

WORK STATUS AND THE QUALITY OF LIFE
FOR INDIVIDUALS WITH CHRONIC
MENTAL ILLNESS

by

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ABSTRACT

Title of Dissertation: Work Status and the Quality
of Life for Individuals with
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Work has always been the goal of the vocational rehabilitation process, and has assumed major importance in the field of psychiatric rehabilitation. The significance accorded work is apparent in the appropriation of millions of federal dollars for improved vocational training technologies (Rehabilitation Acts Amendments, 1986: P.L. 99-506), as well as in the volume of vocationally-oriented literature in the field of psychiatric rehabilitation. Despite policy and program attention, competitive employment success for individuals who are mentally ill remains marginal, with most national and local reports citing employment rates as low as 5 percent and only as high as 25 percent. These poor outcomes are generally attributed to individual disabilities or environmental obstacles, but few studies have attempted to determine the meaning of work to this population by examining the impact that employment status has on overall quality of life.

The present study explores the impact of work status for

a sample of 81 individuals with chronic mental illness participating in community rehabilitation programs in Maryland. Individuals who met the study criteria were randomly selected from programs, and were assessed using the Quality of Life Interview (Lehman, 1988) and the Vocational Development Scale (Hershenson & Lavery, 1978).

Quality of life theory and research suggests that specific domains of an individual's life have an impact on overall reports of well-being. Therefore, this study assesses the relationship between work status and life satisfaction as an analysis of main effects, and then analyzes selected variables that might mediate this relationship. Job satisfaction and vocational development are also analyzed.

Results indicate that competitive employment per se does not have a direct effect on life satisfaction, but that gender and satisfaction with employment status mediate this relationship. Although quality of life research suggests that motivation might mediate the relationship between status and satisfaction, this did not appear to be the case for this sample, nor did there appear to be a relationship between work competence and job or life satisfaction.

The study explores the implications of the results both for public policy and for program planning. Recommendations for further research are discussed.

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CHAPTER I INTRODUCTION

Background: The Importance of Work

"No man is happy who does not think himself so" - Marcus Aurelius

"For most people, work has psychological and economic benefits. It is a place to spend one's time, a way to stay involved and active, to participate in society and feel included. For persons with psychiatric disabilities, work can be all these things, and perhaps more. Some believe that work can have an ameliorating effect on psychiatric symptoms" (Anthony & Blanch, 1987, p. 5)

The notion that work enhances the quality of life of disabled individuals has always been implicit in the field of rehabilitation. The importance accorded work is evident in the definition of the rehabilitation process, "a goal oriented and individual sequence of services designed to assist handicapped people achieve vocational adjustment" (Bitter, 1979, p. 4), as well as the stated goal "to restore disabled persons to the world of work" (Neff, 1968, p. 253). Even with the advent of the Rehabilitation Acts Amendments of 1978 designating independent living as a viable goal for severely disabled persons, most outcome

studies in the field continue to use employment as the criterion against which to measure success.

For mentally ill persons, this same view of the importance of work is reflected in many of the reports of significant contributors to the field (e.g., Anthony, Howell, & Danley, 1984; Lamb 1982; Beard, Probst, & Malamud, 1982). The founders of Fountain House, the pioneering community treatment program for mentally ill persons write of this population that "work, or the ability to work, is a generative force in the life of every human being" (Beard, et al., 1982, p. 17).

Given this professional emphasis on the importance of work, the central concern of this study is to assess the contribution that work status has on the overall quality of life of persons who are mentally ill, in order to assess its value to this population.

The value that rehabilitation researchers and practitioners place on work is evident from the literature cited above. The value that policy makers place on work for this population is evident in recent patterns of fiscal appropriations. Millions of federal dollars, during these times of fiscal constraint, are being appropriated for the development of new employment training technologies for chronic mentally ill persons (Rehabilitation Act Amendments, 1986 - P.L. 99-506).

Statement of the Problem:

Despite fiscal expenditures and a history of programmatic efforts, little is known about the value that mentally ill persons place on work. Does work enhance their quality of life? The strength of the assumptions that practitioners and policy makers place on work-describing it as a "generative force" and an "essential ingredient" of the rehabilitation process - suggest that work status will have a positive effect on the individual's quality of life.

Quality of life, the dependent variable in this study, generally refers to the sense of well-being and satisfaction experienced by people in the context of their current life situations, (Campbell, Converse & Rodgers, 1976; Andrews & Withey, 1976). It has been repeatedly demonstrated that specific domains of life experience, (for example, marriage, social relationships, and work) individually contribute to overall expressions of life satisfaction (Campbell, et al., 1976; Andrews & Withey, 1976; Rodgers, 1977; Deiner, 1984). It is a reasonable strategy, then, to assess the importance a particular life experience has to an individual by comparing groups of individuals with and without that type of experience (Rodgers, 1977). Thus, one might expect that if work status is not particularly related to the self reports of life satisfaction of mentally ill persons, rehabilitation efforts to achieve and sustain employment, while

significant to the provider of services, might be wholly differently perceived by the recipient of them. More importantly, if work status is not an integral component of life satisfaction, then it is necessary to address this issue in accounting for the complex factors that contribute to employment failure for mentally ill persons.

A review of the work status of psychiatrically disabled persons indicates that most hold jobs characterized as unskilled entry level positions (Unger & Anthony, 1984), despite the acknowledged heterogeneity of the population and the fact that many may have advanced skills and/or education (Goldman, 1984).

Anthony and Nemec urge that "the future growth of psychiatric rehabilitation approaches be based on data relevant to the most basic of questions, 'What's in it for the client'" (1984, p. 406). That is what this study is designed to investigate. Before describing the purpose of the current study, it is necessary to review employment statistics and findings.

Need for the Study:

Since the end of World War II, when mentally ill persons were first included as recipients of vocational rehabilitation services, efforts to improve employment outcomes for this group have steadily increased. These efforts have shifted in the last several years from train/place approaches - training persons in sheltered

work settings and then placing them in employment - to place/train methodologies, placing persons directly on the job and providing training and follow-up support (Mehlia, 1986). The impetus behind the shift in training practices is the employment outcomes that are reported for this population. Despite years of rehabilitation efforts, employment rates are poor - with periodic reviews of the literature citing a 20 - 25% competitive employment rate for all mentally ill persons who have been discharged from psychiatric hospitals (Anthony, Buell, & Sharatt, 1972; Anthony, Cohen & Vitallo, 1978; Anthony & Nemec, 1983). For severely psychiatrically disabled persons, the figure is even lower, with some studies citing an 11% competitive employment figure (Tessler & Goldman, 1982), and a recent survey in Maryland reporting a 5% employment figure (Connors, Graham, & Pulso, 1987).

Although competitive employment rates for all disabled groups are poor (a recent estimate from the United State Civil Service Commission (1983) reported a 50% employment figure), the competitive employment rate of mentally ill persons is reported to be at least 20% lower than that of all other disability groups (Rutman & Armstrong, 1986). For example, one study conducted by the National Institute of Handicapped Research concluded that even though psychiatrically disabled individuals make up the largest numbers of cases eligible for vocational rehabilitation

services, they have the least probability of success (NIHR, 1979). In a similar federal study of rehabilitation outcomes, the Rehabilitation Services Administration reported that during the period of 1973 to 1977 there was a 400% increase in the number of spinal cord injured persons who were successfully rehabilitated. During the same period there was a 3% decrease in the numbers of mentally ill persons rehabilitated (Skelly, 1980).

Thus, this is a population that has a particularly difficult time gaining entry into the workplace and maintaining employment. The reasons given for these difficulties usually fall into three groups: those that attribute work difficulties to the individual, those that attribute difficulties to the labor market, and those that attribute difficulties to the rehabilitation system in terms of lack of effective employment training methods and lack of adequate employment support.

The individual explanation for work difficulties for mentally ill persons usually cites the cyclic and episodic nature of the disability as precluding employment tenure (NIDDR Request for Proposals, January, 1987; Turner, 1977; Goldman, Gatozzi, & Taube, 1981). On the other hand, numerous studies which have investigated disability characteristics associated with employment outcomes for this population have generally concluded that psychiatric

symptomatology is not a particularly good predictor of vocational success (Ellsworth, Foster, Childers, Arthur, & Kroeker, 1968; Strauss & Carpenter, 1972). In support of this, in a national survey of community based programs providing employment placement services to this population, Rutman and Armstrong (1986) found that none of the provider agencies listed psychiatric problems as a source of difficulty in maintaining persons in employment.

The second explanation for the poor employment rate of this group is the reluctance of employers to hire mentally ill persons. Although there is significant support in the literature for negative attitudes of employers toward this group (Berven & Driscoll, 1981; Whatley, 1984; Ruffner, 1986), there is some evidence that demonstrates that program personnel, more than employers, view the bias issue as a significant impediment to hiring. Rutman and Armstrong (1986), for example, in a national study found that only 10% of employers as compared to 50% of agency providers cited this as a major reason for the failure of this population in the workplace. Even though employer bias may present a real barrier to job placement, defining the employment failure of this group as the result of employment discrimination may be more a function of provider perception than it is of actual employer attitudes.

The third group of reasons for poor employment statistics generally attribute these outcomes to inadequate program training. Although there remains a "dearth of information" on employment outcomes for mentally ill persons who have participated in employment training programs (Meyerson & Herman, 1984, p. 235), there is little evidence that these individuals exceed the generally acknowledged 20-25% competitive employment rate (see, for example, Bond, 1987; Rutman & Arnold, 1986; Connors et al, 1987). Whether this is due to inadequate programs or simply to a lack of resources to provide appropriate support is difficult to ascertain.

These three rationales for the failure of this group to achieve employment success are juxtaposed against the importance that professionals attribute to work status for this population. Few, if any, studies have examined the impact that work status has on the lives of persons who are mentally ill. One of the ways of assessing this impact is to examine the quality of life.

Quality of Life:

In the past two decades, there has been an increase in both sociological and psychological research devoted to the definition and measurement of 'quality of life'. Although the term sometimes refers to an objective measurement of such things as noise levels, crowding, or

pollution (Zautra & Goodhart, 1978), the focus of psychological research is on measuring subjective quality of life - the individual's own report of his or her sense of well-being. These measures have become known as life satisfaction and "rely on the standards of the respondent to determine what is the good life" (Deiner, 1984, p.543).

The conceptual model for measuring quality of life that is most relevant to this study consists of objective indicators (or life domains), subjective evaluations of these domains, and global reports of overall life satisfaction. Near, Rice & Hunt (1978) describe the relationship among various life domains or concerns as pieces of a pie, with the size of each slice representing the salience of that concern to overall life satisfaction. In terms of work, some researchers (Campbell, Converse & Rodgers, 1976; Davis & Cherns, 1975) studying nondisabled populations have found that the contribution of work to life satisfaction represents a relatively large 'slice', while others (Rice, Near & Hunt, 1980; Rodgers, 1977) have noted that work has only a modest effect on overall satisfaction.

The assumption underlying the measure of both objective life conditions and subjective evaluations of these conditions is that "people live in objectively defined environments, but they perceive a subjectively defined environment, and it is to this psychological 'lifespace'

that they respond" (Campbell et al., p. 134). And, in fact, most literature in this area has documented the surprising discrepancy between objective life conditions and subjective evaluations of these conditions (for a review of this topic, see Chapter 2; also, Deiner, 1984).

Although several theoretical models have been proposed to explain the discrepancy between objective conditions and subjective evaluations, the model that pertains to the current study is based on the person-environment fit theory which argues that, "people's reactions to their environments depend on how well those environments match their own needs and values" (Rodgers, 1977, p. 269; Powers, 1973; French et al., 1974; Campbell et al., 1976).

The goal of the study is to assess the extent to which the life condition or domain of work is reflected in the overall quality of life of the individual.

Quality of Life and Mentally Ill persons

In 1977, the Community Support Program, a project that was initiated by the National Institute of Mental Health to encourage the development of comprehensive community based services for the chronic mentally ill, had, as its stated goal, improving the quality of life (Lehman, Possidente, & Hawker, 1986; Tessler & Goldman, 1982; Schulberg & Bromet, 1981) of this population. Since that time, efforts have been mounted to develop measures that assess the subjective well-being of

chronic mentally ill persons (Baker & Intagliata, 1982; Lehman, 1983; 1988; Bigelow, Brodsky, Steward, and Olsen, 1982). Interest in this construct continues to grow. Schulberg and Bromet, for example, urged that when "valid and reliable instruments are available for assessing patients' quality of life, such analyses should be included in the first order priority evaluations of community support programs" (1981, p. 935).

The impetus behind the mounting interest in quality of life is reflected in issues and controversies that have shaped the direction of policy and program development for this population. One issue is the continuing controversy that surrounds deinstitutionalization policies, with many respected authors in the field (Lamb, 1979; Bachrach, 1976) arguing that mentally ill persons were discharged from the back wards of state hospitals only to occupy the back wards of communities. Other authors have suggested that social policies that marked recent trends in the treatment and care of persons with chronic mental illness were basically "human experiments with some successes but with some failures and disappointments as well" (Landesman, 1986, p.142). Available data does not indicate why some of these programs succeed for some individuals whereas others do not. More importantly, it is critical to determine the environmental variables, both social and nonsocial, that mediate different outcomes for

the individual in order to inform social policy and program practices (Landesman, 1986).

Quality of life can also be viewed as an outcome variable of services and treatment interventions (Gauthier, 1986; Bigelow et al., 1982). Historically, outcome measures of rehabilitation efforts with mentally ill persons have either used recidivism, relapse, or employment data as criteria (Anthony et al., 1982). Although these measures are useful, the need for a broader range of outcome measures has been stressed by a number of authorities in the field including Erickson, 1975; Bachrach, 1976; Dion and Anthony, 1987. Using quality of life as an outcome measure enables the investigation of the overall impact that treatment interventions have on the lives of participants of programs, as well as provides information on the impact that an intervention has on other areas of the client's functioning, beyond those that are being studied.

Purpose of the Study:

The present study is designed to explore the impact that employment has on mentally ill persons, using the measurement of quality of life to determine the extent to which work status is related to overall life satisfaction of the individual as he or she evaluates it. Quality of life theory and research suggests that specific domains of an individual's life have an impact on overall reports of

well being (Andrews & Withey, 1976; Campbell et al., 1976; Near, Rice & Hunt, 1987; Rodgers, 1977). Therefore, this study is designed to assess the relationship between paid employment and life satisfaction for a sample of chronic mentally ill persons.

Research Questions:

The first phase of the study will explore the contribution of work status to quality of life on objective domains, subjective evaluations of these domains, and global reports of satisfaction. A comparison of two matched groups of individuals, those competitively employed and those unemployed, will be examined for differences in these outcomes.

The second problem will be to determine if various factors mediate the relationship between work status and subjective well-being as measured by the Quality of Life Interview. Factors include demographic characteristics of respondents, as well as satisfaction with current work status, and intention to change current status.

The final research question will be to determine what attributes of the job situation mediate the relationship between work and life satisfaction. This last area will also examine the differences in vocational development between employed and non-employed individuals.

Research Questions #1:

This nonexperimental study cannot test the hypothesis

that work causes increased life satisfaction as measured by the dependent variables. Consequently, research areas formulated for this study were not designed to test this model, but rather to explore the relationships between work status and a number of dependent variables that are theoretically and empirically related to quality of life as life satisfaction. Still, development of these questions was derived from careful study of the literature on the relationships between life satisfaction and quality of life, and driven by the need to explore this relationship as a means of studying the meaning of work.

The first group of questions is designed to explore the relationship between work status and quality of life as measured by multiple dependent variables including, objective indicators, subjective indicators, and global satisfaction indices. Although there is a body of literature which has explored the relationship between work status and life satisfaction or quality of life (for example, Wright, 1978; Rodgers, 1977; Campbell, 1982), there is no literature in this area for the population of mentally ill or psychiatrically disabled persons. A few studies have included work status in their findings on quality of life looking at other independent variables (e.g., living situation, hospitalization), but these findings are equivocal. As stated earlier, although much of the rehabilitation literature concerns the

importance of work, none have attempted to measure the meaning of work.

The second group of questions is designed to examine the factors that mediate the relationship between employment status and life satisfaction. For nondisabled populations, a significant body of research suggests a relationship between quality of work life, or job satisfaction, and quality of life (see Kabanoff, 1980; Michaelos, 1986, for a review of these findings). In addition, quality of life research indicates that discrepancies between objective conditions and expressed evaluations of these conditions may be related to need satisfaction (French, Rodgers, & Cobb, 1977); adaptation levels (Helson, 1971) or social comparisons (Michaelos, 1986). Again, application of this literature to the current population is tenuous, given the characteristics of the group as well as characteristics of the job. No reports could be found exploring this issue for this population.

Limitations:

One of the central limitations in studies that measure abstract and multi-faceted concepts is the complexity of the construct being measured and the inadequacy of the instruments that must be used. The remedy for this limitation is not to abandon such studies, but to acknowledge the difficulties that are inherent in much

behavioral research that is increasingly concerned with the measurement of complex multivariate phenomena. A clear theoretical basis for approaching the construct and the study provides a basis for handling the complexity of the subject.

Secondly, limitations that apply to non-experimental research are applicable to the current study and are reviewed in in Chapter 3. The limitations on studies that are nonexperimental are substantial, although it is useful to heed Kerlinger (1986) who advises that "there is no one methodological road to scientific validity" (p. 360). Extension of the results of the study using experimental designs is feasible and noted in the final chapter.

Finally, this study focused on persons with chronic mental illness participating in community programs, thus generalization from this sample to other populations of individuals with chronic mental illness should be done cautiously, and repeated application and testing of the concepts of this study are essential. In addition, sample sizes used in this study require careful interpretation of the data, and careful examination of descriptive tables especially where no significant results are noted. This issue is more fully described in Chapters 3 and 4.

Summary:

This study contributes toward our understanding of the impact that paid employment has on the reported

quality of life and life satisfaction of individuals with chronic mental illness. Current vocational rehabilitation approaches with this population emphasize the importance of work, without considering the meaning that work has to psychiatrically disabled persons. Most of this literature assumes the significance of paid employment, basing this assumption on intuitive rather than empirical grounds. In addition, quality of life research and methodology provide a means of understanding the factors that mediate the relationship between employment and satisfaction.

Evidence of a clear and strong relationship between work and quality of life would provide policy makers and program developers with a strong mandate for increasing the focus on the development of new employment methodologies. Conversely, lack of a strong relationship can provide us with a better understanding of employment failures, as well as a better understanding of the factors that contribute to employment success. Most importantly, if the stated purpose of all of our program interventions is to "enhance the quality of life", then studies such as this one are essential for tackling complex and multifacted phenomena such as quality of life in order to measure the success of our interventions at an individual level. As national policies and resources continue to shift toward the development of new employment technologies, the challenging questions are not only "who" and "how" but "why".

