Residential placement and well-being among persons recovering from serious mental illness

Author: Michael Murphy

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Boston College Electronic Thesis or Dissertation, 2008

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ABSTRACT

Two primary community-based programs currently in use for people who suffer from severe, persistent mental illnesses are staffed group-homes, or intensive outreach residential programs, where the consumer lives independently and services are provided in vivo. This study utilized a cross-sectional relational design and employed a consumer survey to examine how the well-being of people with severe and persistent mental illness and who receive one of these residential services. Well-being refers to the general quality of a person’s life and living situation, including their own perceptions of the quality of their life. For the purposes of this study, well-being was operationalized as the product of three domains: 1). demographic/diagnostic characteristics, including age, gender, race, length of service, educational level, marital status, diagnosis, and intensity of residential support; 2). objective life satisfaction indicators, such as immediate social network, extended social network, independent living/self care, working/productivity, global functioning, freedom from crisis/hospitalization; and 3). subjective life satisfaction indicators, including satisfaction with living arrangements, money, leisure time, family, social life, and health.

An analysis of demographic and diagnostic variables indicated that with the exception of education level, respondents living in group homes are very similar to their counterparts receiving supported housing. Independent functioning ability was significantly higher for respondents receiving supported housing services in eight areas, including cooking, shopping, housekeeping, personal finances, use of medications, active
use of services, pursuit of recovery goals, and ability to find and use health care. Group home residents were significantly more likely to have substance abuse problems than respondents receiving supported housing, and were more likely to have problems that could put them or others at risk. Respondents living independently with supported housing services reported higher satisfaction with their living situation and with their relationship to their family. Group home residents were more satisfied about the availability of money for leisure activities.

Exploratory analysis of the data using logistic regression suggested that such an analysis might be useful in identifying which qualities of applicants for residential services would provide a better “fit” to a particular model of treatment. Implications for policy, practice, and future research are addressed.
While my name alone appears on the cover of this dissertation, there were many faculty, friends, and family members who helped me to complete it. First, I would like to thank the hundreds of program residents and staff who so willingly gave of their time, efforts and opinion to this project. Without their enthusiastic participation, this project would not have been possible.

I would like to express my deepest gratitude to the members of my Dissertation Committee. My Committee Chair, Thomas O’Hare, and his predecessor Richard Mackey, patiently guided me through the long years of developing my research questions, the protracted and often frustrating IRB approval and data collection processes, and my struggles to understand my findings and put my thoughts clearly to paper. Richard Rowland encouraged me as I initially developed my interest in this research problem while a member of his policy seminar. Thanh Tran introduced me to statistics, and his interest in investigating the quality of life of the people we work with sparked my own pursuit in this area. He graciously came forward in the 11th hour to fill a vacancy on my Committee, and provided valuable insight into my results.

I thank Dr. Jim Burke, who graciously and patiently consulted with me on the intricacies of Logistic Regression analysis, and led me through the maize of my data.

Elizabeth Sullivan, Massachusetts Department of Mental Health Western Mass. Area Director, and my supervisors, Mark Leibowitz and Patricia Lyons, have provided support, council, and tolerance of my difficulties juggling work, family, and dissertation
duties simultaneously. Fred Altaffer, Co-chair of the DMH IRB Committee, worked
diligently with me to usher this project through the complex and often paradoxical
research approval process. Many other DMH staff, especially Mike Nagy and Joan
Gruszkowski offered their interest, encouragement, and prodding when procrastination
appeared to overwhelm me.

Mary Beth Averill, my Smith College colleague, writing coach, and ABD support
group facilitator, was instrumental in moving me forward when I was about to give up.
The ABD support group members kept the project moving and served as my cheering
squad and conscience as I struggled to keep going.

Last, but by no means least, I would like to thank my wonderful family—my wife
Brigid, daughters Siobhan, Regis, and Deidre, and son Padraig—who tolerated the
seemingly endless process of my doctoral career, my irritability and irrational behavior,
sleep deprivation, and moodiness over all of these years, and who continued to stand in
my corner through the years.
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CHAPTER I

Purpose and Specific Aims

In communities where there is a network of services for people with severe and persistent mental illness, group homes and intensive residential outreach support programs often co-exist. Public mental health administrators make referral and resource allocation decisions based on assumptions about the need for a continuum of care: they generally consider that mental health consumers require a range of residential care, starting with the structure of a group home, progressing to independent living with outreach residential support, with a gradual reduction in the amount of support as they learn independent living skills. Administrators hold these assumptions in spite of a paucity of controlled research on half-way houses and group homes, as well as research evidence indicating that the concept “continuum of care” is a fallacy (de Girolamo, et al., 2005; Geller & Fisher, 1993). Controlled research indicates that intensive outreach residential services can work well for most people who suffer from severe and persistent mental illness, regardless of their functioning level, (Leheman, et al., 2004; Bellack, 2006; New Freedom Commission on Mental Health., 2003; Mueser, Bond, Drake, & Resnick, 1998; Rog, 2004); and there is research indicating consumers prefer living on their own—as long as they receive enough support—to treatment in group homes (Forchuk, Nelson, & Hall, 2006; Tanzman, Wilson, & Yoe 1992; Tanzman, 1993).

The overall goal of this research study, therefore, was to examine those aspects of community based residential treatment that relate to stability, recovery, and well-being
for people with severe and persistent mental illness. To accomplish this, I compared two
groups of mental health consumers living in the same communities and receiving
residential assistance: those living in staffed group homes, and those living independently
with intensive outreach residential support.

This research initiative sought to answer the following questions: How do people
with severe and persistent mental illness who live independently with intensive outreach
residential supports compare to their counterparts living in 24-hour staffed group homes?
Specifically, how do they compare demographically, functionally and in their satisfaction
with life? Are there consistent, significant differences in any of these areas? Based on
those differences, is there a way to associate type of residential support with the specific
needs and attributes of a particular individual?

In order to achieve its goal this study incorporates the following objectives:

1. To examine similarities and differences in demographic/diagnostic
   characteristics for people with severe and persistent mental illness who live in
   staffed group homes to those who live independently with intensive outreach
   residential support.

2. To compare quality of life measures, including functioning level and freedom
   from psychiatric hospitalization for people who live in staffed group homes to
   those who live independently with intensive outreach residential support.

3. To compare subjective perception of life satisfaction for people who live in
   staffed group homes to their counterparts living independently with intensive
   outreach residential support.
4. To determine if it is possible to associate best type of residential support with the specific needs and attributes of a particular individual?

In conducting this research, efforts were made to incorporate concepts of consumer competency and empowerment, by eliciting information from consumers themselves and taking into consideration the context of natural environments (as opposed to treatment settings only) (Rapp, Shera, & Kishardt, 1993). The majority of people who are disabled by mental illness don’t live in programs. Most live in apartments, rooming houses, or homes (or on the street); they live alone, with friends, or with family. They have lives and social attachments that service providers know little or nothing about. This research initiative has attempted to tap into those consumers’ voices.

Definition of Terms

For the purposes of this research, the terms well-being, consumer, severe and persistent mental illness, group home, and intensive outreach residential services are defined as follows:

The concept of well-being has been generally defined as “the state of being well, happy, or prosperous; welfare” (Neufeldt & Guralnik, 1988, p. 1516). Well-being begins with the basic essentials of life: adequate food, housing, and other material goods, but places its emphasis on more intangible values: achievement in work, identification with community, fulfillment of potential (Campbell, Converse & Rodgers, 1976). In social science research, well-being is a construct referring to an individual’s overall life quality, happiness, morale (George, 1990; Horley, 1884). Tran (1992) has defined subjective
well-being (i.e., happiness, life satisfaction, positive affect, negative affect, and morale) as “a multidimensional construct encompassing cognitive and affective assessments of an individual’s life as a whole:” (pp. 21-22).

Consumer is a term preferred by a large number of people with severe and persistent mental illness who find the terms “patient” or “client” stigmatizing, as well as limiting, considering the diversity of symptoms, functioning level and needs of this population. It will be used when referring to the general group of persons who are disabled by severe and persistent mental illness, and who require support to live in the community (Nelson, Hall, & Walsh-Bowers, 1998).

Severe and persistent mental illness, as defined and operationalized by the Massachusetts Department of Mental Health (2000), is based on three components:

Qualifying Diagnosis: “A substantial disorder of thought, mood, perception, orientation, or memory that grossly impairs judgment, behavior, capacity to recognize reality, and that results in an inability to meet the ordinary demands of life. Severe and persistent mental illness includes schizophrenia and disorders of affect, and other disorders depending on the severity and duration of the illness.” (p. 9)

1. Functioning-level: “Difficulties resulting from a primary mental illness may persistently and substantially interfere with or limit role functioning in one or more major life activities, including basic daily living skills…instrumental living skills…and functioning in social, family, and vocational/educational contexts.” (p. 9)

2. Duration: “The qualifying mental disorder must have lasted for, or be expected to last for, a year.” (p. 10).
A group home is a household of four to six consumers living in the community, which is staffed by direct-care mental health workers on site and awake overnight. It is funded under contract with the Massachusetts Department of Mental Health (DMH).

Intensive outreach residential support denotes the concept of bringing support services to the consumer in his or her natural environment, rather than expecting the consumer to come to (or live in) a treatment site. Intensive outreach residential support encompasses three general types of residential outreach support: Intensive Case Management (ICM), Assertive Community Treatment (ACT), and Supported Housing Programs (SHP). In all of these models, the consumer lives independently in a setting of his or her own choosing, and teams of trained paraprofessional and professional staff provide supportive outreach services. The level and intensity of support varies from one consumer to another, and may quickly and easily be modified, depending upon the changing needs of each individual consumer. These models will be described in more detail in the Analytical Review of the Literature Chapter. The model used in all intensive outreach residential programs used by participants in this study are of the supported housing model.
Literature Review

Background

Over the last fifty years, revolutionary changes have occurred in the treatment of persons who suffer from severe and persistent mental illnesses. Up until the midpoint of the last century, the primary method of treatment for mental illness entailed long-term, involuntary placement in state-run psychiatric facilities (Torrey, 1988a). By the mid-1950s, states began to deinstitutionalize long-term state hospital patients, and reduce lengths-of-stay for new patients. Annual census statistics for public mental hospitals reveal the dramatic effect of deinstitutionalization: in 1955, there were 552,150 psychiatric patients in state hospitals nationwide; by 1984, the number had been reduced to 118,647, a decline of 79% (Torrey, 1988b). Initially, most long-term institutionalized patients were discharged to private board-and-care or nursing homes (Dorwart and Epstein, 1992), essentially transferring care from state hospitals to community-based institutions. Privately run board-and-care and nursing homes became the largest providers of community residential services for the mentally ill (Smith, 1989).

With the advent of deinstitutionalization, most state mental health authorities have developed two systems of care—one that is state hospital-based, and another based in the community. In such systems, the state hospital (or occasionally, its private hospital replacement) continues as the primary locus of mental health treatment, while community-based services are scarce, fragmented and unavailable to many people who need them (Drake et al., 2001; Lehman, et al., 2004; Lehman & Steinwachs, 1998). There often is no central authority to organize and coordinate community programs and services, or between state hospitals and the community (Lehman, Postrado, Roth,
McNary, & Goldman, 1994; Shore & Cohen, 1990). State hospitals are funded, by and large, by the states, while community programs receive funding through a confusing mix of federal funding and entitlements, state and local funding, fees, and donations. State mental health authorities have encouraged community service providers to cost-shift their funding to other sources, but have given up authority and control over community services in the process.

Community Services as an Alternative to Institutions

Reform in the treatment of mental illness, such as the deinstitutionalization movement, has been brought about in large measure through political, financial, and legal pressure. These changes have often been quite controversial from a clinical/scientific perspective. Rarely have clinical trials been conducted to test new treatment methods before they were broadly implemented (Fisher, W., personal communication, September, 1997). This has been particularly true in regards to the deinstitutionalization movement, and development of half-way houses and group homes. There is a paucity of controlled studies regarding the efficacy of group home treatment (Nagy & Gates, 1992, Test & Stein, 1978a), and no controlled studies comparing half-way houses to intensive residential outreach programs. The literature has primarily been descriptive in nature, or outcome studies of specific programs (Geller & Fisher, 1993; Rog & Raush, 1975). There have been, however, several well-designed studies of community treatment efficacy.

A controversial issue is whether people with the most severe or persistent mental illnesses can be safely and effectively treated in the community, thus reducing or
eliminating the need for state hospitals (Geller, Fisher, Simon, & Wirth-Cauchon, 1990; Isaac & Armat, 1990). Several controlled studies have shown that community-based treatments are more effective than those that are hospital-based. In a meta-analysis, Kiesler (1985) reported on ten experimental studies comparing hospital treatment to various alternative community treatment modalities, including hostels, outreach programs, day treatment, independence-training, family crisis therapy, and medication treatment. In each study, participants were randomly assigned to either community treatment or to traditional inpatient care. All studies included severely mentally ill patients. The total number of patients participating in the ten studies was 650. Kiesler concluded:

> It seems quite clear from these studies that for the vast majority of patients now being assigned to inpatient units in mental institutions, care of at least equal impact could be otherwise provided. There is not an instance in this array of studies in which hospitalization had any positive impact on the average patient, which exceeded that of the alternative care investigated in the study. In almost every case, the alternative care had more positive outcomes. There were significant and important effects on the probability of subsequent re-admission: Not only did the patients in the alternative care not undergo the initial hospitalization, but they were less likely to undergo hospitalization later, as well. . . . These data across these ten studies suggest quite clearly that hospitalization of mental patients is self-perpetuating (pp. 308-309).