Literature Review Chapter II

Over-view:

A review of the literature on quality of life leaves little doubt that it is a complex subject area with many issues and questions left unaddressed. Quality of life, as the term is used in this study, is a measure of subjective well-being (Deiner, 1984; Campbell, 1981), an abstract and multi-faceted concept which subsumes related, but structurally different concepts, such as happiness and life satisfaction. Although subjective quality of life research has been carried out for over twenty years, (Cantril, 1965; Gurin, Veroff, & Feld, 1960), it is only in the past decade or so that attempts have been made to explore the dynamics (Campbell, Converse & Rogers, 1976; Andrews & Withey, 1976; Bradburn, 1969; Michaelos, 1980). These theoretical efforts grew, in part, from empirical research which documented a surprising discrepancy between objective conditions such as comfort, and health, and satisfaction with these conditions (Campbell & Converse, 1976; Campbell et al., 1976; Deiner, 1984). The independence of these 'social indicators' and 'psychological indicators' (Zautra & Goodhart, 1978) led researchers to conclude that subjective well-being relied "on the standards of the

respondent to determine what is the good life" (Deiner, 1984, p. 543).

It was the focus on this subjective perspective that stimulated interest in quality of life research among individuals who worked with vulnerable or at-risk populations (see, for example; Landsman (1986) on quality of life and individuals who are mentally retarded; George and Bearon (1980) on quality of life and the elderly; Lehman (1983) on quality of life and individuals who are mentally ill; and Cameron, Titus, Kostin and Kostin (1973) on quality of life and individuals who are physically disabled).

Although quality of life has become a useful and popular means of understanding and measuring subjective well-being, definitions and structural models remain ambiguous (Deiner, 1984; Andrews, 1986), and the task of sorting this information out is a complex one. In order to systematically examine this field, the first section of this chapter will review the theoretical and measurement issues of quality of life, with particular attention to those issues relevant to the current study. The second section discusses the use of measures of quality of life and subjective well-being in group comparisons. The third section reviews quality of life findings for individuals who are mentally ill, as well as studies that address work outcomes for this population.

Definitions, Structural Models and Measurement

"It is better to be a human being dissatisfied than a pig satisfied; better to be Socrates dissatisfied than a fool satisfied" (John Stuart Mill)

Definitional Issues

Definitional ambiguities surrounding the term quality of life can be traced to several sources. One is that two distinct bodies of literature exist in this area: quality of life as a social indicator and quality of life as a psychological indicator (Zautra & Goodhart, 1978; Campbell, Converse, & Rodgers, 1976). The second factor is the interchangeable use of terms to designate quality of life. Most frequently, these are "life satisfaction" and "happiness", but "positive mental health" also appears in the literature as a synonym of, at least, related to, quality of life, as do studies of life events and stress.

The third issue is related to the variety of structural models used to describe and define quality of life. These structural models are, of course, explicitly related to measurement issues, contributing to a growing number of theories to measure the theoretical concept. Although much of this growth demonstrates a strong interest in quality of life research, it also contributes to the current definitional problems that one author summed up by remarking, "There are as many definitions of quality of

life as there are people" (Lui, 1976, p.2).

The next three subsections provide reviews of these definitional issues.

Quality of Life as a Social and Psychological Indicator

Frequently, in the popular press, one hears the terms quality of life in reference to the benefits, say, of living in Cleveland as compared to Chicago. In this context, quality of life refers to a compilation of social indicators, normative statistics that tap a variety of societal conditions in order to assess the 'goodness' of life in a specific geographic region, either a city or a nation. (USDHEW 1969; Flax, 1982).

In a more relevant context, social indicators have also been used as a means of assessing community mental health needs by measuring the frequency of selected social problems that are empirically related to the incidence of mental health needs in a population. These measures include statistics on number of persons who are unemployed; number of persons living below certain income levels, and population density (Zautra & Goodhart, 1978; also see Cagle & Banks, 1986 for a review of the problem of this approach toward assessing mental health needs).

Although social indicators are useful statistics for comparing communities, for time-series analyses of environmental and social changes and for monitoring "the

condition of major aspects of society" (DHEW, 1969, p. 97), significant research findings began to point to the inadequacy of social indicators as measures of life quality (Andrews & Withey, 1976; Dalkey, 1972; Campbell & Converse, 1972; Campbell, Converse & Rodgers, 1976). For example, Campbell and Converse noted that "disenchantment with objective conditions has appeared to be increasing over exactly the same period that those conditions have at most points and by almost all criteria been improving" (1972, p.9) and later that "the relationship between objective conditions and psychological states is very imperfect and that in order to know the quality of life experience it will be necessary to go directly to the individual himself for his description of how his life feels to him" (p. 4).

It was the mounting evidence that suggested an imperfect relationship between objective conditions and psychological states that led directly to two major investigations of the quality of American life in the mid-70's. These seminal studies were based on the aggregation of data on objective life conditions and subjective evaluations of this conditions (Campbell, Converse & Rodgers, 1976; Andrews & Withey, 1976) and provided the basis for subsequent studies of quality of life and subjective well-being.

Disentangling Terminology: Life Satisfaction and Happiness

The central concern in this study is in measuring the quality of life. As reviewed above, quality of life has, at varying times, referred to social indicators (e.g., objective conditions), and psychological indicators (e.g., self-reported perceptions of these conditions). Although the conceptual distinction between these two referents can be made relatively clear, it is a more difficult task to satisfactorily distinguish between quality of life as life satisfaction and quality of life as happiness, especially as these two constructs are, "related to each other empirically as well as definitionally" (Deiner, 1984; p. 549).

Campbell, Converse & Rodgers define quality of life "mainly in terms of satisfaction of needs" (1976; p.9), Andrews and Withey define quality of life in terms of perceptions of well-being, or "affective evaluations of various aspects of one's life" (1976; p. 219). Other researchers in this area have defined quality of life as happiness (Bradburn, 1969; Guerin et al, 1960) and still others have extended the meaning of quality of life to include experiences of self-mastery (Jahoda, 1958; Baker & Intagliata, 1982), as well as experiences or life events that lead to stress. (Dohrenwend & Dohrwend, 1974; Caplan, 1983; Grant, Sweetwood, Yager, & Gerst, 1981). The latter subsumes a major body of research effort not

relevant to this study, but of considerable interest in reviewing the notion of stress and its relation to quality of life.

In defining the distinction between quality of life as life satisfaction and quality of life as happiness, most researchers have relied on distinctions between cognitive and affective domains (Campbell et al., 1976; Deiner, 1984; Costa & McCrae, 1980; McKennell, 1978; McKennel & Andrews, 1980). In this context, quality of life as happiness refers to the preponderance of positive over negative affect (Bradburn, 1969; Shin & Johnson, 1978; Deiner, 1984), while quality of life as satisfaction refers to a perceptual mechanism comparing actual conditions to aspirations, expectations, and values (Campbell et al., 1976). It is the latter definition that is most useful in this study, since The Quality of Life Interview (Lehman, 1988) is based on a life satisfaction construct and scales are developed to measure satisfaction rather than happiness. Therefore, this definition will be adopted in looking at comparisons of perceived well-being or quality of life between groups. For major reviews of quality of life as happiness, see Wilson, 1967; Tartarkiewicz, 1976.

Having thus derived a broad conceptual understanding of the quality of life, it is necessary to explore the notion of life satisfaction before moving on to the exploration

of structural models for measuring it.

Life Satisfaction

"Satisfaction has been described as a cognitive evaluation which is particularly dependent upon comparisons with other important reference groups as well as on internal comparisons to the individuals' desires, expectations, and hopes" (Glatzer, 1987, p. 25). Level of satisfaction has been defined as the perceived discrepancy between aspiration and achievement (Campbell, et al, 1976) and relies on cognitive mechanisms to assess achievement of goals and satisfaction of needs relevant to aspirations and achievements.

The empirical finding that has significantly contributed to and even driven the development of research in this area of satisfaction is the surprisingly modest relationship between objective conditions and reports of satisfaction with this conditions. Campbell et al. (1976) report that only 17% of life satisfaction is predictable from 10 demographic variables including age, income, housing, sex, education. Similarly, Andrews and Withey (1976) found that only 10% of the variation of life satisfaction in their sample could be attributed to demographic variables including, again, age, sex, family cycle stage, family income, education, race and sex.

On the other hand, it is important to note that some of these variables, while not substantively contributing to

the prediction of life satisfaction, are nonetheless related to overall reports of satisfaction. In this area, for example, most research data indicates that income is related to overall reports of life satisfaction (Alston, Lowe & Wrigley, 1974; Kimmel, Price & Walker, 1978), although the effect of income is often small. Similarly, the influence of education on life satisfaction (Campbell, 1981; Palmore, 1979), as well as gender (Andrews & Withey, 1976; Campbell, et al., 1976; Palmore & Kivett, 1977) is often small, but some studies (Medley, 1980; Cameron, 1975) have found modest correlations between sex and life satisfaction.

What has most interested researchers in this area is explaining the discrepancies between what common sense would lead us to expect (e.g., persons with higher incomes would be more satisfied with life) and what actually occurs. One of the relevant literature sources that highlights this discrepancy is the disability literature. For example, Brickman and Campbell (1971) found that persons with quadraplegia did not express lower levels of satisfaction than did a group of controls, and similarly, Cameron, Tintus, Kostin, and Kostin, (1973) found that the disabled groups that they sampled showed no differences in life satisfaction than did control groups. In addition, quality of life research with individuals who are mentally ill has not demonstrated substantially different results

when compared to normal population data (Baker & Intagliata, 1982; Lehman, 1983). A useful example that demonstrates the same phenomena in the opposite direction is a study conducted by Brickman and Campbell (1971) on the effect of winning the lottery and life satisfaction. Again, the major conclusion drawn from the data was that lottery winners were no happier than controls.

In explaining the discrepancy between 'what is' and 'what ought to be', researchers have relied on three major theoretical bodies of literature: adaptation level theory, person-environment fit models, and social comparison theories.

Adaptation level theory (Helson, 1971) as an explanation of discrepancies between actual conditions and perceptions of satisfaction with these conditions bases this "paradoxical finding" (McKennell, 1978) on internal standards of comparison with previous experiences and life events. Thus, Brickman and Campbell write that

"the subjective experience of stimulus input is a function not of the absolute level of that input but of the discrepancy between the input and past levels. As the environment becomes more pleasurable, subjective standards for gauging pleasurable-ness will rise, centering the neutral point of the pleasure-pain, success-failure continuum at a new level such that once again, as many inputs are experienced as painful as are pleasurable" (1971, p. 287).

The major contribution of adaptation-level theory to understanding discrepancies between actual conditions and

reported satisfactions is in describing the process by which an individual's internal standard of evaluation will move up or down in response to changes in conditions or environments. For example, in the area of adjustment to disability, adaptation-level theory suggests that the adaptation process involves re-setting the internal standards in which context aspirations, expectations and values are evaluated (Brickman et al, 1978; Wortman & Silver, 1982; Cameron, 1974), and modified. Substantial support of this position is also available in several major reviews of the adjustment process in disability (see, for example, Wright, 1983; Shontz 1975; Vash, 1981).

Another body of theoretical research that has provided a basis for explaining discrepancies between actual and perceived conditions is the person-environment fit model (French, Rodgers & Cobb, 1974; Campbell et al, 1976; Andrews & Withey, 1976; Deiner, 1984). French, Rodgers & Cobb describe adjustment (or satisfaction) as the "goodness of fit between the characteristics of the person and the properties of the environment" (1974, p.16). This theoretical position is supported by a vast body of literature on person x environment interactions (see, for example, Mischel, 1968; Pervin, 1968) much of which is beyond the scope or relevance of the current study.

This concept of the goodness of fit is, in turn, related to aspirations, needs and expectations: "people

perceive a subjectively defined environment, and it is to the psychological 'life space' that they respond" (French et al., 1974).

Although attempts have been made to validate the notion of person x environment as related to affective outcomes (Deiner, Larsen & Emmons, 1984) such as 'goodness of fit', findings remain equivocal (Deiner, 1984; Deiner et al., 1984). Still, Andrews and Withey, commenting on the person-environment fit theory, concluded that "although it is not a fully proven theory we concur with its suggestion that satisfactions are probably the result of some comparison between a perception of the environment and a set of needs or aspirations, " (1976, p.16). When these authors, in fact, examined the most relevant frame of reference that people use in reaching evaluations of life concerns, they concluded that it was the context of need satisfaction (operationalized by the phrase, "Thinking only of yourself and your own needs, you do you feel about. . " (p. 231) as the most applicable frame of reference through which individuals reached evaluative decisions.

A final group of theories proposed to explain the discrepancy between actual and perceived conditions are referred to as social judgement theories. Social judgement or social comparison theories rely, as do adaptation level theories on standards of comparison, with

the major distinguishing feature being that social comparison theories use an external rather than an internal frame of comparison (Deiner, 1984; Michaelos, 1986). Thus, sociological theorists argue that people use multiple reference standards to evaluate their positions and these standards are based on "social norms prescribing the level of resources they ought to have" (Fernandez & Kulik, 1981; Easterlin, 1974). Wills (1981) showed that comparison of one's own status with those of lower status can increase overall measures of satisfaction. Carp and Carp (1981), examining the life satisfaction of elderly persons and the means by which affective evaluations were made, concluded that if a person is better off than others, that person will be satisfied or happy. But Andrews and Withey (1976) found that equity as a frame of reference was not as applicable for reaching evaluations as was need satisfaction (chapter 2).

In a recent paper, Michaelos (1986) collapsed each of the theories identified above into one category and renamed them gap-theoretical explanations. Basing his model on previous descriptions of Campbell, et al. (1976) and Andrews and Withey (1976), Michaelos suggests that need, aspiration, and equity theories are all related and proposed a Multiple Discrepancy Theory to subsume comparisons with self, past experiences, others, and typical Americans. Gauthier (1986) described Michaelson's

theory as comprised of six categories comparing what one perceives he/she has and what one perceives:

- he/she wants
- he/she needs
- others have
- he/she expects to have in the future
- he/she expected s/he would have
- he/she deserves

as these perceptions are mediated by relevant internal mechanisms including motivations, aspirations, expectations, or needs. Similar research on the use of multiple frames of reference was conducted by Fernandez and Kulik (1981) on community groups.

Structural Models of Life Quality

Defining quality of life as life satisfaction provides a basis for examining the theoretical models that have been proposed to both explain and to measure the concept. The structure of these models depends, of course, on the developer's purpose. One central organizing framework that can be utilized to examine the differences in models is related to the earlier discussion of quality of life as 'happiness' or quality of life as 'satisfaction'. Authors who are interested in the former, (e.g., Bradburn, 1969; Kammann & Flett, 1983) have proposed models that include both measures of positive affect and negative affect as measures of overall well-being or happiness. The prototype of these scales, Bradburn's Affect Balance Scale (Bradburn, 1969), for example, includes ten items: five that tap

negative experiences (e.g., did the respondent feel upset in the past few weeks because someone had criticized them) and five that tap positive experiences (e.g., did the respondent feel happy in the past few weeks because of an accomplishment). Although not central to the concern of the present study, a major finding from the use of the Affect Balance Scale was that positive and negative affect are relatively independent: that the presence of negative affect is not the same as the absence of positive affect (Bradburn & Caplovitz, 1965; Deiner, 1984). This finding of the independence of positive and negative affect remained controversial with several authors challenging the finding based on the weaknesses of the original scale (Kammann & Flett, 1983; Larsen, Diener, & Emmons, 1983), while others developed new instruments that supported the central conclusion regarding the independence of these two measures (Bryant & Veroff, 1982; Zevon & Tellegen, 1980). Baker and Intagliata (1982) administered the Affect Balance Scale to a sample of individuals with mental illness, and noted that this sample reported more negative experiences than did the general population, but they did not examine the scales for statistical independence.

In a more relevant context, Bradburn (1969) compared the independence of his positive and negative affect scales to the Herzberg two factor theory of job satisfaction (Herzberg 1967), where the authors of the original study

concluded that "the factors that made people happy with their jobs turned out to be different from the factors that made people unhappy with their jobs" (Herzberg, Mausner, & Snyderman, 1959, p. 11). Herzberg's model generated a number of empirical studies, the findings of which, as in the case of Bradburn's work, remain equivocal (see King, 1970, for a review of these theories).

The instrument used in this study, The Quality of Life Interview (Lehman, 1983; 1986; 1988) was based on a life quality model drawn from the work of Campbell et al. (1976) and Andrews and Withey (1976), and therefore these models need to be reviewed in more detail.

The Concept of Life Domains:

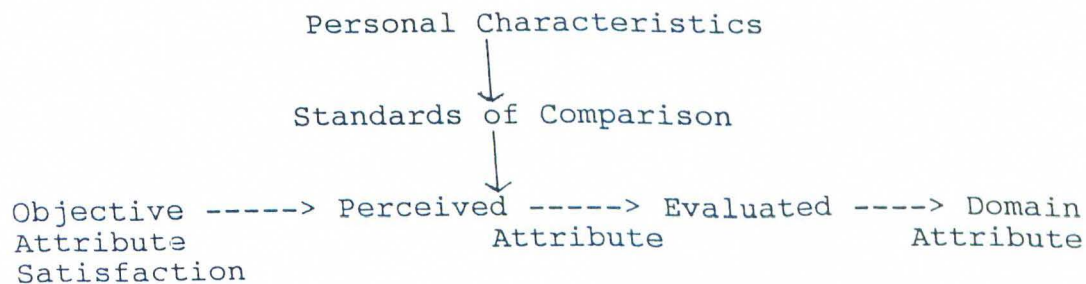
Campbell, Converse & Rodgers Model.

The central issue in measuring subjective well-being as happiness is the relation of positive to negative affect; the issue in measuring subjective well-being as satisfaction is the relationship between an individual's global report of satisfaction and satisfaction with various life domains. The central assumption underlying these models that measure overall life satisfaction as a global index and as a summary of specific indices across various life concerns is that well-being is comprised of "gratifications and disappointments with specific features of life such as housing, finances, friendships, etc. (Andrews & Withey, 1976, p.11). The body of research on

life satisfaction as a composite of satisfaction with various life concerns or domains has supported the notion that people do divide their lives into domains that "although not isolated, are separate enough to be identified and evaluated as a distinguishable part of life" (Andrews & Withey, 1976, p. 11; Flannagan, 1972; Campbell et al., 1976; Dalkey, 1972). The explanation offered for these models is that well-being is conceptually comprised of objective conditions and subjective evaluations of these conditions that are mediated by individual characteristics such as aspirations, expectations and values (Campbell et al., 1976; Baker & Intagliata, 1982; Lehman, 1988). Figure 1 is an illustration of the Campbell et al. model of quality of life.