Several other studies have demonstrated that most patients residing in state hospitals don’t need to be there. A 1972 study of state hospital patients concluded that
90% of the patients then residing in state hospitals, in spite of being quite disabled, could be discharged if the community service system was organized to provide support (Isaac & Armat, 1990). Two subsequent studies of state hospitals examined what happened to patients following discharge to well designed and funded community programs (Geller, Fisher, Wirth-Cauchon, & Simon, 1990; Geller, Fisher, Simon, & Wirth-Cauchon, 1990).

The first study compared the population of patients at a state hospital in a rural/suburban region where the locus of treatment was based on community services, to a similar population in a region where the locus of treatment was traditionally state hospital based. Both hospitals served geographic areas that were similar in size, population, and mix of urban, suburban and rural communities. The per capita average daily census at the traditional state hospital was more than twice that of the hospital with community based treatment (0.59 versus 0.24 per 1,000), and the traditional system’s per capita admission rate was also nearly double (0.17 versus 0.10) (Geller, Fisher, Wirth-Cauchon, and Simon, 1990, p. 984). While the region with community-based treatment spent only 60% as much for inpatient care as the traditional state hospital region, the cost of community services per capita for community-based treatment was almost two-and-one-half times more expensive than the traditional state hospital based region. The study report concluded that the combined inpatient and community services budgets of the community-based system ($26.39 per capita versus $22.85 per capita for the hospital-based system) could be justified if one could demonstrate a related improvement in consumer quality of life. The report also concluded that community-based service
systems still need to have available either the state hospital or a comparable inpatient facility (Geller, Fisher, Wirth-Cauchon, & Simon, 1990, p. 986).

The second study demonstrated the importance of avoiding state hospital admission while providing adequate residential support. The researchers (Geller, Fisher, Simon, & Wirth-Cauchon, 1990) examined the disposition of 368 patients from 1978 to 1986 following discharge from a state hospital. Fifty-one percent of patients remained out of the hospital during those eight years. Three significant factors were related to success in the community: whether patients received residential support following discharge, the patient’s age, and the number of previous admissions. Patients over 60 years of age were rehospitalized at a rate only 25% that of patients between the ages of 30 and 50. For patients with a history of multiple previous admissions, “each prior admission increased the odds of readmission in any time interval by an average of 9%” (Geller, Fisher, Simon, & Wirth-Cauchon, 1990, p. 990). When adequate residential supports were provided in the community, consumers were more likely to successfully live in the community. “Among patients with at least one admission, those placed in community residential programs for the mentally ill had significantly fewer re-admissions than did those living independently or with family when patients’ socio-demographic, diagnostic, and hospitalization history characteristics were controlled for” (Geller, p. 990). They concluded that when a mental health system operates both a network of community supports and a state hospital, costs per capita are greater than a traditional system. If such a system is successful, however, it will eventually reduce or eliminate the need for a state hospital, thereby reducing overall costs.
Other studies supported the value of community-based services. Goldstein & Horgan (1988) conducted a meta-analysis of research literature comparing clinical and economic aspects of inpatient versus community-based care. The researchers were interested in determining whether community services could substitute for inpatient treatment or serve as a complement to care in hospitals. They found that use of community services was significantly associated with improved functioning and fewer hospital readmissions. Community treatment was the most significant predictor of hospital length-of-stay for recidivist patients. Home-based treatments, including family-oriented interventions, outreach by nursing staff, foster care, and skills training in community living resulted in “lower or similar recidivism rates, less time spent in the hospital, and lower levels of psychopathology” (p. 633). Other community-based programs, such as day hospitals, day treatment programs, and structured residential programs were shown to be viable substitutes for inpatient treatment. “Brief hospitalization in conjunction with aftercare services was as effective as standard, longer-term hospitalization in reducing levels of psychopathology and rates of rehospitalization, and in improving social functioning” (p. 633).

All of these studies make the assumption that a reduction in the frequency of hospitalization and hospital length-of-stay are desirable outcomes from the perspective of consumers as well as from the perspectives of administrators, social planners, and taxpayers. Research indicators of this are at best indirect: the researchers did not attempt to measure differences in consumers’ quality-of life, life satisfaction, or functioning in any way comparable to how research would be done for the general population, or for a
cohort of people with a non-psychiatric chronic medical condition (Rapp, Shera, & Kisthardt, 1993).

While the indirect costs of community treatment cannot easily be measured or compared, comparisons can be made between differing types and levels of community support and consumer outcome in regards to consumer functioning level, level of independence, and well-being. Based on the results of this kind of study, the long-term goal for any community based treatment system should be rehabilitative and preventative. If people with severe and persistent mental illness are supported to live independently, are taught the skills necessary to maintain their independence, and receive extra support in times of crisis, they may avoid hospitalization. The longer they remain out of the hospital, the better their chances for not needing a hospital in the future.

One concern regarding the implementation of a community-based system of services has been whether community systems actually treat those with the most severe and persistent disorders. Holcomb & Ahr (1987) reviewed the services to young adults (ages 18-35) with severe mental illness in Missouri. Using a statewide patient tracking system, the authors were able to identify 7800 individuals meeting the study’s criteria for severe mental illness. Of that population, a random sampling of 611 was chosen, and data on demographic, clinical characteristics, and arrest records were collected. In addition, level of functioning information was collected on 53% of the sample. In comparing state-run facilities with private Community Mental Health Centers (CMHCs), the authors found some significant differences: the state facilities were twice as likely to be treating individuals with a primary diagnosis of schizophrenia (53% of all consumers treated)
compared to CMHCs (27% of consumers treated). Private CMHCs were three times as likely to treat consumers with personality disorder (18% vs. 6%). State programs were more likely to be treating minority group members, poor people, the unemployed, and those living in urban areas. Individuals receiving state services were more likely to have arrest records, have had more psychiatric hospital admissions, and have spent more days in the hospital. (State-run facilities all had inpatient units, while private CMHCs generally relied upon inpatient units in private or community hospitals.) The authors concluded that both systems were needed: “The more volatile patients with numerous arrests and with a history of involuntary psychiatric admissions may be most appropriately served in state-operated facilities, while patients functioning at a higher level but nevertheless impaired may be more appropriately treated by private, not-for-profit CMHCs” (Holcomb & Ahr, 1987, p. 630).

There is a need for government oversight of the private community mental health treatment industry in order to assure that the neediest are able to obtain services. State mental health authorities have been criticized for not taking the initiative in organizing the services under their purview (Isaac, & Armat, 1990). As a result, community based mental health systems have developed haphazardly, with a confusion of funding, oversight, and regulation. In 1986, the Robert Wood Johnson Foundation funded the Program on Chronic Mental Illness, including an extensive outcome study of efforts to organize community services for the mentally ill (Shore & Cohen, 1990; Goldman, et al. 1990; Goldman, Morrissey and Ridgely, 1990). Grants were provided to nine large US cities in an effort to improve and consolidate community services for residents with
chronic mental illness. Each city developed a Mental Health Authority, whose mission was to “assure continuity of care, a full range of services, a housing plan, and new sources of financing” (Shore & Cohen, p. 1212). The study found that while there was some success in making organizational change at the highest level of administration, cohesive clinical plans were not developed, and the need for comprehensive services continued to exceed resources at all study sites. In addition, there was a shortage of workers—especially psychiatrists and case managers—who were trained (or willing) to provide treatment in consumers’ natural environments, such as their homes and work sites.

Most community mental health systems have both public and private components, which can create gaps in service, or parallel services competing for consumers. Shore & Cohen’s research indicated that coordination of public and private services, while it can be very difficult, is vital for a cohesive support system. This study demonstrated the degree of success that is possible for a system that relies on cooperation between a state-run case management and private agencies.

Community Residential Programs

In the first decades of the deinstitutionalization movement, most state hospital patients were discharged to institutions in the community, such as nursing homes and private board-and-care facilities, where care was for the most part custodial (Isaac & Armat, 1990). Alternatives to institutional care in state hospitals or nursing/board-and-care homes were also developed. The first psychiatric community residential programs
such as half-way houses and group homes (Budson, 1978), were designed as alternatives to institutions. Group residences were intended to foster community assimilation: “A sort of ethnic enclave, a haven, offering respite and support to people in transition between the hospital and the community” (Nagy & Gates, 1992, p. 202).

A second alternative was initially termed *Training in Community Living* (Test & Stein, 1978b). Developed at the Mendota Mental Health Institute and the University of Wisconsin, in Madison, the program admitted people with severe and persistent mental illness who were in acute crisis and about to be admitted to the state hospital. A team of trained staff worked together to give consumers in the program necessary support in the community. Locus of treatment remained in the community and staff were held to a high expectation of success. This model has evolved and is generally referred to now as *Assertive Community Treatment* (Phillips, et al., 2001)

*Half-way houses and staffed group homes.* Initially, half-way houses evolved at a time when hospital administrators were trying to find ways to discharge patients and not have them rapidly go into crisis and return. Both literally and conceptually, half-way houses were “half-way” between the hospital and the community, sometimes placed on the outskirts of state hospital grounds, in unused buildings and staff houses. In his conceptualization of the half-way house, Budson (1978) identified four basic deficiencies of the traditional large institution which brought half-way houses into existence:
1. Largeness: State hospitals had grown to contain thousands of patients on wards of 50 to 60 patients each. Resources were inadequate to meet the patients’ most basic needs.

2. Universal medical model: Patients were considered “sick” twenty-four hours a day, which promoted a defective self-image and extreme dependence upon staff.

3. Closed Society: Hospitals had their own rules and social order. Attendants, the lowest caste in the system, had the most contact with patients and made the bulk of treatment decisions.

4. Isolation from the community: State hospitals were usually located in rural areas away from society, making it almost impossible for patients to come in contact with the outside world. (pp.5-6.)

Half-way houses were designed to alleviate these deficiencies by being small, family-like, open, and integrated into the community. Budson (1978) described the development a statewide program of half-way house residences in Massachusetts. In 1967, there were 6 state-funded community residences and 16 cooperative apartments statewide. By 1976, there were 46 group residences, with a capacity of 586 residents (for an average 12.73 residents per site), and 35 cooperative apartments, housing 172 residents (an average 4.9 residents per apartment, for a total 81 residential apartments or houses with 758 residents). Although Budson discussed the need for a continuum of community residential settings, including some short-term and transitional programs as well as longer term, semi-permanent living situations, data described very short-term
service. In 1974, the mean annual discharge rate from halfway-houses statewide was 14.62 residents per site. One-quarter of the residents stayed less than one month, 51% stayed from one to six months, and 94% were discharged by one year. A Massachusetts Department of Mental Health study in 1976 projected that the state would need 400 community residences housing 8,000 people annually statewide in order to keep up with demand, or more than five times the number it had. Budson raised concerns that in some longer term residential programs there was a trend for staff to avoid doing anything to improve residents’ functioning level or diminish their negative symptoms. In those residences, the expectation was that residents would remain regressed and dependent indefinitely, and thus easier to manage.

While there have been descriptive and conceptual discussions of half-way houses and group homes in the literature, there have been few published empirical studies, and even fewer controlled studies. Lamb (1971) conducted a three year controlled outcome study of a “high expectation” transitional half-way house program. High expectation meant that residents were expected to participate in social and work programs. Experimental and control groups were randomly selected from a pool of state hospital patients who had been continuously hospitalized for at least one year. Forty-eight patients were assigned to the experimental group, and 43 to the control. Participants in the experimental group were gradually discharged to a 19-bed half-way house, and were expected to attend a day treatment program and sheltered workshop. Some were able to progress to satellite apartments and independent living, but could remain at the half-way
house if clinically indicated. The control group participated in normal discharge procedures and aftercare services.

At six months 71% of the experimental group had been discharged from the hospital, compared to 47% of the control group. However, 12 (25%) of the experimental group were rehospitalized at least once in the first six months, but only one person in the control group (5%) was readmitted to the hospital. In latter stages of the study, both groups experienced significant recidivism, with more than half the experimental group readmitted to the hospital at any given time. There was little difference between participants in the experimental and control groups regarding how many days they remained in the community. Vocationally, the experimental group fared much better, engaging in workshop or other vocational activity at a much higher rate than the control group. Socialization, which was evaluated by observers close to each participant, was the same for both groups at six months after hospital discharge. By the end of the study, socialization scores for the experimental group improved, while scores for the control group remained the same.

It is difficult to critically evaluate Lamb’s work in that so much has changed in the 35 years since it was published, but there are some striking issues. First, it appears that participants were not given options about entering the study. He does report that two participants were dropped from the study, one from each group, because they were long-time friends and wanted to be discharged to the same facility. Everyone else assigned to either of the two groups apparently participated. The primary indications of success were age, percentage of time spent in the community (versus the hospital), vocational
engagement, and level of social engagement. The first two variables were objectively measured; Lamb reported that interrater reliability for the socialization scale was not determined. There is no indication that participants’ input or opinions were sought, which seems unconscionable by today’s research standards.

Rog and Roush (1975) evaluated 26 statistical reports of psychiatric half-way houses, including two studies that included control group comparisons. The studies varied greatly in several criteria: length of stay varied from 6 weeks to 30 months; some studies selected only participants with high rehabilitative potential while others selected only individuals who were severely impaired. Some studies evaluated participant functioning while in the program, others at the point of discharge, and still others were follow-up studies, varying from 90 days to four years after residents left the programs. Three variables were consistently evaluated in all of the studies: (a) full-time employment or school attendance, (b) independent community living, and (c) recidivism. Median figures for participants in all the studies indicated that 55.2% were employed or in school, 58.3% lived independently after discharge from the program, and 20.5% were re-hospitalized.