Figure 1

Campbell, Converse, and Rodgers (1976) Model of Satisfaction



In support of the causal relationships implied in this model, significant research has supported two key

assumptions. The first is that satisfaction with life concerns or domains are linearly related to global satisfaction indices (Andrews & Withey, 1976; Campbell et al., 1976; McKennell, 1977). Campbell et al. (1976) found that a linear additive combination of satisfactions in specific domains explained about 60% of the variance in global ratings of life satisfaction. Speculating that this may be one of the major findings of their empirical research, the simple linear model to fit the data was confirmed by Andrews and Withey (1976), despite their efforts to discover either curvilinear or interactional patterns.

Another key assumption that has received substantial support in subsequent research is related to individual evaluations of objective conditions. Earlier, the distinction between satisfaction and happiness as consisting of primarily cognitive as opposed to affective mechanisms was discussed. The point here is that substantial research has supported the finding that individual aspirations in particular and expectations secondarily are significantly related to an individual's evaluations of life domains and overall life satisfaction. (Michaelos, 1980; 1986; Carter & Rees, 1982).

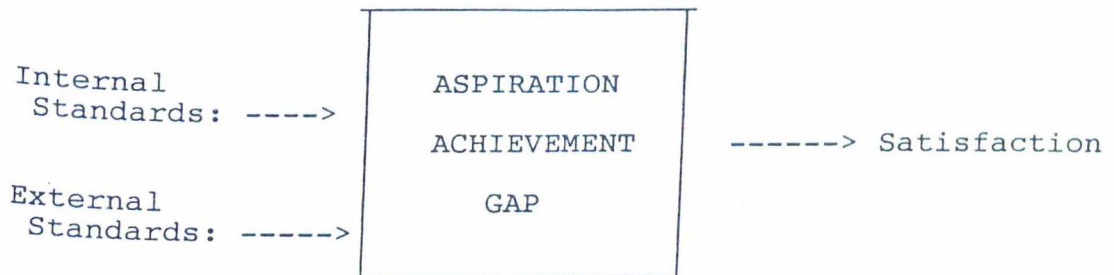
Thus, support for including individual factors in a model describing the theoretical relationship of quality of life has generated a good deal of support. The figure

below illustrates the relationship between comparisons with a variety of internal and external standards as a function of an aspiration - achievement gap.

Figure 2

Michaelos (1986) Aspiration-Achievement Gap

Comparison with:



Andrews & Withey Model.

A second structural model is the one proposed by Andrews and Withey (1976) and illustrated in Figure 3. Although similar, several factors differentiate this model from the one derived by Campbell et al. (1976). The first is that domains, or concerns, were derived from published as well as empirical sources (structured interviews conducted by the reserachers). Secondly, the structural model suggests that concerns are related to the criteria by which these life concerns are evaluated: establishing a relationship not only between domains and overall life satisfaction, but signifying that the interaction between

domains and criteria provides a framework in which the individual's actual evaluations are hypothesized to occur.

Figure 3

¹
Andrews & Withey (1976) Model of Domain Satisfaction

Criteria by Which Domains Are Evaluated:

Domains:	Success	Beauty	Safety	Fun	.	.	.
House	Eij					Ei	
Job							
Family							
Friends							
.							
.							
.	Ej						

¹ From Social Indicators of Well-Being (p. 13) by F. Andrews & S.B. Withey, Plenum Press, 1982.

In a series of analyses of the relationships between domains and criteria, Andrews and Withey concluded that the model, if not proven correct, at least demonstrated that hypothesized relationships were accurate. For example, a series of multiple regression analyses of their data for six domains and eight criteria demonstrated that criteria were able to predict as much as 58% of the variance in a particular domain (1976, p. 237). In addition, different

criteria had different relevance in the prediction of domains.

Interestingly, the Campbell et al. (1976) and the Lehman (1988) Quality of Life Interviews are not based on conceptual models that include explicit criteria for subjective evaluations, but do make use of this information in the development of the assessment instruments. Thus, for example, Lehman (1988) uses the criteria of cohesion, privacy and comfort, in the evaluation of the domain, Housing.

Measurement Issues

A central issue in the theoretical basis and measurement of quality of life is that the construct takes on a more specific meaning in terms of the "measures used to operationalize it" (McKennell, 1978, p. 390). For example, we have reviewed some of the distinctions between measurement of subjective well-being when the theoretical approach is happiness (Bradburn, 1969) and subjective well-being when the approach is life satisfaction (Campbell et al, 1976; Andrews & Withey, 1976). Researchers in this area have recognized that the relations in this field between theory and research are "notoriously loose" (McKennell, p. 423) and that when viewed against the complex and abstract constructs they attempt to measure, the instruments may be "oversimple to the point of travesty"

p. 423).

On the other hand, there are several reports which indicate that the state of measurement of subjective quality of life is encouraging (Kerlinger, 1986; Deiner, 1984; Campbell & Converse, 1976) and several of these reports point to general findings that support this optimism.

One is the consistent finding that all measures of well-being correlate moderately with each other (Andrews & Withey, 1976; Campbell et al, 1976; Deiner, 1984; McKennell, 1978 ; Baker & Intaligata, 1982; Michaelos, 1986), substantiating the assumption that a common construct is being assessed across instruments and populations.

Still, correlation between measures is a necessary but not sufficient finding for understanding what is being measured. In order to describe the latter, it is necessary to examine the validity of quality of life research.

Variance of any measure can be partitioned into three parts: a valid component, a correlated error component, and a random or residual component. The valid component of the variance measure is a reflection of what the measure is intended to measure and is usually separated into three types: concurrent or predictive, construct, and content. It is, of course, construct validity that is most useful for the central determination of any measure: is it

measuring what it is supposed to measure. For self-report instruments such as quality of life, several correlated error components may influence the variance of the score. The two most common in this type of measure are labelled response bias and, related to this, reliability.

The suspicion that response bias, especially social desirability, is related to life satisfaction evaluations is apparent in reviews on quality of life findings across a variety of populations. A consistent report is that individuals tend to cluster at the higher end of scales in rating their satisfaction with life (Andrews & Withey, 1976; Campbell et al., 1976; Deiner, 1984). Although the conclusion drawn is that social desirability exerts a small but pervasive influence on reports of satisfaction (Campbell et al., 1976; Klassen et al., 1975), it appears to be more problematic for research attempting to "determine the true level of quality of life than for studies which aim to compare levels of well-being between groups" (Zautra & Goodhart, 1978, p. 7).

The second measurement issue that affects the validity and contributes to the correlated error is the reliability of the instrument. This issue is reviewed in detail in Chapter 3, but, in brief, all quality of life measures that have examined reliability estimates report strong test-retest correlations or internal consistency

correlations (Andrews & Withey, 1976; Lehman, 1986; 1988; Baker & Intagliata, 1982).

That quality of life measures seem to contain a substantial amount of valid variance has, by now, received significant empirical support (Andrews & Withey, 1976; Campbell et al, 1987; Campbell, 1981; Deiner, 1984; Lehman, 1988). Several of these authors (Andrews & Withey, 1976; Lehman, 1988) have produced construct validity coefficients of .80 using multi-trait, multi-method approaches to the study (Campbell & Fiske, 1959).

Conclusion

This section of the literature review has examined some of the basic issues that relate to the definition and measurement of quality of life in order to provide the theoretical basis for the current study. As such, the review has focused on the ambiguity of the definitions of quality of life, the relationship of the terms quality of life, life satisfaction, and happiness, and the structural models for describing and measuring life quality. The review has also discussed puzzling research findings related to the discrepancy between life conditions and perceptions of satisfaction, as well as major theories which attempted to explain the discrepancy.

The next section of this review will focus on describing the research literature that is related to using quality of life as a measure of group comparison.

Quality of Life as Method of Group Comparison

Although quality of life originated as a means of determining the "true" level of subjective well-being in the population, the relativistic aspect of this research became increasingly apparent. The significance of the individual's frame of reference was discussed in a previous section of this review, and it is apparent that this frame of reference is inextricably rooted to the cultural and environmental context of the individual's life. Thus, Campbell et al. (1976) speculate that if

"we were able to emerge on an English moor of the eleventh century equipped with a modern interview schedule bearing on the quality of life, it seems unlikely that our serf and yeoman respondents would in any great numbers answer to our adjective checklist that life was 'nasty, brutish or short'. Human life at the time was not short, for example, relative to anything in the collective memory" (p. 171).

It is the relativistic nature of these quality of life ratings that probably contributed to the use of this measure as a means of group comparisons, and later, as a means of longitudinal comparisons measuring individual change (see, for example, Glenn & Weaver, 1981; Campbell, 1981). The substantive question that guides group comparison research is not "How happy are women in America?", but "How happy are women compared to men?", or "How satisfied are disabled individuals compared to nondisabled individuals?".

Research on the comparison of quality of life outcomes

between subgroups of the population (e.g., the elderly, women, and minority groups) has been conducted for several years (Campbell et al., 1976; Veroff et al., 1981). Research on the comparison of quality of life or life satisfaction levels between groups of persons selected for status membership (e.g., working or not working, disabled or nondisabled) has also been available for several years (e.g., Cameron et al., 1974 on handicapped status, Rodgers, 1977; Wright; 1978; Nye, 1963; Ferree, 1978 on working and nonworking women; Lehman, 1983; Baker & Intagliata, 1982 on mentally ill persons living in state hospitals and in the community).

Although many of these studies address relevant aspects of the current report, no quality of life studies were found that specifically examined the work status of individuals who are disabled or mentally ill as a method of group comparison. This lack is surprising since there is a substantial body of literature examining the relationship between quality of life and job satisfaction (or quality of work life), some of which has supported the notion that work life is related to quality of life apart from the workplace (Near et al., 1984; Davis & Cherns, 1975). In addition, most quality of life literature indicates that work and job satisfaction exert a moderate, but consistent effect on overall life satisfaction (Campbell et al., 1976; Rice, 1982; Campbell, 1981).

The lack of relevant research in this area is both an advantage and a disadvantage. The advantage is, of course, that the findings of this study may stimulate some needed research in this area. The disadvantage is that there is a dearth of comparative data for the current study, and confirmation will have to await replication and future research.

Given the lack of comparative studies for the current report, this part of the review will briefly examine literature that is related in intent and methodology, if not in population and needs. Specifically, the literature that compares quality of life of working women to non-working women (e.g., home-makers), represents a small but significant body of research that in methodology and intent is related to the current study. This research is also particularly relevant since working women, similarly to disabled individuals who are employed, tend to be 'excluded from satisfying and managerial careers' (Coser & Roloff, 1981) and to be concentrated in low-level clerical or service occupations.

Researchers in this area have explored the meaning of work to women by comparing groups of women who were working with groups that were not (Rodgers, 1977; Wright, 1978; Nye, 1963; Ferrante, 1976), attempting to determine which group was more satisfied or which group led the more enriching and satisfying life (Wright, 1978, p. 302).

Several of the research findings in this area have been equivocal. Rodgers, (1977) using the data from the 1976 Campbell, Converse and Rodgers study, examined quality of life results for a sample of women who were working at least part time compared to a group of home-makers. He concluded that the two groups did not differ in quality of life when expectations and motivations were controlled for. Thus, women who did not work, but who expected to work reported lower levels of satisfaction than those who did not work and had never expected to.

In another major study of over 2000 mothers who were working compared to those who were not, Nye (1963) found that working women reported more satisfaction with jobs than housewives did with home-making duties, but that the working women in his sample reported less marital satisfaction than did the nonworking women. In a later study of 135 working women, Ferree (1976) compared working women to housewives and concluded that housewives paid a "considerable price in personal unhappiness" (p. 80). In an attempt to replicate Ferree's findings, Wright (1978), using the 1976 Campbell, Converse & Rodgers data found few significant differences in satisfaction between working and non-working women and concluded that, "both work and housekeeping roles have costs and benefits attached to them" (p. 312). In a recent review of this

literature, Warr and Perry (1982) suggested that variables may mediate the relationship between employment and psychological well-being including quality of work life and quality of home life.

Conclusion

Rodgers, (1977), describing his methodology for group comparison of women who were working to those who were not, explained that "it makes sense to speak of the presence or absence of a domain in attempting to measure the importance of it. In such a case, the apparent effects of the domain (e.g., work) can be analyzed by comparisons of individuals with and without that type of experience " (1977; p. 269). Campbell (1976; 1981) has argued that people compare their lives to some individually -derived standard; if found wanting, this comparison leads them to a negative evaluation of their work and/or non-work situation. Near et al. (1978), writing about work and non-work roles, portray life satisfaction as a pie, where the size of each slice represents the salience of its contribution to overall life satisfaction. The subjective evaluation of each of these slices determines, in part, satisfaction with that domain which, in turn, determines overall life satisfaction.

Thus, this group comparison methodology has been adopted by researchers who have attempted to gauge the importance of work to groups of people by comparing those who worked

to those who did not (Wright, 1978; Ferree, 1976); or, in the case of job satisfaction, comparing those who were satisfied to those who were not (Near, Rice & Hunt, 1978; Rice, Near & Hunt, 1980).

In the case of individuals with chronic mental illness, this methodology has been used to compare, for example, persons living in state hospitals to those living in the community (Lehman, Possidente, & Hawkins, 1986), those receiving community services to those who were not (Bigelow, Brodsky, Steward & Olsen, 1982), and individuals who were clients of a community support system to the general population (Baker & Intagliata, 1982). The next section of this chapter reviews these findings.

Quality of Life and Individuals Who are Mentally Ill

"We need to realize that if we can 'only' improve the quality of life of these patients and make them feel comfortable living low-energy but satisfying lives in a non-hospital environment, we have taken a great step forward in the management of the long-term mentally ill and in making real the benefits expected of deinstitutionalization (Lamb, 1982, p. 106).

Lamb's quotation provides a context in which to review the quality of life research on individuals with chronic mental illness. Much of this literature has focused on using measures of well-being as a means of evaluating program outcomes and/or client improvement. This focus is reasonable, given the issues and controversies that have shaped recent directions in policy making and program planning for this population.

One of the most salient issues in policy and programs continues to be increased sensitivity toward the development and planning of community services in the wake of almost three decades of deinstitutionalization (Lehman, 1988). The term 'transinstitutionalization' captures the charge by some that the shift from the hospital to the community was a shift in structure, but not in philosophy (see Lamb, 1979; Talbott, 1985) and that placing persons in community 'asylums' (Lamb, 1979) is not substantially different than placing them in state hospitals. As public policy and program efforts began to address these

issues, increased attention was placed on both improving the lives of individuals with chronic mental illness, and on improving the programs that serve them. One of the means of evaluating these global efforts is quality of life research. On the other hand, mounting evidence and support for global measures of well-being of psychiatrically disabled individuals (Shulberg & Bromet 1981; Lamb, 1979; Stein & Test, 1981) has not, thus far, generated a voluminous body of research in this area.

This section will discuss some of the major issues and findings concerning quality of life research and individuals with chronic mental illness.

The Scope of the Research

Two directions in quality of life research with this population are apparent. Although these approaches rely on distinct conceptual models for measuring the quality of life, (some approach this measurement from a multiple frame of reference (e.g., Bigelow et al., 1981), most are based on a long-range goal of evaluating program effectiveness and/or treatment outcomes (But, see Lehman, 1983 and Baker & Intagliata, 1982, for a discussion of this issue). Malm et al. explain that using quality of life as an outcome measure of program effectiveness allows practitioners to "reconceptualize rehabilitation in a wider context" not only in terms of how program efforts achieve

specific goals, but how well they meet the "idiosyncratic needs of the individual" (1981, p. 475).

These two approaches similarly use quality of life as a dependent variable in program evaluation and treatment effectiveness, but they differ in both conceptualization and operationalization of the construct.

One way that the term is conceptualized and operationalized is quality of life as life satisfaction (see p. 25 in this review), the result of objective conditions being compared to some individual standard. Thus, Lehman (1983; Lehman et al., 1986; 1988) bases his Quality of Life Interview on a conceptual model similar to the Campbell et al. (1976) model, where quality of life is a composite of individual characteristics, objective conditions, and the subjective evaluation of these conditions). Malm et al describe a similar model, where quality of life is based on a pre-determination of the client's needs and represents a "range of factors in the material and social environment together with the subjective experience of the individual" (1981, p. 476). Their Quality of Life Checklist includes a set of life domains that are rated by clients as satisfactory or unsatisfactory. No data regarding the statistics of the checklist are provided: it mainly serves as a "guide to treatment" (p. 483).

Baker and Intagliata (1982) developed a Quality of Life

model which included Bradburn's Affect Balance Scale (1969), and a brief Satisfaction with Life Domains Scale adapted from the Andrews and Withey (1976) model.

The second approach to quality of life measurement for this population is defining quality of life in terms of environmental mastery or adaptive functioning. This definition was briefly described earlier in this review, but will be discussed in detail as it relates to the findings for this population.

Quality of life has been defined in terms of coping or mastery behaviors in the sense that "persons possess inherent tendencies to develop skills, to promote their own learning, and to perceive themselves as active agents governing their own lives" (Zautra & Goodhart, 1978, p. 5). This definition of life quality is related to the notion of positive mental health, and suggests that life satisfaction is enhanced as individuals' increase their ability to master their environments. This model has received substantial support from a variety of sources. One source of support is the theoretical literature that defines well-being as as a function of an individual's skills matched with environmental challenges (Deiner, 1984) and views quality of life as related to experiences of self mastery (Jahoda, 1958; Zautra & Goodhart, 1978). The approach also receives indirect support from the literature on the use of social support systems as a means

of enhancing an individuals quality of life by building coping skills which, in turn, decrease stress and promote well-being (Beiser, 1974; Caplan, 1974).

Applying this theoretical model of life satisfaction to this population, research in this area has attempted to measure adaptive behaviors and instrumental role functioning in order to assess overall quality of life. The basic assumption is that "the actualization of abilities is intrinsically motivating but is also important because of the functional relationship of the individual to his or her environment. Thus, quality of life is a measurement of the individual participating in the environment" (Bigelow et al., 1982, p. 350).