In one of the two controlled studies evaluated, 15 ex-residents of a half-way house were matched demographically and diagnostically with 15 patients discharged to the community directly from the hospital. After one year, no half-way house ex-residents had been readmitted to the hospital, while three in the control group had. Rog and Roush cited two general studies of recidivism for comparison. The average readmission rate within one year for those studies was 38%. Also, a significantly greater number of half-
way house ex-residents had found sustained employment (10 former half-way house residents, as compared to 4 in the control group).

The second controlled study investigated use of a half-way house as substitute for hospital admission. A total of 110 participants were randomly assigned to either a hospital or the half-way house program, which used intensive operant learning and a token economy. After 18 months there were no significant differences between the experimental and control groups. Hospital readmission rates were approximately 20% for both groups. The author does not explain the low readmission rate for the control group compared to other general studies of hospital readmission.

In their discussion, Rog and Raush (1975) raised the issue of values and life satisfaction. They pointed out that in most circumstances it was better to be out of the hospital than in, and better to be productive than idle. In that sense, half-way houses afforded consumers the means to obtain these values. The authors expressed concerns that there were signs of a degradation of program mission in some half-way houses, where treatment was usually nothing more than low-level custodial care.

In a critical analysis of half-way house outcome studies, Cometa and Morrison (1979) pointed out discrepancies between the ideals of half-way houses and the reality of the studies. For instance, they found that in some models participants’ community adjustment (avoidance of hospital readmission) improved in programs where there was little formal structure and high demands for resident autonomy. The authors were critical of claims that half-way house programs were successful in promoting vocational activities. In some studies, while vocational involvement was high while participants
were in residence, vocational involvement on follow-up dropped precipitously. Cometa and Morrison questioned whether the absence of hospital admission in and of itself constitutes successful community adjustment. Finally, they were critical of the lack of consistent data. They recommended that researchers distinguish between “successes” and participants who just drop out, or are rehospitalized in other locations and facilities. They also recommended that investigators more clearly report the following variables: number and length-of-stay to both hospitals and half-way houses, diagnostic composition of half-way house residents, frequency and nature of contact of ex-residents with staff and current residents, type of living arrangements for graduates, and length and number of hospitalizations before entering the half-way house.

We do not mean to imply that psychiatric halfway houses ‘don’t work’; obviously, some [italics in the original] clients in some halfway house programs improve to some extent. Rather, our concern rests with the apparent lack of detailed evidence specifying which factors account for successful (or unsuccessful) client adjustment. (pp.26-27)

More recently, researchers have begun to seek consumers’ opinions of their own treatment in group homes (Everett & Boydell, 1994; Fendell, 1994; Fisher & Dickey, 1995). When both consumers and staff have been consulted about treatment experiences, a disparity has emerged between consumers’ and treatment providers’ perceptions of success. Everett & Boydell (1994) evaluated the efficacy of a group home for persons with severe and persistent mental illness by surveying both staff and residents. Staff indicated that the setting’s principal benefit was the opportunity for residents to learn
basic living skills. They felt that house rules were important in teaching residents how to share. The residents, on the other hand, most valued relationships they formed with other residents and staff. They reported that too much regulation and not enough privacy compromised their living situation. This study also revealed how staff and residents differed in their view of the conclusion of residential support: Graduation, for the staff, signified that residents were ready for more independence. Residents experienced graduation as a loss.

In a study published in 2005, de Girolamo, et al. examined the status and needs of 2962 residents in 265 residential facilities (RFs) in Italy. Following the court-ordered closure of all public-sector psychiatric hospitals in the 1990s, people with severe and persistent mental illness who were deemed to require long-term residential care were admitted to RFs, which included staffed group homes, “intermediate facilities”, “wards in the community”, board-and-care homes, or supervised hostels. A sample of one-fifth (19.3%) of all RFs nationally were selected to take part in the study. Median number of residents per RF was 10.

For three-fourths of participants (74%), the current RF was considered to be the most appropriate living situation. When asked about what they thought would be the needs of their residents in six-months’ time, facility managers predicted that 78.9% would continue to reside in the current RF, 9.5% would be in another RF (with lower or higher intensity of care), 2.4% would need nursing home level of care, and only 6.5% would be able to move to a more independent accommodation, such as an apartment. Logistic regression analysis determined variables which might predict discharge to more
independent living included: currently living in a public RF, never having been admitted to a state mental hospital, having an available and effective social support system, a higher GAF score, and a shorter length-of-stay in the current RF.

The authors concluded that for the great majority of participants, RFs will be their “homes for life”. They noted that “most national [Italian] and international policies have been based on economic and humanistic concerns for adequate housing resources, rather than scientific evidence for effective rehabilitation of patients.” (p. 430) They noted that their cross-sectional survey methodology may not have adequately represented people who either move quickly through (and out of) the RF system, or who exhibit unacceptable antisocial behavior, and overrepresented the most disabled, with little prospect for discharge. They advised a follow-up investigation of the cohort to obtain a better understanding of benefits and limitations of residential resources.

In summary, the empirical evidence for efficacy of halfway house/group home treatment is woefully inadequate considering the model’s widespread use in public-sector community mental health care. Based on the data from available studies, it appears that group homes are effective in reducing hospital recidivism, and may have positive influence on vocational activity of the residents. In order for group homes to be effective, consumers need to “graduate” in order to make room for new consumers entering the programs, but some research indicates graduates may not get adequate support to remain stable after leaving the programs. Half-way houses and group homes are part of a system in which the locus of treatment is the psychiatric hospital. Many of the negative
characteristics common to institutional settings can undermine program ideals, and over time there may be degradation of program effectiveness. Most concerning is that while group homes and half-way houses are still in widespread use in the United States, research into their efficacy has not continued. There is an assumption on the part of public-sector mental health authorities that group homes are necessary and they work, and bureaucratic inertia prevents an objective comparative evaluation with alternative residential support programs.

*Continuum of care residential model.* From their origins as half-way houses, community residential programs have evolved into staffed group homes, as part of a residential *continuum of care* (Geller & Fisher, 1993). The continuum of care model provides for community residential settings of varying levels of support, structure and restriction. In theory, as consumers are discharged from state hospitals (the *most* restrictive setting), they enter the most restrictive community residential setting. As they gain community living skills and self-confidence, they move on to less restrictive/structured programs, until they graduate from the residential system to independent living. Geller & Fisher tested the model by tracking the residential movement of all consumers living in group homes in western Massachusetts. The pattern that the model predicted—continuous movement from most-restrictive to least-restricted—was not the pattern they observed. They determined that there were four levels of structure and restriction in the community group home system (largely based on staffing patterns), which they designated High, Medium, Low, and Ultralow. After
limiting the effect of patients who had been institutionalized for many years, the investigators found that in all but one level of restrictiveness (low) the modal referral source was the state hospital; the proportion of all referrals that came from the state hospital was 69.9%, and state hospital patients discharged to residential programs entered at all levels. Only 5.7% of study participants moved from a greater to less restrictive level of care in the three years of the study.