In operationalizing this theory, researchers have developed a number of scales including the Oregon Quality of Life Scale (Bigelow et al., 1982); the Quality of Life Scale (Heinrichs et al., 1982); and, somewhat differently, the Schedule of Recent Experiences (Grant, Sweetwood, Yager, & Gerst, 1981). The latter is a measure of life events that may have precipitated psychiatric symptoms, rather than an assessment of adaptive or instrumental functioning.

The implicit assumption in all of these scales is that a community treatment intervention in any setting is designed to increase the coping skills of the target population. Those that succeed in this goal promote the quality of life of clients by enhancing their abilities to master

appropriate environments. It follows, then, that these instruments are primarily designed as measures of client change, or indirectly, program effectiveness (Bigelow, et al., 1976; Heinrichs et al., 1981; Malm et al., 1981).

Review of Findings

The following section discusses conclusions drawn from the research on quality of life and individuals with chronic mental illness.

Using Quality of Life as a Methodology with this Population

One of the central findings that generalized across all of the quality of life literature with this population is that it represents a viable means of investigating the subjective well-being of individuals with chronic mental illness. Those investigators who examined the reliability and validity of the quality of life measures in detail (Lehman, 1988; Baker & Intagliata, 1982; Bigelow et al., 1981) were able to conclude that the measurement of subjective well-being in this population behaved similarly to the measurements in the general population. This conclusion was based on several corresponding findings.

One was that most demographic characteristics exerted a modest influence on measures of well-being (Lehman et al., 1986; Bigelow et al., 1981), a conclusion that is similar to that drawn in quality of life research with general

populations (e.g., Campbell et al., 1976; Andrews & Withey, 1976; Goodstein, Zautra & Goodhart, 1982 on gender; Bradburn & Caplovitz, 1965; Glenn & Weaver, 1981 on education; and Stock, Okun Haring, & Witter, 1983 on age). Some of these findings, as discussed earlier, remain equivocal, when other confounding variables are not controlled (see Deiner, 1984). In addition, race seems to remain a variable that is related to overall reports of life satisfaction (Campbell et al., 1976; Andrews & Withey, 1976), but again, results may be confounded with other variables, e.g., income, living situations, etc.

In terms of findings related to the contribution of objective life conditions, e.g., housing, leisure activities, work, to overall life satisfaction, most reports indicate that finances are a major source of dissatisfaction for several of the groups measured (Lehman et al., 1986; Lehman, 1983; Baker & Intagliata, 1982), with health status another consistent source of dissatisfaction (Baker & Intagliata, 1982; Heinrichs et al., 1984). Although Lehman (1983) found employment correlated with subjective well-being for his sample, other studies found employment exerting only a moderate influence on overall well-being (Malm et al., 1981; Baker & Intagliata, 1982), a finding that is, in general, supported by other quality of life studies (e.g., Campbell, 1976; Andrews & Withey, 1976). There is, however, a body of research that has

argued for the significance of the relationship between work life and quality of life that has been discussed earlier (Near et al., 1978; Rice et al., 1980).

Clinical Characteristics - Psychiatric Diagnosis:

Again, findings in this area are equivocal, although a general conclusion drawn might be that some psychiatric diagnostic categories influence subjective well-being, but these tend to be diagnostic categories related to affective states (e.g., depression see Lehman, 1983; 1988). Thus, Baker and Intagliata concluded that "ratings of clients' mental health status were quite significantly related to their reported life quality" (1982, p. 78). But, in a series of investigations of the relationship of diagnostic categories to reports of overall well-being, Lehman concluded that "certain aspects of psychopathology, specifically depression and anxiety, correlate moderately with subjective QOL indicators" (1988, p. 56). But all of the researchers in quality of life for this population concluded that despite psychiatric symptomatology, measuring quality of life or subjective well-being represented a viable means of measuring client change or program outcomes (Lehman et al., 1986; Lehman, 1988; Baker & Intagliata, 1982; Malm et al., 1982; Heinrichs et al., 1984).

Conclusion

Quality of life research with this population emerged as

a means of evaluating programs and individual gains. In this context, it provides a global assessment of program effectiveness based on a broader perspective than any single criterion such as employment or re-hospitalization.

Quality of life research with chronic mentally ill persons also provides a means of assessing the "goodness of life" as the individual reports it. As such, it allows the researcher to elicit subjective data both from an overall perspective (global satisfaction) as well as from the perspective of investigating the impact of specific life conditions on overall well-being (e.g., housing, employment, etc.)

Psychiatric Rehabilitation and the Impact of Work

The final issue to address in this review is the psychiatric rehabilitation literature on the impact of work. Unfortunately, as was pointed out earlier, there are few studies which have examined the issue of the meaning of work; instead, the bulk of the voluminous literature on work and individuals with mental illness has focused on predicting vocational success (see, Anthony & Jansen, 1984, for a review of these studies) or on examining the impact of various vocational intervention models on work adjustment and job placement (e.g., see Dion & Anthony, 1987, for a comprehensive review of these).

Despite this apparent shortcoming, there is no lack of

literature which attests to the importance of work for this population (Anthony, Howell, & Danley, 1984; Neff, 1967; Ruffner, 1986; McCrory, 1987; Beard et al., 1982), basing this assertion on intuitive rather than empirical tests. Thus, Jacobs, Kardashian, Kreinbring, Ponder and Simpson (1984) assert that "the opportunity to work has been found to help decrease psychopathological symptoms" but don't support their assertion (p. 87). Similarly, Anthony et al. (1984) argue that "work is a major part of a person's life - whether that person is psychiatrically disabled or not" (p. 215), but again don't provide any support for this assertion. While it is difficult to argue with authors who assert the central importance of work in American society, there is some research, cited earlier, which indicates that focusing on work, for nonwork centered populations, may do little to improve the quality of life for these groups (see, for example, Wright, 1978; London, Crandall & Seals, 1977). This possibility in the field of psychiatric rehabilitation has received little attention.

The few studies that have examined therapeutic and social gains related to work status have typically examined these outcomes in studies designed to measure program effectiveness. Thus, for example, Wasylenki, Goering, Lancress, Ballantyne, and Farkas (1985), in a comparison of two matched groups, one receiving

rehabilitation services (including employment) and the other not, concluded that the rehabilitation group had higher levels of satisfaction. The difficulty with the results is that higher levels of satisfaction may have been the result of a number of rehabilitative services this group was receiving, and not simply employment services. In a similar study of group comparisons, Mathews (1979) found increases in measures of self concept in a group that participated in a 10 week work program compared to one that did not, but the nonworking group did not receive any rehabilitation services during the same period.

In a somewhat different study on the meaning of work, Florian and Dor Har-Even (1984) compared two groups of individuals with psychiatric disabilities to a group with physical disabilities and a nondisabled group along three dimensions of work-related meaning: Personal Satisfaction, Economic Concerns, and Social Mastery. The central purpose of the study was to validate a three-factor model of work meaning; the finding was that Social Mastery was not relevant to evaluations of work by the groups that were psychiatrically disabled. It is important to note, though, that the disabled groups who participated in the study were in the "latter stages of vocational rehabilitation training" but were not actually working. Thus, the study focused on assessing the meaning

that future work might have to the individual, rather than examining its impact on current functioning.

It is curious to compare the body of literature that asserts the significance of work to the lack of studies that examine it. While the vocational psychology literature has long been concerned with the meaning of work (Dunnette, 1973; Porter, Lawler & Hackman, 1975; Warr & Perry, 1982) to various groups, the field of psychiatric rehabilitation has neglected this issue, focusing instead on individual, programmatic, and systemic issues that serve as barriers to work. Of course, given the employment outcomes cited earlier in this study, perhaps the most salient vocational issue in the field is not meaning, but method. That is, the focus is on 'how' rather than 'why'. On the other hand, if the relationship between work and life satisfaction is not a simple one-way model, then practitioners and program developers need to address the impact of work when determining service priorities and developing program models.

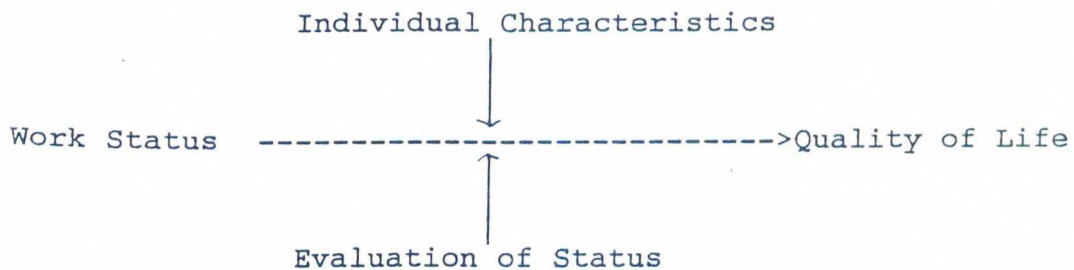
Conclusion

This review of the literature leads directly into a discussion of several models illustrating the relationship between work and life satisfaction that have either been described or implied in the research literature.

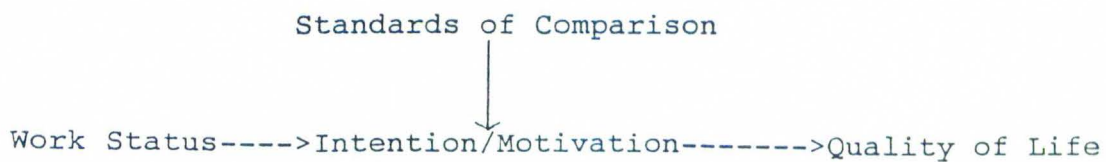
The first model, drawn from the psychiatric rehabilitation literature is the simplest one, suggesting a direct relationship between employment status and quality of life. Unfortunately, this simple model is derived primarily from assumption rather than research, but reflects not only current literature, but current federal policy (Rehabilitation Acts Amendments of 1986; Rehabilitation Services Administration Request for Proposals, January, 1987; February, 1988). Although some authors in the field of rehabilitation for psychiatrically disabled persons would argue that so simple an approach ignores important components of the vocational rehabilitation model which stress job/client match strategies and providing career counseling and vocational guidance (see, for example, Anthony et al., 1984), the vast majority of the literature in this area addresses the issue of the importance of work per se, and not the factors that mediate or influence its relationship to well-being.

Work Status -----> Quality of Life

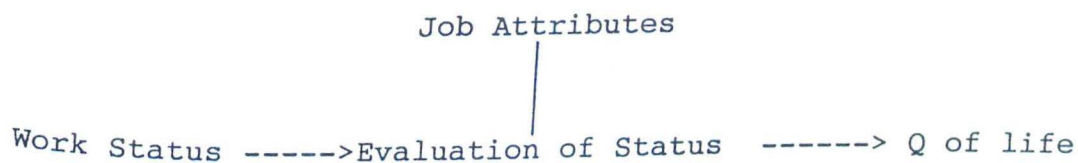
The second more complex model is based on quality of life research, where a consistent finding has been that the relationship between objective conditions (e.g., work) and overall life satisfaction is modest at best, and that significant factors such as evaluations of this condition, as well as individual characteristics mediate this relationship.



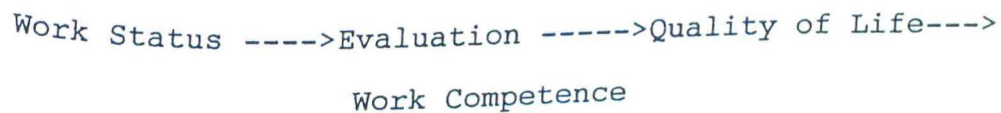
Quality of life research also suggests that the relationship between objective conditions and life satisfaction is mediated by internal and external standards of comparison. Thus, the model illustrated here builds on the relationships in the previous model and adds those variables that are related to an internally derived (e.g., aspirations, expectations) and externally derived (e.g., social comparisons) standard of comparison.



The relationship between work and life satisfaction may also be related to job satisfaction, as well as objective attributes of the job (e.g., wages, type of job, etc.). Thus the model below illustrates the addition of these factors in the relationship between work and life satisfaction.



Finally, research suggests that life satisfaction is related to enhanced adaptive behavior and mastery. For our sample, the figure would look as drawn below:



Research demonstrates that the relationship between paid employment and quality of life is a complex one (see, for example, Campbell et al., 1976; Campbell, 1982; Near et al., 1980; Wright, 1978; Deiner, 1984). The mechanism through which individuals attach meaning to their work has been well researched in some fields, but findings remain

equivocal (Deiner, 1984; Michaelos, 1986; Kabanov, 1980) and seemingly related to the population the researcher is interested in (Warr and Perry, 1982; London, Crandall, & Seals, 1977; Krause and Markides, 1985).

This study is an attempt to address the research gap that exists in the field of vocational rehabilitation for individuals with psychiatric disabilities by exploring the impact that paid employment has on the quality of life. Given recent directions in federal policy and fiscal appropriations toward intensive job placement efforts, it is essential that program developers and practitioners turn their attention to toward understanding the meaning that work has to this population. The predominant focus on methods rather than meaning in the literature has left us with many explanations for why people fail but with no understanding of why they might succeed. This study will address this gap by beginning to explore the meaning that work has to evaluations of life.

CHAPTER III - METHODOLOGY

This study began with two related questions. At the general level, it sought to explore the impact that employment has on the lives of persons who are mentally ill. At a more specific level, it is designed to identify differences in reported life satisfaction across working individuals to determine what factors may influence self-reported satisfaction. In this section, the following topics are discussed: subjects, research design, instruments, and research methodology.

Subjects:

The study design required that two samples of mentally ill persons be located: one comprised of persons competitively employed for at least two months but not longer than nine months (Note 1), and the second comprised of persons participating in community rehabilitation programs but not employed.

The issue of nonequivalent groups will be addressed later in this chapter, but several steps were included in the research design as a means of matching the two groups as closely as possible. Criteria for subject inclusion were:

- 1) that the subject have a diagnosis of schizophrenia;
- 2) that the subject be receiving Supplemental Security Income.

The first criteria serves as a control, in the design of the study, for the influence of psychiatric diagnosis on quality of life ratings (see Lehman et al., 1986; Lehman, 1988; Baker & Intagliata, 1982). The second criteria was used as a means of providing a standardization across the sample for severity of illness (see, Goldman, Gattozzi, & Taube, 1981, for discussion of this issue). Other measures of severity (e.g., years or numbers of psychiatric hospitalizations) are confounded by age (e.g., commitment laws were looser pre-1970), as well as certain demographic characteristics which are related to increased episodes of psychiatric hospitalization without being reflections of the severity of the disability (Goldman et al., 1981; Dincin & Withridge, 1982). It should be noted, however, that there is a substantial body of research reporting that employment success is not related to psychiatric diagnosis - see Anthony & Jansen (1984), for a review of this issue. In addition, and this will be discussed later in this chapter, the counselors of all subjects who were selected for this study were asked to complete a rating scale measuring vocational development of the subjects (Hershenson, 1968; Hershenson & Lavery, 1978). The purpose of this instrument was to assess

between the employed and not employed groups on this index.

Finally, individuals selected for employment had to be working in competitive employment settings for at least 20 hours per week. Competitive employment is defined as integrated community settings earning at least a minimum wage.

Once programs were identified, 20 subjects from each program who met the study criteria were randomly selected for inclusion in the study. Subject selection was constrained by the limited number of individuals participating in community rehabilitation programs who are competitively employed. (One recent Maryland State survey estimated that less than 100 competitive employment placements of psychiatrically disabled persons participating in community rehabilitation programs were made in 1985). Although there are over 30 of these programs in the State, only 11 of them are currently certified by the Division of Vocational Rehabilitation to provide job training and placement services to DVR referred clients. Of these 11, 5 were selected that had reasonably high numbers of persons competitively employed (e.g., at least 20). Later, one program was eliminated since subjects did not meet study criteria.

It is important to note that community rehabilitation programs were selected as the as a source of subjects

because the mission of these programs is to develop needed skills to enable the individual to live, learn, and work in the community. Thus, all subjects, whether employed or not, received similar program services and training designed to promote personal, social and vocational independence.

In all, 81 subjects were included in the study: 41 who met standards for the employed group and 40 for the unemployed group (see Appendix A; Note 2).

Design

Kerlinger wrote that "both objective and subjective indicators will probably be used much more in scientific behavioral research in the next decade, especially in multivariate research that explores and tests theories and hypotheses on the complex relations among psychological, sociological and educational variables" (1986, p. 458). This statement provides an apt description of the purpose of the current study, as well as a description of the methodological issues.

This is a nonexperimental study, described by some authors as a 'passive observational approach' (Cook & Campbell, 1979), and by others as 'ex post facto' research (Gelso, 1979). Despite the descriptor, there are three issues that are central to defining studies of this nature.

One issue is the lack of control over the independent variable. The second issue is the lack of power to

assign subjects randomly to groups, a limitation that results in samples or groups that are non-equivalent, having been self-selected on the basis of a characteristic related to either the dependent or independent variable under study. The third issue in nonexperimental research is the "risk of improper interpretation" (Kerlinger, 1986, p. 358).

Given these limitations, despite efforts to control for rival explanations in the design of the study (e.g., matching individuals on severity of illness, on pre-employment history, and on diagnosis), it is still not possible within the confines of nonexperimental research to test the causal hypothesis, "if x (work) then y (satisfaction)". What is possible, though, is to examine the relationships between variables, and, using the research hypotheses as a guide, to use this study as a means of theory building, rather than theory testing (Schafer & Johnson, Unpublished). Similarly, Gelso (1979) describes the use of these studies as a means of "disconfirming hypotheses", and notes that studies of this nature may be useful in the early stages of research of a topic.

The limits of nonexperimental research have been identified in the literature and explicitly noted in this research study. Most writers in the field of research design (e.g., Cook & Campbell, 1979; Kerlinger, 1986) and

analysis (Pedhauzer, 1982) note that non-experimental research, when guided by theories and hypotheses is not limited as much by the nature of the study as by the nature of the erroneous uses and interpretations of the results of the study. Cook and Campbell (1979) suggest that when nonequivalent groups are used in research, efforts should be made to identify and explore alternative explanations for the data. This methodology has been adopted in Chapter 4.

Instruments

The Quality of Life Interview

The Quality of Life Interview (Lehman, 1983; 1988; Appendix B) is a highly structured interview eliciting responses on how the individual currently feels about his or her life. The Interview is designed to be administered by a trained person and requires about 45 minutes to complete.

The Interview consists of items that measure objective conditions and subjective evaluations of these conditions in nine life domains (living situation, family relations, social relations, leisure, work, finances, safety, health, and religion), as well as two overall measures of global satisfaction. Interview items are quite concrete and require only one word responses. Questions concerning objective conditions are measured as yes/no or frequency responses, while subjective responses are based on the

Delighted-Terrible Scale (Andrews & Withey, 1976; Lehman, 1988), a seven item rating scale (see Appendix B). The Interview begins with a question about overall life satisfaction and concludes with a repeated general life satisfaction question.

The Quality of Life Interview has been used with hundreds of mentally ill persons: both residents of hospitals and persons living in the community. Scale statistics for the Interview were based on three separate samples of individuals with mental illness: two groups living in community residential settings and one in-patient group.

Test-retest reliabilities have been conducted on each of the scales of the Interview: objective conditions, subjective evaluations, and global ratings.

On the objective scales, test re-test correlations ranged from .60 on health to .93 on finances (Lehman, 1988). On the subjective scales, test-retest coefficients range from .41 for Safety to .95 for Leisure.

Internal consistency reliability coefficients (Cronbach's Alpha) were also computed for each of the three samples. These were similar to test-retest correlations, ranging from .60 on amount of psychiatric care to .82 for Family Relations. Similarly, coefficients for subjective conditions were even stronger, with most in the .80's range. Overall, reliability coefficients were

adequate for group comparison methodology, showing significant levels of stability for most interview items and scales (Lehman, 1988, p. 55).

Validity.

The Quality of Life Interview was evaluated in the following way: 1) Face and content validity of scale items; 2) consistency of relationships among measures across populations studied; and 3) comparison of multivariate prediction models produced by the instrument between mentally ill and normal populations studied.

Content Validity:

Items chosen for inclusion in this Interview were developed or selected from a wide variety of existing measures on the quality of life literature (Lehman, 1988). Factor analyses support a central factor for each of the nine scales.

Construct Validity:

Intra-domain correlations between objective and subjective quality of life measures are modest, consistent with findings from other quality of life studies (e.g., Andrews & Withey, 1976; Campbell, Converse & Rodgers, 1976; Deiner, 1984). Second, domain-specific subjective quality of life measures correlate most strongly with life satisfaction, while objective quality of life measures correlate less strong and demographic and diagnostic variables correlate least strongly (Lehman, 1988). This is

also the central finding of other studies using these measures. Third, diagnostic categories of depression and anxiety showed significant negative correlations with life satisfaction.

Predictive Validity:

The pattern of predicted variance across the three chronic patient populations studied were similar and compared favorably with similar analyses from general population studies (Lehman, 1988).

Vocational Development Rating Scale

This is an eight-item rating scale designed to test Hershenson's model of the sequencing of stages in vocational development (Hershenson, 1968; see Appendix B). Hershenson's model of vocational development suggests that there are five sequential stages to this development: social-amniotic, self-differentiation, competence, independence, and commitment. Subsequent studies (Hershenson & Langbauer, 1973; Hershenson & Lavery, 1978) supported the proposed sequencing of three of these stages: self-differentiation, competence, and independence for samples of inner city residents of a vocational training program, for mid-level managers, and for deaf individuals participating in a vocational training program. The purpose of the vocational development rating scale in the current study is twofold:

- 1) It provides a means of examining differences in vocational development between the two groups being studied (work and non-work) in order to examine the possibility that these differences might be related to outcomes on the dependent variables; and
- 2) It allows for an examination of the sequencing of vocational development stages for this sample of disabled individuals.

Procedures:

Permission to conduct the study was requested of each of the directors of the community rehabilitation programs participating. In most cases, this permission involved the preparation of a proposal for approval to appropriate oversight bodies (e.g., the Sinai Hospital Research Committee, the Board of Directors of other programs). Interest in results was noted by each of the provider groups, and results will be provided in exchange for participation. In addition, a brief explanation of the study was given to each of the subjects participating, and permission to proceed with the interviews was obtained prior to interviewing. As soon as subjects were included in the study, they were assigned a code number. Subsequently, during data analysis, name lists were destroyed and code numbers maintained in order to protect anonymity.

Most of the data collection was conducted by the study author. In order to insure that interviews were not biased by the researcher's knowledge of design, eight persons were interviewed by another researcher and then re-interviewed by the author. The two interviews were examined for inter-rater reliability. Re-interviews were scheduled for the same day in order to mitigate the confounding of rater reliability with scale reliabilities. Pearson correlation coefficients for the non-binary objective scales and for all of the subjective scales (eight) indicated that reliability coefficients were in the .90's for the subjective scales. Coefficients for the two global items were .86 and .67, respectively. (In subsequent analysis, these items were averaged). For the objective scales, coefficients ranged from the upper .90's for health status to .79 for living situation. Coefficients were strong enough to rule out researcher bias. See Appendix C for details on the reliability coefficients.

Research Questions and Data Analysis:

The purpose of this study is to determine if paid employment influences the quality of life of mentally ill persons. More specifically, it is designed to investigate whether persons with severe mental illness who work in competitive environments report higher levels of life satisfaction than do those who don't; whether satisfaction

with job or non job status mediates the relationship between paid employment and life satisfaction, whether motivation or intention to change mediates the relationship between life satisfaction and employment status, whether counselor ratings of work competence mediates the relationship between work status and life satisfaction, and which demographic characteristics influence this relationship.

These are stated below in specific form:

Research Question #1: Are there any differences between the employed and non-employed group on objective conditions of life quality;

Research Question #2: Are there any differences between the employed and non-employed group on subjective measures of life satisfaction;

Research Question #3: Are there any differences between the employed and nonemployed group when individuals are grouped according to satisfaction with current status;

Research Question #4: Do individual characteristics mediate the relationship between work status and life satisfaction?

Research Question #5: Are there any differences on life satisfaction between employed individuals grouped according to high or low job satisfaction;

Research Question #6: Are there any differences on life

satisfaction between individuals grouped according to counselor ratings of work competence.

A multivariate analysis of variance was selected to determine the significance of the effects. This procedure was selected since quality of life is, definitionally, a 'multivariate model of well-being'. Although analysis of variance models are more appropriately used in experimental designs, selection of this method was based on several factors. The first was that it allows for examination of the significance of main effects and interaction effects.

The second was that the study design met the criteria for an analysis of variance design (e.g. that sample sizes and cell sizes be equal). Finally, Pedhauzer (1982) has demonstrated that when there are only two groups, multivariate analysis of variance, multiple regression analysis, and discriminant analysis are equivalent (chapters 17 and 18). In determining the significance of effects, alpha was set at the .05 level since this is an exploratory study. It is important to note that because sample sizes are small, one of the limitations of the study is that analyses may not detect differences where differences do exist (Type II error). In order to mitigate the impact of this on the results, descriptive statistics are provided on means and standard deviations, and significant differences in univariate F Ratios are noted and included in appendices to this study.

In the data analysis, objective conditions (n=8) and subjective scales (n=8) were grouped into a composite index as dependent variables since these scales are intercorrelated and together represent a measure of well-being or life satisfaction (Lehman, 1983; Lehman et al., 1986; Andrews & Withey, 1976). The Work/Nonwork scale was not included in the grouping. The next chapter reviews the results of these analyses.

CHAPTER IV - RESULTS

This chapter presents the results of the multivariate analysis of data on life satisfaction and quality of life, as well as analysis of the relationships between job variables and job satisfaction and life satisfaction.

Although this nonexperimental study is not designed to test a model, results are organized according to the models that were described in Chapter 2. It is important to note that these models are illustrated for clarity of presentation, and not because they are being 'tested'. The central purpose of the first section of data analyses is to explore the relationship between employment status and life satisfaction as an assessment of main effects, the second section explores the effects of the variables that are proposed to mediate this relationship; and the final section reviews work status and job satisfaction.

Descriptive Tables

Because individuals were not randomly assigned to status or program, descriptive information is first provided on the demographic characteristics of the sample set.

Demographic Information:

Individuals were not randomly assigned to groups, but were randomly selected from programs for participation in

the study. Table 1 below presents demographic information for two groups of individuals: employed and unemployed.

Table 1

Demographic Characteristics of the Employed and Nonemployed Groups

	Employed (n=41)	Not Employed (n=40)
Mean Age	32.7	33.8
Mean Level of Education	11.5	12.2
Percent of females (a)	39 (16)	42 (17)
Percent minority (b)	49 (20)	50 (20)
Percent residing in supervised residence (c)	39 (16)	42 (17)
Percent residing with family (c)	39 (16)	42 (17)
Percent residing alone non-relatives (c)	22 (09)	15 (06)
Percent hospitalized at Least Once	100	100
Number mentally Retarded	(1)	0

Note: Numbers in parentheses designate frequencies in each category.

- (a) $\chi^2 = .080$
 (b) $\chi^2 = .000$
 (c) $\chi^2 = 3.907$

Table 1 data suggests that the two groups of working and nonworking individuals were quite similar in demographic

and background characteristics.

This pattern is not surprising since research literature suggests that vocational success is not related to demographic or background characteristics (Anthony & Jansen, 1984), but may be related to previous work experience. It is unclear, though, whether work experience promotes the development of skills that enhance subsequent vocational success, or if individuals are able to work because they possess these skills. In addition, there is a body of research literature supporting the independence of psychiatric symptoms and subsequent work behaviors (Ellsworth et al., 1968), an independence that Neff (1967) described as the 'semi-autonomous' functioning of the work personality.

Mean Scores on Life Satisfaction Indices:

In order to provide some basis for comparison, means from this sample were compared to means from two other samples of individuals on life satisfaction measures. These means were derived from similar scales which asked respondents to rate items on a scale from 1 (lowest) to 7 (highest)

The set of domains is listed in Table 2 along with the three groups used for comparison: the sample from the current study; a sample of individuals with mental illness residing in community residences in Rochester New York (from Lehman, 1986), and a national sample from the

Campbell et al (1976) data. Table 2 provides the means for life satisfaction scores for each of these three groups:

Table 2

Mean Life Satisfaction Ratings for Samples from Current Study, Lehman Samples of Community Group, and Campbell et al. (1976) data from national survey

		^a	^b
	Current Study (n=81)	Lehman Data (n=92)	Campbell data (n=2,142)
Finances	4.2	4.2	5.3
Family relations	4.9	4.8	5.9
Health	5.1	5.2	5.8
Living Sit.	5.0	5.1	5.6
Safety	4.8	4.8	c
Social rel	4.6	5.0	5.7
Leisure	4.9	4.8	5.6
Life/General	4.8	4.9	5.2

a From unpublished data with permission of Dr. Anthony Lehman.

b From The Quality of American Life (p. 63) by A. Campbell and P.E. Converse, and W. L. Rodgers, 1976. New York: Russel Sage Foundation.

c Not available

The pattern that was expected is the one that emerges upon inspection of Table 2 data. The samples from the current study were similar to the sample from the Lehman et al. (1986) data for individuals living in community residences on most of the scales that measured life

satisfaction.

Another means of examining the relationship between study data and general population data is to compare the correlation between global life satisfaction scores and individual life domains. Comparison of all of these scales to global measures is available in Table D-1. Table 3 compares correlations for selected scales to available national data from Andrews and Withey (1976).

Table 3

Correlations between Selected Life Domains and Global Life for Current Study and General Population Data from Andrews & Withey (1976)

Domain	Current study	Andrew & Withey ^a
Living situation	.38	.49
Family Relations	.53	.50
Social Relations	.55	.55
Finances	.43	.49
Safety	.50	.23
Health	.39	.32
Job	.34	.32

Note: All coefficients are Pearson's r.

a From Social Indicators of well-being (p. 162) F.M. Andrews and S.B. Withey, 1976. New York: Plenum Press.

Data in Table 3 illustrates somewhat similar correlations between the current study and the data from the national survey which used a similar seven-point satisfaction scale.

Interestingly, the only scale that seems different is the correlation between satisfaction with safety, which tapped how secure the individual felt in his or her home and neighborhood environments and global life satisfaction. The strength of the correlation between Safety and Well-being is puzzling, and may be reflecting differences between individuals who lived alone or in group homes and those that lived with their families. Interestingly, the correlation between Safety and Global satisfaction for those living alone or in group homes is .56, and .33 for those living with their families.

The following section examines each of the research questions generated for this study. In order to facilitate cohesiveness of these results, analysis is organized according to the model descriptions presented in chapter two. Thus, the first series of analyses explore the simple model which suggests a direct relationship between work status and quality of life. The next group of analyses evaluate two sets of variables that mediate this relationship: one is satisfaction with current status and the second group is individual characteristics. The third analysis examines discrepancy factors including intentionality and motivation that mediate the relationship between status and satisfaction. The final set of analyses presents the results of vocational development ratings, as well as examination of job characteristics to life

satisfaction.

For clarity of presentation, these results are grouped according to the models that are being explored. In order to mitigate the potential problem that might result from small sample sizes, results are displayed descriptively where appropriate so that the reader may examine the differences between means on each of the scales being analyzed. Although multivariate analysis was selected to analyze group differences, univariate differences are noted where they are significant.

Work Status ----->Quality of Life

The first question was designed to examine the difference between the two groups on objective conditions of life domains. Subjects for this study were equally divided between four different community based programs. Therefore, in assessing differences between the two groups on the dependent variables, program membership was also analyzed in order to determine its effect on life satisfaction.

Table 4 presents the the mean scores and standard deviations of the two groups on each of these objective scales.

Table 4

Mean Scores of Employed and Nonemployed Groups on Eight Objective Scales

Scale	Employed		Not Employed	
	M	SD	M	SD
Living Situation	6.6	1.7	6.9	1.7
Family Contacts	3.6	1.2	3.8	.9
Social Contacts*	15.8	4.4	13.3	5.6
General Health	3.1	.8	3.0	.8
Frequency of Health Care	1.0	1.1	1.0	1.2
Frequency of Mental Health Care	3.0	.9	3.2	1.0
Leisure Activities	12.3	3.7	13.4	5.3
Money**	199.53		99.23	

*Univariate F Ratio is Significant; $p \leq .05$

**Univariate F Ratio is Significant; $p \leq .001$

A multivariate analysis of variance for these objective conditions was not significant ($F=1.72$; $df=7,73$).

There does not appear to be a significant relationship between work status and objective life conditions.

The second research question addressed the difference between the two groups on satisfaction with life domains. Table 5 provides mean scores and standard deviations for the two groups on eight subjective domains.

Table 5

Mean Scores for Employed and Nonemployed Groups across Subjective Life Domains

Domain	Not Employed (n=40)		Employed (n=41)	
	M	SD	M	SD
Global	4.7	1.6	5.0	1.4
Living	5.0	1.1	4.9	.91
Family	4.8	1.2	4.9	1.1
Social	4.6	1.2	4.7	1.1
Finances	4.2	1.6	4.1	1.3
Safety	4.8	1.5	4.8	1.2
Health	5.1	1.0	5.0	.98
Leisure	4.7	1.6	5.0	1.4

Note: Means are based on Scales of 1 (Terrible) to 7 (Delightful)

In a multivariate analysis of variance with group status as the main effect, and life satisfaction scores on the 8 domains as the dependent variables (satisfaction with: housing, social life, leisure activities, family, safety, health, finances, and global), differences between the two groups were not significant ($F=.64047$; $df=8,72$).

There does not appear to be a significant relationship between work status and subjective life domains.

Finally, Table 6 presents the mean scores and standard deviations for subjective life domains and the four programs.

Table 6

Mean Scores for Four Programs across Subjective Life Domains

Domain	S.T.E.P. (n = 21)		St Luke (n=20)		P.E.P. (n=20)		Changing Dir. (n=20)	
	M	SD	M	SD	M	SD	M	SD
Global	4.8	1.8	4.4	1.5	5.0	1.5	5.0	1.4
Living	5.0	1.2	4.7	.87	5.2	.95	5.0	.74
Family	4.9	1.5	4.4	1.5	5.1	1.2	5.2	.92
Social	4.4	1.2	4.4	1.5	4.9	1.4	5.0	.97
Financial*	4.0	1.8	3.3	1.6	4.8	1.3	4.5	1.0
Safety	4.6	1.6	4.6	1.4	4.6	1.2	5.4	.97
Health	4.7	1.0	5.0	.84	5.3	.78	5.3	1.0
Leisure	4.8	1.4	4.3	1.2	5.0	1.4	5.0	1.2

Note: Means are based on scale ranging from 1 (Terrible) to 7 (Delighted)

*Univariate F Ratio Significant; $p \leq .05$

A multivariate analysis of variance yielded a non-significant F ratio of 1.13; $df=24,204$.

It appears that these data do not support a direct relationship between work status and life satisfaction or quality of life. The next section reviews the results of variables that are hypothesized to mediate this relationship.

Mediating Variables: Results of Analysis

Studying the effects of the variables that mediate the

relationship between life satisfaction and work status is primarily a study of the interaction effects of these variables with employment status. The suggestion is that employment status combines with these nonwork factors to "produce" life satisfaction. Although main effects may be significant, the analyses are designed to explore the interaction effect. When significant differences are identified, subsequent analyses examines these differences where appropriate.

Again, for clarity of presentation, results of each analysis are preceded by diagrams which illustrate the mediating variables that are being examined. These diagrams are for illustrative purposes only, and are not attempted to represent models that are being 'tested' by the subsequent analyses.

Work Status ---->Individual Characteristics ----->Q of Life

Because theories of life satisfaction suggest that individual characteristics may be related to reports of satisfaction, analyses were conducted on sex, race, and educational level. These variables were derived from research which has reviewed the impact of individual characteristics as they relate to work status and satisfaction, and research with individuals who are mentally ill.

Table 7 presents the results of a multivariate analysis of variance with sex and group as the main effects and life satisfaction measures the dependent variables:

Table 7

Group and Sex by Subjective Life Domains

Effect	Wilks	DF	Error DF	F	Signif. of F
Sex	.85281	8	71	1.51021	.169
Group	.93237	8	71	.63465	.746
Sex x Group	.80609	8	71	2.10490	.047*

*Significant, $p < .05$

There were no significant differences in the main effects, but there was a significant interaction effect. Gender appears to be a mediating variable between employment status and life satisfaction (see Appendix E for cell means). Univariate F Ratios for each of the Subjective Life Domains for the interaction effect are significant for six of the eight domains: global life, family, social, finances, safety, and leisure (see Table F-1). None of the univariate F ratios was significant for either of the other main effects.