If the continuum of care model is flawed, perhaps it is because it is based on the assumption that all people with severe and persistent mental illness begin at a low level of functioning and low self-esteem (and require treatment in the most restrictive setting—the state hospital). How much of that view is an artifact of institutionalization, and not of mental illness? Severe and persistent mental illness affects each person who carries the diagnosis differently, and symptoms tend to wax and wane. The skills and self-confidence each individual acquires either before or during the course of mental illness will affect their functioning level, as will their temperament and personality. Hospitalization usually occurs because the person is experiencing acute symptoms, which can usually be controlled rapidly with neuroleptic medication. Most state hospital patients are not dangerous to themselves or others, but some are. It makes sense, then, that patients being discharged from a state hospital would need varying levels and types of residential support when they leave, depending upon their functioning and risk levels at the time of discharge.

Residential group homes have many drawbacks. They provide housing for the people who live there, but housing which is segregated and isolated from the larger
“normal” community (Rosenfield, 1992). By being overprotective, this type of setting can maintain residents’ powerless status and lowered self-esteem, which discourages their movement to more independent living (Nagy & Gates, 1992). Group homes often foster dependence through labeling and by controlling residents’ lives (Willer, Guastaferro, Zankiw, & Duran, 1992). They are very expensive, staff-intensive, and scarce—there are usually long waiting lists for vacancies. When surveyed, consumers generally report that they’d prefer to live independently with enough support than to live in staffed group settings (Forchuk, Nelson, & Hall, 2006; Nelson, Hall, & Forchuk, 2003; Tanzman, Wilson, & Yoe, 1992; Tanzman, 1993). When group homes were developed in the 1960s and 1970s, there was very little controlled research to test their efficacy (Rog & Raush, 1975), and almost nothing reported in the literature in the last twenty years. Cited as a major problem for group homes is a high hospital readmission rate, in part attributed to pressure to move on to a more independent living situation (Nagy & Gates, 1992, Test & Stein, 1978a).

Alternative community residential supports. Several alternative types of community residential support have developed. Models such as Intensive Case Management (ICM), Assertive Community Treatment (ACT), and Supported Housing Programs (SHP), are designed to provide intensive residential outreach support to consumers, who are helped to find their own housing, and are then provided the services they want and need in order to live independently (Brown, Ridgway, Anthony, & Rodgers, 1991): “Rather than considering housing part of the treatment system, [these
programs start] from the premise that the affected person needs help to establish and maintain a home” (Diamond, 1993, p.462). The service provider supports the consumer in their own home, rather than expecting the consumer to live in a program run by the agency. The intensity of service is tailored to each consumer’s needs and living preferences, and can by increased or decreased based upon the consumer’s evolving needs.

In contrast to the half-way house/staffed group home model, ACT and ICM have been well tested in a number of controlled studies. A meta-analysis of 72 controlled studies of various forms of community support (Mueser, Bond, Drake, & Resnick, 1998) revealed that ICM and ACT reduced participants’ time spent in hospital and improved their stability in maintaining housing. ICM and ACT both utilize a low consumer-to-staff ratio, and staff provide services in vivo. In ICM, each staff person is assigned a caseload of clients to work with individually, while in ACT, work with consumers is shared by the team, rather than assigned to individual workers. The team provides most or all necessary services; and service is time unlimited.

Mueser, et al. found that the most consistent beneficial effects of ICM and ACT as demonstrated by research were reduced time spent in the hospital and more stable housing. Of 22 controlled studies examining treatment effects on time spent in-hospital, 14 (64%) reported significant reductions, with only one study indicating negative effects of ICM on time spent in-hospital. Out of eleven studies that controlled for housing stability, nine reported significantly improved stability or increased independence. In addition, both models had a mild to moderate effect on reducing symptoms and
improving quality of life. These studies offered little evidence, however, that social or vocational functioning improved, or that frequency of arrest or incarceration decreased.

Costs of public sector residential community support can be very high. In an experimental study, Quinlivan, et al. (1995), observed the clinical effects and financial costs of intensive community case management on consumers who were frequent users of inpatient treatment. Ninety participants were randomly assigned to an intensive case management group, traditional case management group, or to a control group; the latter received no particular services over a two year period. While there was no significant difference between the groups in rate of admission to private hospitals, participants who received intensive case management had 91% fewer county hospital admissions and spent 94% fewer days in county hospital than the other two groups. Costs for outpatient care were about four times higher for the intensive case-managed group than for the other two groups, but when hospital costs were added, intensive case management was significantly less expensive: $18,943 per participant, compared to $26,085 per participant for the traditionally case managed group, and $42,094 for the group that was not case managed.

When indirect treatment costs (such as replacement of the patient’s salary, and social costs incurred by welfare, unemployment insurance, medical services, and costs for law enforcement) were taken into account, the benefit-cost ratio was higher for patients receiving community-based care: they required less medical care and fewer services from law enforcement and social agencies, and were more likely to be working. The authors
recommend that research be conducted to identify for whom, and under what conditions, community-based service is a viable alternative to inpatient care.

In spite of widespread use of both staffed group/congregate residences and alternative models such as ICM, ACT, and SHP for the last 30 or more years, there appear to be no randomized studies comparing the two models. In an exhaustive review of the international literature in search of such randomized studies, Chilvers, McDonald, and Hayes (2007) identified 137 empirical studies of residential support for people with severe mental illness. Only four of those studies involved random assignment of residential support, and all four of those studies were eliminated from review because they did not meet inclusion criteria. Three of the studies involved comparison of community to psychiatric hospital care, and the fourth emphasized placing homeless individuals into single or group living situations, rather than providing a supported residential intervention to aid people with mental illness. The authors concluded that initiatives to provide residential support to the mentally ill are often based on informal reports of effectiveness, and not on evidence-based research. Such initiatives are expensive to develop and maintain. Group/congregate programs, while having potential for great benefit by providing “safe havens” for their residents, may risk increasing residents’ dependence on professionals while prolonging exclusion from the community. “There is an urgent need to investigate the effects of supported housing on people with severe mental illness within a randomized trial.” (p. 1)

In one of the few recent studies to compare different housing types including group homes and staffed apartments, Dorvil, Morin, Beaulieu, & Robert (2005) examined
housing as a social integration factor. This was a qualitative study in which the researchers conducted extensive interviews with a cohort of participants living in one of four types of residences: custodial (foster family placement), supportive housing (group homes and supervised, dedicated apartments with staff in the building), supported housing (independent living with outreach support tailored to the individual’s needs, and one-room housing (SROs or public housing). Data were coded inductively under three thematic headings: relationship to self, relationship to one’s home, and relationship to the outside world.