Examination of the cell means for this interaction elicits an interesting pattern in the data (see Figures 4 and 5). Although employed males are the most satisfied

Figure 4

Employed and Nonemployed Males by Subjective Life Domains

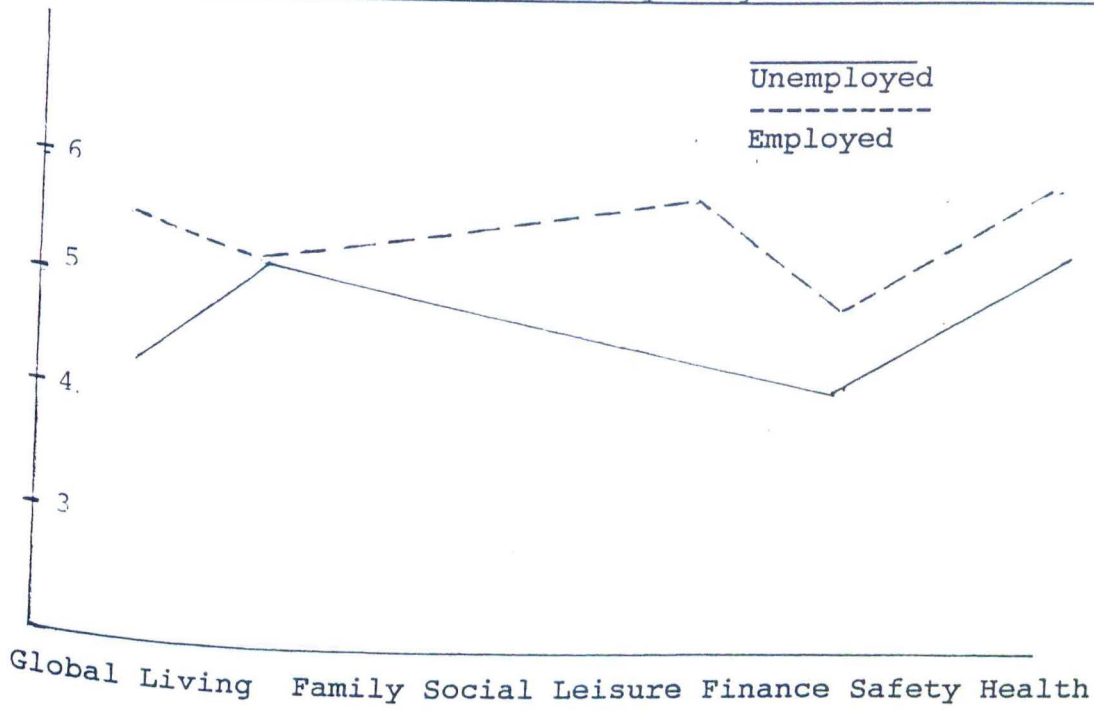
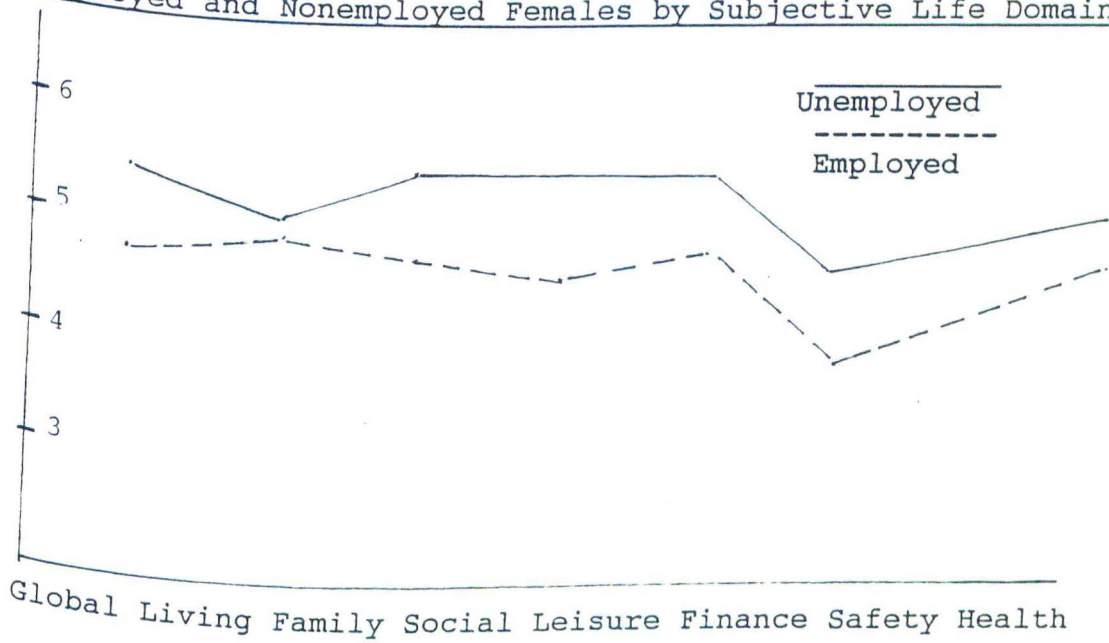


Figure 5

Employed and Nonemployed Females by Subjective Life Domains



group and unemployed males the least, unemployed females appear to be the next most satisfied, and employed females the next to least. Although this finding is at first puzzling, it is supported by general quality of life studies which report that unemployed men are the least satisfied with life (Campbell et al., 1976; Campbell, 1981)

For comparisons between employed and unemployed women, findings are more equivocal (see chapter 2 for a review of these). Some of these findings report that life satisfaction for working women is mediated by a number of factors including marital status, number and ages of children, and social role definitions. Some of this data is not available in the current study, and while data on the other variables is available, numbers of working women who have children or who are married is so small (6 and 4, respectively) as to preclude analysis.

The next individual characteristic that was reviewed in terms of its mediating effect on life satisfaction was race. Table 8 below presents the results of this analysis:

Table 8

Race and Group by Subjective Life Domains

Effect	Wilks	DF	Error DF	F Ratio	Signif. of F
Group	.931	8	70	.64553	.737
Race	.769	8	70	2.629	.014*
Group X Race	.834	8	70	1.747	.103

*p \leq .05.

Interestingly, there was no interaction effect for race nor a main effect for groups (see Appendix E for the cell means and standard deviations). In order to explore this relationship, Figures 6 and 7 graph the data concerning employed and nonemployed caucasian and minority members of the sample. It is important to note here that even though the interaction of group and race was not significant, five of the eight univariate F ratios on the subjective domains were significant (living situation, family, finances, safety, and social - see Table F-2). Figure 6 illustrates the similarity in the mean scores of the two groups of employed subjects across all of the domains. Figure 7, on the other hand, indicates differences between unemployed white and minority subjects, demonstrating that white subjects had lower means scores than unemployed minorities across all of the domains listed.

In order to further explore the issue of race, the samples were examined for differences in economic background based on responses that elicited information concerning family background, parent's educational levels, and parent's occupational status. Table 9 summarizes these findings.

Figure 6

Employed Caucasians and Minorities Across Subjective Life Domains

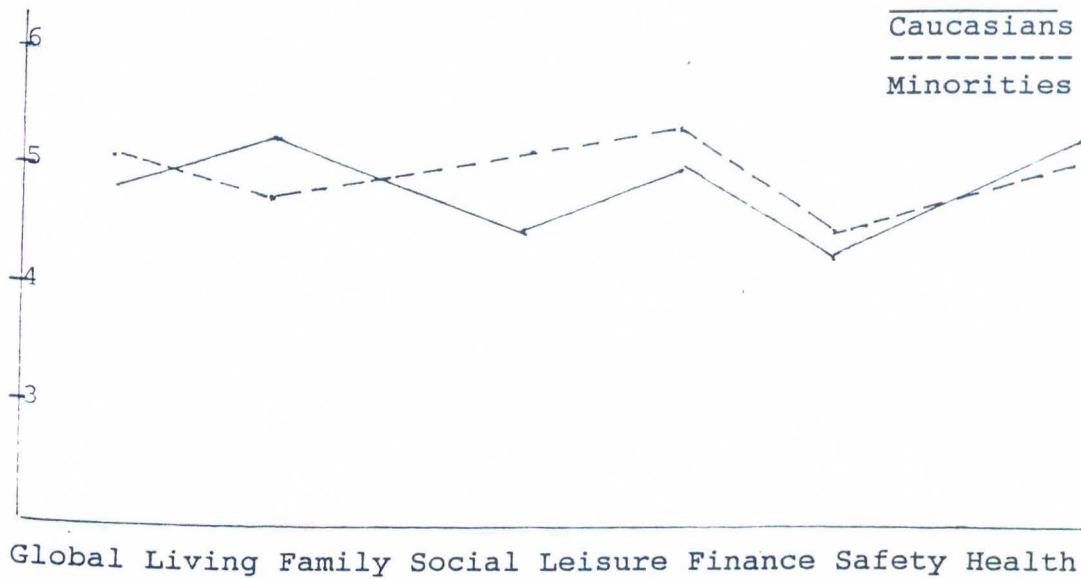


Figure 7

Nonemployed Caucasians and Minorities by Subjective Life Domains

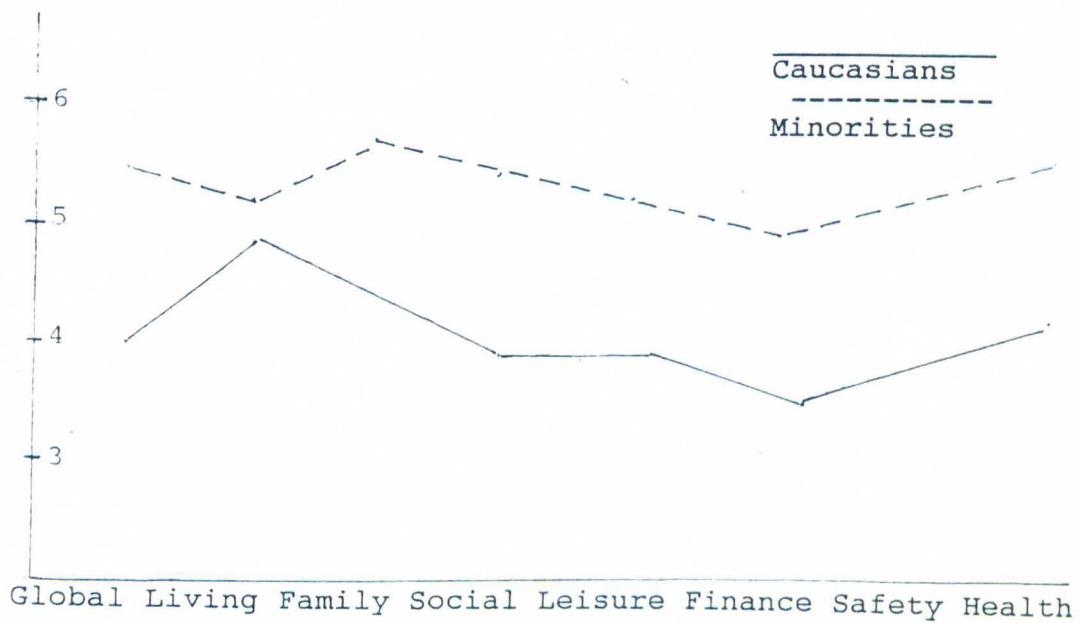


Table 9

Family Background Characteristics of Minority and Caucasian Subjects

	Minority n = 40	Caucasian n = 41
Percent from 2-Parent Households	60 (24)	65 (27)
Percent from Households where Parent Had Completed Highschool	47 (19)	68 (28)
Percent from Households with Both Parents Employed	25 (10)	41 (17)
Percent from Households Report Parent had Skilled or Managerial Employment	40 (10)	51 (21)

Note: the numbers in parentheses designate frequencies of each category.

Examination of data in Table 9 indicates that caucasian and minority persons in this sample differed on a number of family background characteristics. Available information does not allow for conclusions to be drawn concerning what 'race' represents, although figures do support expected differences in family background characteristics between these two groups.

Finally, Table 10 summarizes the results of a multivariate analysis of variance looking at the effects of gender, race , and group status. See Tables F-1 and F-2 for univariate F Ratios for each of the domains.

Table 10

Race, Gender, and Group Status by Subjective Life Domains

Source	Wilks	DF	Error DF	F Ratio
Race	.721	8	66	3.185*
Gender	.841	8	66	1.55
Group	.928	8	66	.637
Gender X Race	.823	8	66	1.77
Group X Race	.813	8	66	1.89
Group X Gender	.774	8	66	2.40*
Group X Race X Gender	.892	8	66	.995

* $p \leq .05$

The final analysis that was conducted on individual characteristics focused on educational level as a potential mediating factor in the relationship between group status and life satisfaction outcomes. Results of this analysis are presented in Table 11.

Table 11

Education and Group Status by Subjective Life Domains

Effect	Wilks	DF	Error DF	F Ratio	Signif. of F
Group	.964	8	71	.37861	.913
Educ.	.903	8	71	1.09237	.377
Group X Educ	.92113	8	71	.86846	.536

Group Status ----->Satisfaction----->Q of Life

with Status

The second illustration under these research questions suggests that the relationship between status membership and life satisfaction is mediated by satisfaction with status.

For this analysis, the sample was collapsed into two groups: those that scored below the mean on work or nonwork domain and those that scored above. This methodology was drawn from other literature which has examined the relationship between satisfaction with work or non work status and life satisfaction (see, for example, Near, Rice & Hunt, 1980). The questions here asked the respondent to rate feelings about work or unemployment on the same 7 point scale. Individuals scoring below the mean for the group were identified as 'unsatisfied' and those scoring above the mean were identified as 'satisfied' in the context of current employment status. The overall means for the two scales were 4.90, SD = .669 (employed) and 3.31, SD = .949 (unemployed).

A multivariate analysis of variance was conducted using group one (satisfied with status) and group two (unsatisfied with status) and employment status as the main effects. Results are presented in Table 12.

Table 12

Employment Status and Satisfaction with Status by Subjective Life Domains

Effect	Wilks	DF	Error DF	F ratio	Signif. of F
Group	.96877	8	66+	.29478	.954
Status Satis.	.83666	8	66	1.78499	.106
Group X Satis	.70109	8	66	3.89799	.001**

** $p \leq .001$

+ Data missing for 5 cases

Again, there were no significant main effects, but the interaction is significant, supporting the hypothesis that satisfaction with status (employed or unemployed) mediates the relationship between work and life satisfaction. Examination of the univariate F Ratios for this interaction indicates that satisfaction with finances, health and safety significantly differentiated the two groups (see Table F-3). This significant interaction effect is supported by quality of life literature which is based on the premise that it is not the objective condition itself which contributes to overall life satisfaction, but the individuals' evaluation of this status.

Third Group of Analyses

The fourth question explores the relationship between groups based on motivation to change. This was operationally defined in two ways. One was a response to

the item: Are you currently looking for work (or looking for another job if employed). Individuals responding yes to this item were coded as group one and individuals responding no were coded as group two. The second used counselor ratings of work motivation to collapse the entire sample into three groups: Highly motivated to work; Somewhat Motivated; Not Motivated (see Brief Vocational Rating Scale in Appendix B).

For the first analyses under this condition, a multivariate analysis of variance was conducted with Groups and Intention to Change as the main effects and means of life satisfaction scores as the dependent variable. Results of this analysis are presented in table 13.

Table 13

<u>Intention to Change and Group Status by Subjective Life Domains</u>					
Effect	Wilks	Df	Error DF	F Ratio	Signif. of F
Groups	.979	8	66+	.20544	.983
Look Work	.849	8	66	1.680	.129
Interaction	.864	8	66	1.480	.190

+Data missing for 5 cases

Neither main nor interaction effects were significant, suggesting that expressed intent does not mediate the relationship between work status and life satisfaction. Examination of Univariate F Ratios for this analysis

indicates that only the domain of Finances achieved significance at the .05 level (see Table F-4 for all univariate statistics associated with this analysis). Follow-up analysis on a related issue examined the impact of counselor ratings of motivation to work. Results of this analysis are presented in the table below, and again, are not significant, and none of the Univariate F Ratios were significant for this analysis.

Table 14

Work Motivation and Work Status by Subjective Life Domains

Effect	Wilks	DF	Error DF	F Ratio	Signif. of F
Group	.909	8	48+	.5712	.796
Motiv	.767	16	92	.81402	.667
Group X Motiv	.835	16	92	.53966	.919

+Data missing for 21 cases.

Interestingly, intention to change or assessment of work motivation does not appear to effect the relationship of employment to life satisfaction, although some research in this area (e.g., Rodgers, 1977) has reported that motivation to work may be a significant mediator in the relationship between work and life satisfaction for women.

Assessment of Working Individuals

This final section explores the second aspect of the

research problem (see Chapter 1), that is, what is the relationship between job satisfaction and quality of life. Earlier in this study, the correlation between job satisfaction and life satisfaction was reported to be .34 ($p < .001$). On the other hand, this study and all quality of life research has demonstrated that the intercorrelations between domains of life satisfaction are quite high (see Appendix D for a matrix of these correlations), and all of these domains correlate with satisfaction with life in general.

Examining the data on the employed group supports this supposition. For example, 39% of individuals who were above the mean on life satisfaction (measured as the average of the two global life items), were also above the mean on job satisfaction. Similarly, 34% of individuals below the mean on job satisfaction were below the mean on global life (interestingly, only 24% of the group represented 'discongruent patterns', that is below the mean on one measure and above the mean on other).

Another means of substantiating these figures is given in the table below, where the group was coded according to below or above the mean on job satisfaction and then analyzed for mean differences in global life satisfaction. Not surprisingly, the difference between the two groups was significant.

Table 15

Global Life Satisfaction Differences between Means of
Individuals Grouped by Job Satisfaction

Source	SS	DF	MS	F Ratio
Between	10.219	1	10.219	5.046*
Among	78.976	39	2.050	
Total	89.195	40	89.195	

* $p \leq .05$

Of course, these are only relationships and therefore are not causal determinants. For example, other factors might be influencing (and probably are) both job satisfaction and life quality. This issue has been the subject of much research in the area of the relationships between quality of work life and quality of life (see Chapter 2).

Although the determinants of job satisfaction are not of central concern to this study, two relationships were examined in detail in order to clarify some of the issues addressed in Chapter 1 concerning the finding that most individuals with severe mental illness are placed in low-level service jobs, despite attained educational levels.

There are two ways of examining this issue, both of which, due to the small numbers involved, are descriptive methods.

Figure 8 graphs job satisfaction means across type of job. For this sample, 44% worked in maintenance jobs, 15% in food services, 20% in unskilled clerical and office jobs, 12% in retail stock work, and 10% in skilled jobs. (For distribution by gender see Table G-1). Means are based on scales of 1-Terrible to 7-Delighted.

Patterns of job satisfaction across type of jobs indicate that individuals in clerical or office jobs express the highest mean levels of job satisfaction.

Another important relationship to consider in the domain of work is the relationship between job satisfaction and level of education. Figure 9 illustrates the relationship between level of education and expressed job satisfaction for this sample. Again, mean job satisfaction scores are based on a scale ranging from 1 (Terrible) to 7 (Delighted). Although the difference between the means are small, there is a pattern indicative of education being inversely related to job satisfaction.

The final series of analyses for this Chapter concerns counselor ratings of individuals using Hershenson's Vocational Development Scale.

Table 16 presents mean scores on each of the three factors that comprise the brief rating scale: Self Differentiation, Work Competence, and Work Goals.

Figure 8

Mean Job Satisfaction Scores by Type of Job

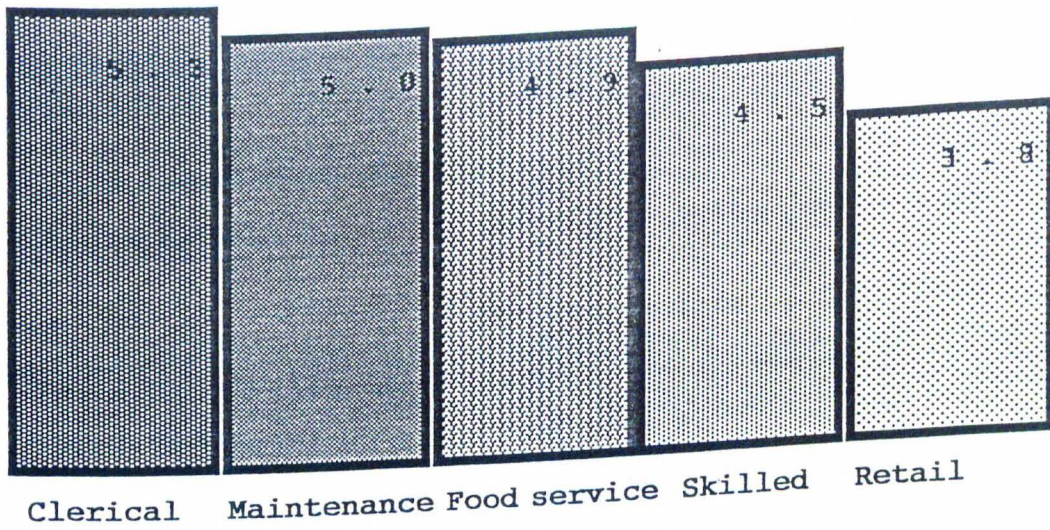


Figure 9

Mean Job Satisfaction Scores by Level of Education

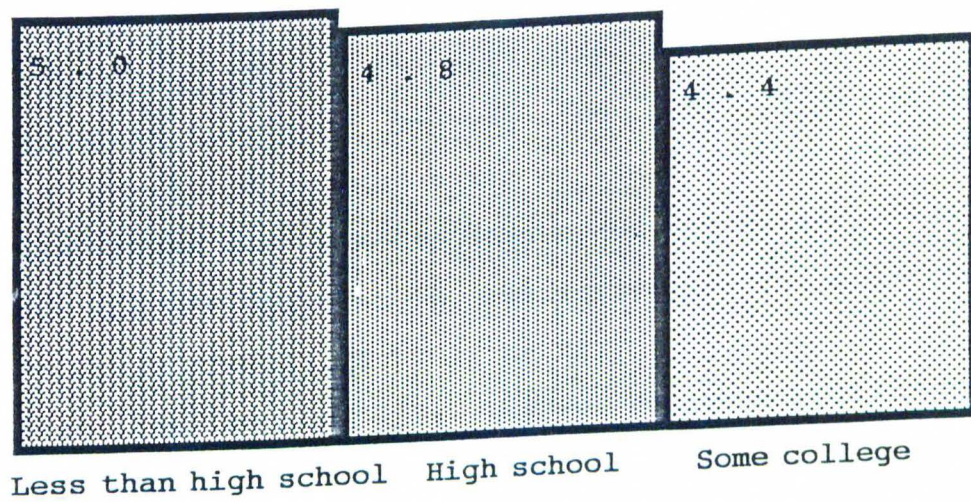


Table 16

^aVocational Development Rating Scale Mean Scores

	Employed (n=30)		Unemployed (n=31)		Total (n=61)	
	M	SD	M	SD	M	SD
Self Differentiation	2.32	.53	2.23	.56	2.26	.64
Work Competence	2.10	.61	2.10	.68	2.09	.54
Work Goals	2.28	.54	1.89	.63	2.08	.61

Note: Data missing or incomplete for 20 subjects.

^a Means are based on scales of 1 to 3.

Hershenson's theory of vocational development proposes that self-differentiation precedes work competence which precedes formulation of goals. Means of the two groups on each of the scales were calculated. In addition, the method for comparing items with only three response categories to those with four was used (Hershenson & Lavery, 1978). Interestingly, the current study provides some support for the proposal concerning the sequencing of vocational stages. Perhaps more interesting is the similarity in the means between the two groups on this scale. Specifically, the means of the two groups for Self Differentiation and Work Competence did not differ ($F=.339$, $df=1,60$ and $F=.023$, $df=1,60$ respectively), but did differ on Work Goals ($F=6.99$, $df=1,59$; $p<.05$).

Since quality of life theory suggests that life behavior, the final question for this study examined work

competence in its relationship to life satisfaction. Pearson correlation coefficients for working individuals between job and life satisfaction (measured as Global Life) and Work Competence (mean scores) were .12 and .06 respectively. The table below presents result of an Anova with life satisfaction as the dependent variable and work competence ratings as the independent variables.

Table 17

Work Competence Ratings by Global Life

Source	SS	DF	MS	F	
Within	68.5	28	2.449		
Grp	.008	1	.008	.003	.954

It appears that neither correlations nor analysis of variance indicates a relationship between work competence (as measured by counselor ratings) and global life satisfaction.

Conclusion: Data Analysis

Several patterns have emerged from this data analysis. It appears that work per se does not exert a significant impact on quality of life for this sample of individuals with severe mental illness. On the other hand, there are several variables, notably sex and satisfaction with status, that mediate this relationship by significantly interacting with group status. It appears that white unemployed males are the least satisfied with their status, while employed males are the most satisfied. Employed females do not express expected levels of life satisfaction, and minorities, in general, appear to express higher levels of satisfaction than do whites, although this finding may be related to socioeconomic status, and, in turn, to expectation.

For employed individuals, gender is not significantly related to job satisfaction, although job satisfaction and life satisfaction are significantly related. Ratings of vocational development between the two groups were similar, although individuals with higher levels of work competence (as defined by counselor ratings) do not appear to be more satisfied with jobs and life.

Chapter V CONCLUSION

The central aim of this study was to address the question, 'Does work benefit the well-being of individuals with chronic mental illness'? Similar to other research that has explored this relationship with special populations (e.g., Wright, 1977 on women; Krause & Markides, 1985 on Mexican American women), it appears that the relationship between work and satisfaction as measured by quality of life indicators is a complex one. This chapter will review the findings associated with the research questions and present recommendations for further research.

The Simple Relationship: Is Work Beneficial?

Based on data analysis from the current study, it appears that there is no simple relationship between work status and objective or subjective indicators of life quality, casting doubt on the notion that it is work per se that is beneficial to this population. This finding is generally supported by most of the body of research literature that has examined the impact of employment on

psychological well-being of groups that are 'non-work centered'. Thus, for example, in their review of the literature on the relationship between life satisfaction and paid employment status for women, Warr and Perry (1982) concluded that it was not work per se that led to increases or decreases in life satisfaction, but that there were significant variables that mediated this relationship. On the other hand, available research comparing the well-being of working and retired age cohorts tends to report that employed persons express slightly higher levels of satisfaction than do their retired counterparts (Campbell et al., 1976). This research is tentative, though, since health status correlates fairly strongly with well-being, and retired individuals may have retired because of health-related issues (Wells & Strickland, 1982).

In the context of quality of life theory, the finding that work status per se does not necessarily contribute to differences in life satisfaction outcomes is plausible. First, as has been reviewed throughout this study, the correlations between objective domains and satisfaction is modest at best. A number of theories have been proposed to explain the discrepancy between what is and what ought to be (see Chapter 2 for a review of these), which may be applicable to this finding.

Social comparison theories, for example, suggest that one compares one's status to similar reference groups in

reaching evaluations of overall well-being. If we speculate that the most salient reference group for individuals in this study is the population of participants in community rehabilitation programs, then nonworking individuals in these settings acquire a proximal nonwork centered reference group with which to draw comparisons. The implication here requiring further research is that despite the stated emphasis in these programs, the social norm is based on a nonworking ethic. This supposition receives some support from a 1985 survey of community rehabilitation programs in Maryland (Connors, et al., 1987), where the authors concluded that few of the programs that responded to the survey provided a comprehensive array of vocational services. Consequently, while writers and policy makers are emphasizing the central importance of work, at the grass roots level, represented by community rehabilitation programs, this policy is not translated into a normative ethic that stresses the importance of work.

A second theory that may be more relevant to the current study is the person/environment fit model. This model, reviewed in Chapter 2, proposes that it is not situations themselves that lead to perceptions of well-being, but an individual's evaluations of these situations. This supposition has intuitive appeal as well as empirical support (French et al., 1977; Diener et al., 1984). In support of this, the current study demonstrated that when

satisfaction with current status (either work or nonwork) was taken into account, there were significant differences in life satisfaction between the employed and nonemployed groups.

It seems that the belief of a number of writers (e.g., Anthony et al., 1984; Anthony & Blanch, 1987; Beard, Probst, & Malumud, 1982) that work per se has a beneficial impact on life quality for this population is just that - a belief without substantial empirical support.

Mediating Variables: Demographic Characteristics:

Perhaps one of the more interesting findings of this study was the interaction of gender and work status on life satisfaction outcomes. As reviewed earlier, most of the literature examining unemployment and quality of life outcomes supports the finding that it is unemployed males that report the lowest levels of satisfaction across all domains (see, for example, Campbell et al., 1976) and this finding is generally assumed to be related to the social imperatives for men to work.

On the other hand, it was because the findings based on studies of working women were so inconclusive, that most of the body of research using quality of life as a method of group comparison has focused on assessing the impact of paid employment status on women. Data from this study also raises the concern that women may be 'purchasing'

employment at the cost of other satisfactions in life. Although other authors have reviewed this finding, the literature here is equivocal, but generally concludes that the relationship between status and happiness for women is complex and related to a number of circumstances. These include social role attitudes and beliefs, and the quality of home life (e.g., help with small children, help with housework, availability of daycare, etc.). Although the numbers of working women who are responsible for children in this sample was too small to be used to draw any conclusions, it is necessary to try to understand the low levels of life satisfaction reported by working women in this sample.

One obvious speculation might be that women are less satisfied with their jobs than are men. Yet findings from this study indicate that the two groups do not differ significantly on this outcome (see Table G-2). Moreover, data in this sample indicated that 'clerical workers' reported that highest levels of job satisfaction, and 50% of individuals in this category were women. Another possibility is that women, in general, report lower levels of life satisfaction than do men, yet research indicates that when variables such as age are controlled, there is little difference in global satisfaction outcomes between men and women (e.g., Andrews & Withey, 1976; Campbell et al., 1976; Goodstein, Zautra & Goodhart, 1982), a finding

that is supported by the current data.

One further plausible explanation is related to social comparison theories. Women who are mentally ill and are working are in environments where the salient social reference group is not the community rehabilitation program population, but the 'general population', which provides a different comparison standard for assessing their lives. On the other hand, this situation would also characterize men in the work environment, and doesn't seem to hold up given current study data. Lack of additional data suggests that this is an area that requires further research.

Intention to Change/Work Motivation:

The finding that there was no interaction effect between intention to change current work status and life satisfaction is also puzzling, and perhaps requires further elaboration. For example, of the nonemployed group, fully 55% responded that they were 'looking for work'. Even more dramatic are the responses of counselor ratings on this issue. There, 74% rated individuals as somewhat motivated to work or very motivated to work! These impressive percentages are perhaps an indication that motivation to work, or intention to work are such socially desirable responses in the community rehabilitation program setting, that endorsement of them is not necessarily indicative of actual intention/motivation. This explanation is plausible for this particular group of

community rehabilitation programs that have impressive competitive job placement records (at least in comparison to the other 30 programs in the State of Maryland) and provide an array of vocational services including work adjustment training, vocational evaluation, sheltered employment, transitional employment, and vocational skills training.

The apparent paradox here is that while nonwork status is the unspoken norm in these programs, program staff and participants readily endorse the importance of work. The explanation of this paradox might reside in policy issues and rehabilitation literature. For example, the State of Maryland is one of 27 states participating in the 'state-wide change efforts', designed to shift programs that serve severely disabled populations to supported employment models. Related to this, several activities have occurred throughout the state including technical assistance training to community providers, and an agreement between the Maryland State Department of Health & Mental Hygiene and the State Division of Vocational Rehabilitation to certify all community rehabilitation programs by the early 1990's (The Maryland Rehabilitation Facility Plan, 1987). Thus, state and federal policy initiatives focusing on competitive employment may be sensitizing providers to the importance of employment. Moreover, literature cited in Chapters 1 and 2 confirm the emphasis placed on the

importance of work. These factors may promote endorsement of a work ideal, without necessarily reflecting program and participants' values concerning work. A theoretical explanation for this finding is that although some research has identified aspiration level as a significant mediator between current status and satisfaction, (Michaelos, 1986), other research describes this relationship as modest (Deiner & Emmons, 1985; Kamman, 1983). In addition, one would have to question whether intention to find work is an indicator of 'aspiration' for this population.

Race and Satisfaction:

A puzzling finding was the differences between minority and caucasian groups. Most quality of life studies that have explored differences between racial groups have concluded that blacks, in general, tend to reflect patterns of satisfaction slightly lower than do whites (Alston et al., 1974), although the effect of race has not been universal (Messer, 1968). Related to these findings, Deiner (1984) cautions that often the subsamples of race in studies are as few as ten persons. If race is viewed as representing socioeconomic status rather than status membership, then the results are more plausible. For example, national studies (Campbell et al., 1976; Andrews & Withey, 1976) have found that lower income groups do express more satisfaction with life than do

middle income groups. One of the rationales for this unexpected pattern is that socio-economic status implies a standard of comparison, both internal and external, against which individuals evaluate their current life situations. The reasoning is that individuals from higher socioeconomic status 'expect more' and thus feel less satisfied with what they have. Following up on this approach is possible, but would require additional research to attempt to identify expectations and aspirations.

Job Satisfaction and Life Satisfaction:

The relationship between job and life satisfaction is expected, given most of the current literature in the field that has examined this relationship (e.g., Near et al., 1980; Rice et al., 1980). The difficult issue in this relationship is to trace a causal model between job and life satisfaction. Consequently, the question is, "does satisfaction with work 'spill over' into satisfaction with life"? Thus far, findings on this issue have been equivocal, and this study has no data to assess a causal model. On the other hand, it is perhaps interesting to note that those with higher education backgrounds (e.g., some college) demonstrated lower mean scores on the job satisfaction scale than did those with high school diplomas or less. This may reflect the inadequacy of current competitive job placements to meet

the needs of individuals with college backgrounds, a supposition supported by authors who suggest that employed men with schizophrenia achieve employment "only at the risk of working in low level jobs" (Turner, 1977, p. 34). Moreover, national studies on the quality of life indicate that level of education is inversely related to life satisfaction (Campbell et al., 1976; Andrews & Withey, 1976). While this study did not support this general finding, the pattern found may be indicative of this trend.

Vocational Development Ratings.

The finding that the entire sample supported Hershenson's theory of vocational development raises two issues. One is the need for further research in this area since other studies have demonstrated that patterns of vocational development in this population are different from patterns in the general population (see, for example, Ciardiello & Bingham, 1982). The second issue is the similarity on the scales for the two groups, with Vocational Goals being the only scale that significantly differentiated employed from nonemployed subjects.

The similarity of the Self Concept and Work Competence Scales provides some support for the similarity of the two sample groups. The significant difference found on the scale measuring vocational goals may support some of the scarce literature in this area which indicates that

vocational goals of individuals with chronic mental illness tend to be inappropriate and unrealistic (Patterson, 1957).

The implication is that the work environment itself might have a moderating affect on an individual's vocational aspirations, while individuals not exposed to this environment continue to express inappropriate vocational aspirations. This is an interesting area and one that requires further research, especially because of the relative inattention that vocational development and career maturity have recieved for individuals with psychiatric disabilities.

Implications

It is tempting in nonexperimental research such as this, to engage in inappropriate speculations concerning program and policy implications. And, in fact, that was neither the impetus nor intention of the current study, which was designed to begin to explore the relationship between work and life satisfaction for individuals with chronic mental illness. In fact, using such nonexperimental research as a basis for inappropriate policy decisions represents the greatest threat in the design of such studies. Examples of inappropriate use of such data are numerous and often reviewed by research design writers such as Cook and Campbell (1979) and Kerlinger (1986) as examples of how to avoid misinterpretation in these designs. Cook and

Campbell (1979) advise that when presenting implications from such studies, it is necessary to emphasize the tentativeness of the results.

With this caveat in mind, there are perhaps some suggestions that arise from the current study which present opportunities for further research.

The first such suggestion that arises from the study is that we cannot conclude that work is either 'good' or 'bad'. In fact, the central theme that emerges from this study is that it is not only necessary for community programs to focus on work per se, but to address the factors that contribute to the relationship between work and life satisfaction. Neither, though, is it appropriate for policy makers to assume that work (either through supported employment models or other) represents a panacea for the problems that chronic mentally ill persons face in adjusting to the community. In fact, another way of interpreting this data is that community rehabilitation programs are providing the necessary and sufficient conditions to meet the stated goal of the community support program project, to 'improve the quality of life' of chronic mentally ill persons' (Tessler & Goldman, 1982). If this is the case, then appropriations for these programs should not be lost in the mistaken fervor to develop supported employment models that will 'get everyone to work'. The other way to approach the data is to look

at it as the inability of providers to instill a work value or work ethic for this population. This rationale becomes even more compelling if one views individuals with chronic mental illness as members of a subculture of society, a status that is supported by some writers in the field of rehabilitation who have addressed the 'minority group paradigm' for viewing individuals with disabilities (see, for example Stubbins, 1984; 1987). Within this context, before developing job opportunities for this population, it is also necessary to address work values and work ethics, in order to promote the notion that work is beneficial. Of course, to succeed at this, we need to use our creativity and our resources to develop job opportunities that represent greater than entry level service jobs from which no one ever really graduates.

In addition, the implications of the failure of this population to achieve employment success need to be addressed. As said earlier in this study, a variety of reasons have been put forward to explain this failure, ranging from individual deficit approaches to environmental obstacles. But, if work is not meaningfully related to real life outcomes, then we need to address this before we resort, once again, to modification of employment training technologies in an effort to improve the process and thus, we hope, the outcomes.