Regarding relationship to self, participants saw their housing as a reflection of the relative seriousness of their illness. They were quite cognizant of the hierarchy and rank of the residential system, which was a marker of status. If they were forced to move from an independent apartment to a foster situation, it signified setback or failure. Conversely, movement from a group home to an independent apartment signified graduation or promotion, a kind of trophy. “Normal housing” (one’s own apartment) was both a reference point and an ideal that one hoped to attain.

Medications were integral for the control of symptoms, and relapse often occurred when medications were not taken as prescribed or the dose was ineffective. The link between housing and mental health became tangible for participants through staff assistance with medication dispensing and psychiatric appointments. For those living in group and congregate situations, the presence of other people kept loneliness at bay. Also, they felt a measure of satisfaction in being there for others who may be going through a difficult time. Group and congregate housing is considered a judgment-free
zone, where mental illness and symptoms are accepted. Living in such settings afforded participants the chance to develop new interpersonal and social skills within the safety of an accepting environment.

Conversely, those in independent living tended to cleverly conceal their mental health problems from neighbors and landlords. This type of housing contributed to “normalization”—concealment of one’s symptoms, rather than an expectation of neighbors’ acceptance of those symptoms. One’s own apartment represented the ideal set-up to most participants in the study (no matter what their own residential situation), and was associated with stability, autonomy, and mental health, the attainment of which bolstered one’s self image. Participants currently living in their own apartments reported the living situation facilitated their developing solving problems skills and making choices for themselves.

Regarding relationship to one’s home, participants who lived independently in apartments indicated the importance of having control over their own space, which included the power to withdraw, even for a few days, which may be crucial to control one’s illness. Having one’s own space also means having control over one’s time. People living in group accommodations reported that staff put constraints on their time, such as with meal times or curfews, which hampered residents’ freedom and was viewed as a form of excessive control. Those living with others reported not having a choice about with whom they lived. They were also constrained from engaging in “intimate encounters”—group home euphemism for sexual relationships—whereas there were no such rules for those living in their own apartments.
Regarding their relationship with the world outside of the residential supports, participants who lived in group and congregate situations were more likely to socially engage with other consumers in agency-run programs and activities. Those living in their own apartments were free to engage in those activities as well, but reported also having social networks that included people not in the mental health community. In spite of this, most participants reported that as time went on they felt more cut off from the so-called “normal” sector, that they were part of the “mental illness ghetto.” (Dorvil, p. 511)

The authors concluded that the themes most cogent for participants were locus of control and degree of social integration. Participants placed great importance on their ability to have control over their environment; to be able to negotiate rather than be coerced, make their own choices instead of having decisions imposed upon them. There is “a choice to be made between the greater autonomy yet greater risk of isolation that apartment-style living brings, and the lack of autonomy yet greater security offered in residential accommodations.” (Dorvil, p. 514)

In a study examining housing choice and control (Nelson, Sylvestre, Aubry, George, & Trainor, 2007), the authors interviewed 130 participants with mental illness receiving residential support from 12 government-funded agencies in Ontario, Canada. Agencies had wide latitude in terms of the types of housing and support they could develop, and programs ranged from congregate living situations to independent apartments. Trained and experienced interviewers interviewed participants utilizing scales to gather information for five variables: housing choice/control, housing quality, control over professional support, subjective quality of life, and community adaptation.
Findings showed that perceptions of housing quality were related to perceptions of housing control and choice. Participants who perceived that they had more choice and control over their housing were also more likely to perceive that their housing was of greater quality. Perceptions of housing choice/control were also positively associated with subjective quality-of-life. Participants who perceived that they had more control over professional relationships had better adaptation to community living and higher subjective quality-of-life.

Related to housing type, participants living in apartments reported higher levels of housing choice/control and control over professional support. The authors concluded that their findings contributed to the body of research on significance of housing of an empowering nature on the lives of people with serious mental illness. Promoting choice over where and with whom people live results in improved quality-of-life and community functioning. The authors note some limitations of their study, including that participants were not randomly assigned to different types of housing, and participants had been living in housing for several months prior to participating, preventing baseline measures.

Rog (2004) conducted a review of 15 published studies examining the outcome of independent housing with supports for people with serious mental illnesses. She found a number of consistent outcomes to indicate the effectiveness of the model. Every study demonstrated resident stability; once in housing with supports, the majority of participants stayed in housing and were less likely to be hospitalized. There was limited evidence that people in supported housing fared better than comparison groups in alternative types of residential support. When compared to individuals not in any specific
form of housing support, those living in supported housing had better outcomes. However when people receiving supported housing services were compared to participants in other housing program types, outcomes were more equivocal or inconsistent. Rog surmised that it was possible that well-defined, more consistent supported housing services “may help create an advantage in residential stability, especially for individuals with severe issues and problems.” (p. 339) What appeared to be critical was to have access to affordable housing. Participants who had access to Section 8 subsidies (which set their rent to approximately one-third of their monthly income) fared better regardless of the type of support they received.

Results were also equivocal regarding who fared better or worse in supported housing. Younger participants fared better than older ones, participants with mood disorders had better outcomes than those with schizophrenia, and those with co-occurring substance abuse disorders had worse outcomes. It was clear that when consumers received the housing approach they preferred as well as what clinicians recommended, they had better outcomes.

Four recent studies point to the importance of the client-worker relationship within an ACT/SHP/ICM setting, in which each client is typically assigned a “primary worker.” (Angel & Mahoney; 2007; Buck & Alexander, 2006; Tunner & Salzer, 2006; Ware, Tugesberg, & Dickey, 2004) In each of the studies, the authors used qualitative methodology in order to overcome the limitations of quantitative methodology, by pinpointing aspects of client-worker relationships that are valued by consumers and are of such importance to the treatment process. In three of the studies (Buck & Alexander,
2006; Tunner & Salzer, 2006; Ware, Tugesberg, & Dickey, 2004), a total of 158 consumers were interviewed. In the fourth (Angel & Mahoney; 2007), 15 client-case manager pairs were observed working together through three scheduled appointments, and case managers were also interviewed. The findings in all four studies were remarkably similar: The relationship between the client and worker goes well beyond professional rapport. It is very meaningful to the client to get “extra things” from the worker. “[O]ften these were small things: a ride, a joke, a shred of personal information, coffee and conversation about something other than mental illness, even a simple greeting.” (Ware, Tugesberg, Dickey, 2004, p. 556). That the worker is willing to go to the client’s home overcame the typical practitioner-client boundary that often feel alienating to people with severe mental illness. These close personal relationships met consumer desire for connection with others, and helped serve as a bridge to a larger social world through the worker-client relationship. A negative aspect to such a close relationship occurred when there was conflict and tension within the relationship, but even in those situations other aspects of the relationship—such as enjoyable social activities, mutual affirmation—indicated that the strong relationship ties helped to overcome conflict.