This issue is also related to the on-going debate in the

disability literature on the disincentives to employment. Typically, though, these disincentives are identified as financial ones (e.g., loss of entitlement income, entitlement benefits). While there is no doubt that these arguments have compelling merit, it may be necessary to look at the disincentive of the employment itself. In other words, if work itself does not provide some meaning for a person, then the financial benefits that accrue from these low-level service jobs will not be sufficient to sustain interest in competitive employment. Thus, it is not only the financial barriers that function as disincentives, but the meaninglessness of work itself.

It is also necessary to address the issue of certain subgroups in the population of individuals with chronic mental illness attaching different meaning to work. If it is only white unemployed males in community rehabilitation programs that feel compelled to work, then programs may not be providing appropriate incentives or role models to other subgroups, e.g., women and minorities, to reinforce work behaviors and work values. Worse, some of these groups may be purchasing employment at the cost of other life satisfactions, and this issue is critical both to individuals and to programs. It is necessary to look at what is effective for whom under what circumstances (Paul, 1967).

Finally, although authors in this field discuss the

significance of job/client match and career counseling, (see, for example, Anthony et al., 1984; Connors et al., 1987), this activity needs to be emphasized if job placement is to be successful. Community providers are under pressure to provide competitive placements, and, given employer attitudes and barriers, often resort to available jobs rather than careful matching based on individual skills and needs and work demands and resources (Rutman & Arnold, 1986). Worse, this field has a history of taking job placement technologies developed for mentally retarded individuals and applying them to individuals with chronic mental illness. As a result, employment placement techniques focus on getting individuals into competitive settings at entry levels, without sufficient attention paid to the skill level of the chronic mentally ill population. This, of course, leads to meaningless jobs for this group, some of whom have college or higher level training. This type of work may not be sufficient to sustain employment placements.

In summary, several of these conclusions have implications for rehabilitation practice. Salient issues include:

- o The indication that working women may be purchasing employment at the cost of other satisfactions in life;
- o The differential meaning that work has to subgroups of the populations in community rehabilitation

programs;

- o The indication that some individuals participating in these programs may have achieved a 'ceiling effect' in terms of their quality of life - that additional services may not substantially increase satisfactions;
- o The indication that race may co-vary with work status, necessitating greater attention to work values;
- o The need to focus on job satisfaction and the quality of work life for individuals with chronic mental illness.

Recommendations

Some of the suggestions outlined above can be assessed using experimental designs. One design that suggests itself is the need for a longitudinal study assessing changes in quality of life indicators for individuals with chronic mental illness both before employment and at designated intervals. This is especially critical since it may be that employment status will be reflected in improved life satisfaction indices, but that an interval is required before this change will be apparent (e.g., one year or more). Field and Yeggee (1982), for example, conducted a longitudinal quality of life study on individuals entering a community support and case management program in Oregon, with client changes in productivity and independent living activities noted at a nine month re-assessment. The

problem with longitudinal designs on the effects of employment status is that six month job retention rates appear to be so low (see Dion & Anthony, 1987) that individuals assessed at one year or more may no longer be representative of the population. Employing survival analysis types of designs in these evaluations may allow the researcher to identify both short and long term patterns in the data.

A second research area that emerges from the current study is to use similar criteria to assess working and nonworking individuals with severe mental illness from DVR caseloads. In this way, one would have a broader population base to assess, rather than just participants in community rehabilitation programs.

A third area that emerges from the current study is the need to address subpopulations of persons participating in community rehabilitation programs (e.g., minorities and women). Further studies are required to assess the impact of competitive employment on women with chronic mental illness in order to examine the appropriateness of current models and methods.

Finally, quality of life methodology needs to be used as a means of evaluating community rehabilitation programs. Although this study found no significant differences between programs on life satisfaction outcomes, these programs are similar in representing comprehensive arrays

of community services. We need to continue to assess the impact of community services at the individual level, as well as the factors that mediate between individuals and programs.

Conclusion

Future research in the field of psychiatric rehabilitation, rather than focusing on employment predictions and outcomes, needs to focus on individuals and needs. Although work in our society is both a measure of human competence and part of the definition of "the normal state" (Turner, 1977, p. 32), work has different meanings to different individuals. This issue cannot be ignored in planning and program development.

To continue to rely on a simple uni-directional model as the basis for our assumption that work is good may be, in the long run, of no benefit to individuals in our programs, and will certainly not assist the process of improving vocational outcomes. These simple models offer little in the way of understanding the processes that characterize the interactions across different life spheres (Kabanov, 1980), and we need to abandon these models in order to move on to a more complex understanding of the dynamics between work and quality of life. This suggestion is in accord with other recommendations in the field that urge a shift from single criterion in the evaluation of outcomes, to more

complex models illustrating the relationship between a number of variables affected by program and treatment interventions.

Finally, research in the quality of life has the potential for informing public policy and shifting program practices. Despite the measurement complexity, it represents a promising means of continuing to evaluate program interventions as they are mediated by individual experiences and individual differences. Even though definition and measurement issues remain ambiguous, we cannot afford to abandon the effort.

Notes:

1. Prior to legislation enacted in 1986 (P.L. 99-643), individuals on SSI were allowed a nine month trial work period during which entitlements continued to be paid. After the nine month period, entitlements were severed and loss of job required re-application. P.L. 99-643 and Sections 1619 (a) and (b) of the Social Security Act (1981) repealed this provision, but the issue remains confusing for providers and recipients. The issue concerning employment retention statistics is inconclusive, with few data available. But, since reports of 6 month retention rates tend to be quite low for this group, it was determined that individuals maintaining employment past 9 months may not be representative of the population.
2. The 1987 State Division of Vocational Rehabilitation Facilities Plan estimated the number of individuals with severe mental illness to be approximately 20,000. This figure, though, remains inconclusive and is based on a 1984 Mental Hygiene Administration estimate. In term of persons participating in community rehabilitation programs, a 1985 survey conducted by the Maryland Association of Psychosocial Services reported 1466 persons in 17 of 28 programs. Current estimates of numbers are approximately 2500.

Appendix A: Programs and Sample Sizes

Changing Directions: A large community rehabilitation program with an average daily attendance of about 100 members. The program, located in downtown Baltimore, has a catchment area that includes one of the lowest socioeconomic areas of the City. The program provides: clubhouse activities, pre-vocational skills training, transitional employment, supported employment, job placement, and job retention services.

Schapiro Center/P.E.P.: One of the largest community rehabilitation programs in Maryland, this center has an average daily attendance approaching 200 members. It is located in Northwest Washington and is affiliated with Sinai Hospital in Baltimore. The program provides: sheltered work, clubhouse activities, pre-vocational skills, transitional employment, job placement, and job retention services.

St. Lukes House: This community rehabilitation program is primarily a residential program with vocational services offered to individuals living in the supervised apartment setting. The program serves about 50 persons and provides pre-vocational skills training, supported employment, transitional employment placements, job placement and job

retention services.

S.T.E.P.: This is a new program in Baltimore City providing supported employment services to participants of other community rehabilitation programs in the Baltimore area. It serves about 60 persons and provides pre-vocational workshops, supported employment, job placement, and job retention.

Table A-1

Sample Sizes from each Participant Program

Program:	Employed	Not Employed
Changing Directions	11	9
St. Lukes	8	11
P.E.P.	10	10
S.T.E.P.	12	10

Appendix B: Research Instruments
Examples of Quality of Life Interview Scales

Satisfaction with Life

1. How do you feel about your life as a whole?
(Response options: 1=terrible, 2=unhappy, 3=mostly dissatisfied, 4=mixed, 5=mostly satisfied, 6=pleased 7=delighted).

Satisfaction with Living Situation:

How do you feel about:
(Response options: 1-terrible 2=unhappy 3=mostly dissatisfied 4=mixed, about equally satisfied and dissatisfied 5=mostly satisfied 6=pleased 7=delighted).

1. The living arrangements where you live?
2. The amount you pay to live there?
3. The food there?
4. The rules there?
5. The amount of influence you have in what goes on there?
6. The other people you live with?
7. The privacy you have there?
8. The amount of freedom you have?
9. The prospect of staying on where you currently live for a long period of time?

Frequency of Social Contacts:

About how often do you do the following things?
(Response options 5=About daily, 4=About weekly 3=About monthly 2=Less than monthly 1=Never)/

1. Join with other residents to play cards, games, or some other activity?
2. Try to make friends with other residents in the house?
3. Sit and talk with other residents?
4. Visit with someone not in this house?
5. Telephone someone not in this house?
6. Write a letter to someone?
7. Do something with another person that you planned ahead of time?
8. Spend time with someone you consider more than a friend like a boyfriend or a girlfriend?

Leisure Activities:

Which of the things listed on this sheet have you done during the past week?

Please say 'yes' or 'no'

1. went for a walk
2. went to a movie or play
3. watched T.V.
4. went shopping
5. went to a restaurant or coffee shop
6. went to a bar
7. read a book, magazine, or newspaper
8. listened to a radio
9. went for a ride in a bus or car
10. played cards
11. prepared a meal
12. worked on a hobby
13. played a sport
14. went to a meeting of some organization or social group
15. went to a park

Family Relations:

How do you feel about:
(Response options: 1=terrible, 2=unhappy, 3=mostly dissatisfied, 4=mixed (about equally satisfied and dissatisfied), 5=mostly satisfied, 6=pleased, 7=delighted).

1. Your family in general?
2. The amount of time you spend with your family?
3. How often you have contact with your family?
like by telephone or letters?
4. The way you and your family act toward each other?
5. The way things are in general between you and your family?

Quality of Leisure Activities:

How do you feel about?
(Response Options: 1=terrible, 2=unhappy, 3=mostly dissatisfied, 4=mixed (about equally satisfied and dissatisfied), 5=mostly satisfied, 6=pleased, 7=delighted).

1. The way you spend your spare time?
2. The amount of time you have to do the things

3. You want to do?
4. The chance you have to enjoy pleasant or beautiful things?
5. The amount of fun you have?
5. The amount of relaxation in your life?

Quality of Work Life:

How do you feel about?

1. Your job?
2. The people you work with?
3. What it's like where you work?
4. The number of hours you work?
5. The amount you get paid?

Vocational Development Rating Scale

Please complete the following items for the person listed above. Circle the response below each item that best describes that individual.

I. Self-differentiation

Is this client's self-concept as a worker:

- A. 1 Positive
2 Neutral
3 Negative

- B. 1 Well formulated
2 Somewhat formulated
3 Poorly formulated

- C Is the client's motivation to work:
1 Very Strong (actively seeks and performs work)
2 Above average (accepts work as an expectation)
3 Below average (resists work, but does it grudgingly)
4 Very weak (avoids or actively resists work)

II. Competence

A. Are this client's work habits (promptness, responsibility, etc.):

- 1 Very Good
2 Above average
3 Below average
4 Very Poor

B. Does this client handle the interpersonal aspects of work:

- 1 Very well (makes positive contribution)
2 Above average (gets along adequately)
3 Below average (has some problems)
4 Very poorly (very antagonistic or disruptive)

- C. Is this client's level of job-related skills:
1 Very high (immediately useable skills)
2 Above average (has transferable skills, requires some retraining)
3 Below average (requires fairly extensive retraining)
4 Very low (few or no skills, requires much training)

III. Independence

Are the client's vocational goals:

- A.
 - 1. Well formulated
 - 2. Somewhat formulated
 - 3. Poorly formulated
- B.
 - 1. Highly appropriate (neither too high nor too low)
 - 2. Somewhat appropriate (requires some readjustment)
 - 3. Somewhat inappropriate (requires major readjustment)
 - 4. Highly inappropriate (totally unrealistic)

Appendix C: Pearson Correlation Coefficients for Inter-Rater Reliability on 8 Objective Scales & 8 Subjective Scales.

Scales:

Global 1	.86
Global 2	.67
Living	.79
Soc Freq	.94
Fam Freq	.99
Leisure	.74
Gen Hlth	..*
Physical	.98
Psychiatric	.65
Living	.96
Family	.92
Social	.91
Job	.94
Finances	.96
Safety	.84
Health	.86

*Coefficient cannot be calculated.

Appendix D: Pearson Correlation Coefficients for QOL Scales

Table D-1

Pearson Correlation Coefficients for Subjective Quality of Life Scales

	Global	Global	Living	Family	Social	Finance	Safety
Global							
Living	.38**						
Family	.53**	.57**					
Social	.55**	.34**	.64**				
Finances	.43**	.20*	.34**	.40**			
Safety	.50**	.35**	.51**	.57**	.50**		
Health	.39**	.42**	.38**	.43**	.32**	.41**	
Job	.34**	.06	.33*	.29*	.38**	.30**	

*p<.05

**p <.001

Table D-1 (Continued)

	Health	Leisure	Job
Global	.39**	.55**	.34**
Living	.39**	.38**	.06
Family	.38**	.34**	.33*
Social	.43**	.47**	.29*
Finance	.32**	.28	.38*
Safety	.41**	.50**	.30*

*p<.05

**p<.001

Table D-2

Pearson Correlation Coefficients for Selected Subjective
Domains and Objective Domains

	Objliv	Objfam	Objsoc	Objvic	Genhlth	Objhlth
Global	.24*	.10	.13	-.00	.43*	-.22*
Subliv	.45**	.28*	.07	.02	.29*	-.23*
Subsoc	.28*	.03	.33**	-.01	.42**	-.31*
Subfam	.31*	.35**	.04	-.08	.36**	-.24*
Subfin	.21*	.10	-.02	.11	.39**	-.24*
Subsaf	.37**	.07	.12	-.10	.49**	-.38**
Subhlth	.29*	.04	.27*	-.10	.50**	-.20*
Subjob	.04	.12	.09	.00	.18	.09
Subleisur	.22*	.08	.15	.13	.34**	.19

*p<.05

**p<.001

Appendix E: Cell means And Standard Deviations for Sex X
Group and Race X Group

Sex X Group

Variable: Global

Grp	Unemployed			
Sex	Male	4.152	1.780	23
	Female	5.441	1.345	17
	Employed			
	Male	5.300	1.155	25
	Female	4.625	1.875	16

Variable: Subliv

Grp	Unemployed		
	Male	5.047	.926
	Female	5.148	1.263
	Employed		
	Male	5.020	.892
	Female	4.917	.985

Variable: Subfam

Grp	Unemployed		
	Male	4.465	1.514
	Female	5.400	1.373
	Employed		
	Male	5.234	.887
	Female	4.581	1.415

Variable: Subsox

Grp	Unemployed		
	Male	4.233	1.101
	Female	5.329	1.194
	Employed		
	Male	5.320	.828
	Female	4.642	.922

Variable: Subleisure

Grp	Unemployed		
	Male	4.187	1.580

Female	5.388	1.328
Employed		
Male	5.348	1.124
Female	4.700	1.762

Variable: Subfin

Grp	Unemployed		
	Male	4.003	1.331
	Female	4.568	1.544
	Employed		
	Male	4.706	1.107
	Female	3.406	1.396

Variable: Subsaf

Grp	Unemployed		
	Male	4.548	1.689
	Female	5.224	1.235
	Employed		
	Male	5.304	.848
	Female	4.053	1.358

Variable: Subhlth

Grp	Unemployed		
	Male	5.179	1.045
	Female	5.132	1.058
	Employed		
	Male	5.320	.828
	Female	4.642	.922

Race X Group:

Variable:
Global

Factor:
Grp

Unemployed

Minority
Caucasians

5.375
4.025

1.168
1.930

20
20

Employed

Minority
Cauc

5.143
4.925

1.697
1.280

20
21

Variable:
Subjective Living

Grp

Unemployed
Minority
Cauc

5.274
4.905

.977
1.147

Employed
Minority
Cauc

4.756
5.214

.983
.804

Variable:
Subfam

Grp

Unemployed
Minority
Cauc

5.530
4.195

1.123
1.579

Employed
Minority
Cauc

5.070
4.885

1.034
1.285

Variable:
Subsoc

Grp

Unemployed
Minority
Cauc

5.476
3.922

.972
1.503

Employed
Minority
Cauc

5.009
4.431

1.013
1.163

Variable:
Financial

		3.561	1.495
	Cauc		
	Employed	4.221	1.350
	Minority	4.175	1.426
	Cauc		
Variable:			
Subjective Safety			
Grp	Unemployed	5.690	1.033
	Minority	3.980	1.488
	Cauc		
	Employed	4.710	1.427
	Minority	4.927	1.000
	Cauc		
Variable:			
Subhlth			
Grp	Unemployed	5.441	.986
	Minority	4.877	1.034
	Cauc		
	Employed	4.946	1.013
	Minority	5.170	.815
	Cauc		
Variable:			
Leisure			
Grp	Unemployed	5.320	1.173
	Minority	3.975	1.201
	Cauc		
	Employed	5.219	1.479
	Minority	4.900	1.066
	Cauc		

Appendix F: Univariate F Tests for Multivariate Tests of Significance.

Table F-1
Gender by Group by Subjective Life Domains

Domain	F-Ratio
Global	7.907*
Subliv	.19814
Subfam	7.318*
Subsoc	6.806*
Subfin	7.310*
Subsaf	10.567*
Subhlth	2.0991
Leisure	6.428*

* $p \leq .05$

** $p \leq .001$

Table F-2

Race by Subjective Life Domains

Domain	F Ration
Global	7.907*
Subliv	.19814
Subfam	7.31850*
Subsoc	6.806*
Subfin	7.31003*
Subsaf	10.5671*
Subhlth	2.0991
Subleisure	6.428*

* $p \leq .05$

Table F-3

Univariate F Ratios for Employment Status and Satisfaction
with Status by Subjective Life Domains

Domain	F Ratio:
Global	.110
Living	.288
Family	.212
Social	.001
Finance	10.97*
Safety	4.90*
Leisure	.310
Health	3.069*

* $p \leq .05$

Table F-4

Univariate F Ratios for Intention to Change by Subjective
Life Domains

Domain	F Ratio
Global	.085
Living	.132
Family	.002
Social	.077
Finances	7.949*
Safety	2.02
Health	.269
Leisure	.134

* $p \leq .05$

Appendix G: Work and Gender

Table G-1

Cell Frequencies for Gender by Type of Job

Male	14	4	5	1	1
Female	4	4	1	4	3
	Maint.	Clerical	Food Ser.	Retail	Skilled

Table G-2

ANOVA for Job Satisfaction by Gender

Source	SS	df	MS	F
Within	36.95	39	.948	
Between	.210	1	.210	

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