In all of the studies, the researchers emphasized the importance of a good interpersonal process, which led to the client’s fulfilling their desire for connection to the larger world through the client-worker relationship. The authors recommended that consumer opinion continue to be sought in research, and that methods to more effectively
obtain data regarding the therapeutic aspects of the client-worker relationship—such as survey scales designed specifically for this type of relationship—be developed and tested.

One problem of program design can be model “slippage,” whereby programs deviate from the model structure in implementation, thus possibly affecting the treatment outcome of the clients. In an examination of 252 consumers participating in 27 supported housing programs in the Philadelphia area, Wong, Filoromo, & Tennile (2007) found that there was quite a varied range of housing normalization. Nearly one-quarter lived in housing in which there was a staff office or program located in the same building, 11% lived in housing settings where mental health consumers were highly clustered, and one-fifth of participants lived in buildings owned by the mental health agency providing the residential support. The authors recommended that there be an “unbundling” of housing from mental health support to ensure consumers have a choice of whether they receive or not receive services without it affecting their tenancy status. They recommended the establishment of clear operational frameworks to make sure there is fidelity to model principles.

In spite of the empirical evidence of ACT/SHP/ICM’s effectiveness, Mental Health Authorities have been slow to implement alternative intensive outreach residential services. (Brown, Ridgeway, Anthony, & Rodgers, 1991; Drake et al., 2001). There is a general belief among administrators that people who are most severely disabled by mental illness would require a prohibitively expensive intensity of outreach support (Strebnik, Uehara, & Smukler, 1998). People with more severe or persistent symptoms, deficits in daily living skills, or a history of relapse, require treatment in staffed group
homes, at least initially (Geller & Fisher, 1992; Munetz, Peterson, & Vandershie, 1996). Administrators may also assume that only those consumers with less severe symptoms and who are higher functioning should be provided intensive outreach residential services (Friedrich, Hollingsworth, Hradek, Friedrich, & Culp, 1999). Consumer preference, basic life skills, and willingness to accept help, however, may more accurately predict successful outcome than severity or persistence of symptoms (Diamond, 1993; Knoedler, Carpenter, McCabe, Rutkowski, & Allness, 1992).

Based on the findings of replicated empirical studies of ACT/SHP/ICM and, more recently, well-designed studies surveying consumers’ opinions, comprehensive, ongoing supports that are provided to consumers where they live are suitable for the vast majority of people who suffer from severe and persistent mental illness. Such services are efficient and cost-effective compared to group home/half-way house and continuum of care models, and greatly diminish the need for (and expense of) inpatient care. Such services are easily adaptable to the needs of individual consumers, and can be quickly reduced or intensified based on need. When asked, consumers state a clear preference to live where they choose to live as long as they receive adequate support.

**Well-being**

Well-being is a personal, subjective perception encompassing a sense of satisfaction with the quality of one’s life, of happiness; the fulfillment of needs and the ability to meet the demands that a society places on its members (Bigelow, McFarland, & Olson, 1991). The individual meets society’s demands through use of basic physical, social, and psychological skills. These skills are applied to the completion of work that
benefits society. In order to work, one must be able to learn a job, concentrate on work tasks, and handle stress of the workplace. In return, work supplies the individual with opportunities for fulfillment of physical, psychological, and social affiliation needs. Positive self-esteem and a sense of mastery are vital contributors to an individual’s feeling of well-being (Rosenfield, 1997).

Illness impacts negatively on an individual’s sense of well-being by compromising the person’s ability to satisfactorily engage in the social and vocational role demands of the society. When that illness is persistent and disabling, it may deprive the individual of a vital source for positive self-esteem and well-being. Severe and persistent mental illness can dramatically impair the individual’s cognitive, social, and physical abilities, making it impossible for the individual to be productive in society. Treatment for severe and persistent mental illness is palliative and only partially alleviates symptoms. It is therefore helpful for those who care for someone with mental illness to have a broader awareness of that person’s life conditions and the impact the mental illness is having on that individual’s functioning. They need to question whether treatment not only alleviates symptoms of disease, but whether it also enhances the quality of the person’s life (Lehman, Ward, & Linn, 1982).

The scientific study of well-being is a relatively recent undertaking. One of the first major studies of the general population to include a measure of well-being was published in 1960 by Gurin, Veroff, & Field. This was a national survey of the general population of Americans, funded by the National Commission on Mental Illness and Health. While the study concerned itself primarily with determining the psychological
health of respondents, it inquired about various forms of “worry”, and included a single question rating the respondents’ level of “happiness”. In 1965, Bradburn & Caplovitz published a series of studies on happiness in which they used the Gurin-Veroff-Field “happiness” question, and related it to the relative balance of two independent conditions: positive and negative feeling states. In later work, Bradburn applied positive-negative feeling states to marriage and work (Bradburn, 1969). His concept of well-being was based on the notion of emotional balance. Hadley and Cantrel’s 1965 study (as cited in Andrews & Withey, 1976) conducted an extensive study comparing data from thirteen countries including the United States. The study was most concerned with respondents’ aspirations, needs and satisfaction. Researchers asked respondents to think of “the best in life” and “the worst in life” imaginable and place themselves on a scale ranging between those two extremes.

The first studies to attempt to measure well-being exclusively were published in 1976 (Andrews & Withey; Campbell, Converse, & Rodgers). Both studies examined well-being for the general population of Americans. Their results provided benchmark measures for well-being of the general population of Americans against which other groups could be compared. Both groups of researchers developed instruments that included general items in domains such as satisfaction with marriage and family, friends, job, housing, neighborhood, standard of living, hobbies, faith. They also compared results among subgroups by age, marital status, and race/ethnicity. In both studies respondents were presented with statements in several categories and asked to choose a term that most represents their feelings, using a seven-point rating scale. Campbell, et al. used a scale
that ranged from “completely satisfied” to “completely dissatisfied”. Andrews and Withey, concerned that the Campbell, et al. study’s data reflected skewed distributions for several domains developed a “delighted-pleased-mostly satisfied-mixed-mostly dissatisfied-unhappy-terrible” scale in which they hoped to add more affect and, consequently, reduce skew. Andrews and Withey also sought to elicit “affective evaluations”, which involved what they considered to be both a cognitive evaluation and some degree of positive or negative feeling.

There is a substantial body of research into the well-being of patients suffering from serious, disabling, and life-limiting medical conditions. Physicians and health care providers have tried to objectively measure quality of life for patients receiving cancer therapy treatments, which can extremely toxic, and which often only serve to extend the patient’s life or reduce suffering, rather than as a cure. A number of objective instruments developed to assist medical staff in making quality of life assessments were tested by Slevin, Plant, Lynch, Drinkwater & Gregory, (1988). One instrument, the Spitzer quality of life evaluation measures five specific aspects of quality of life, including activity, daily living, health, support, and outlook, and a series of linear analogue self assessment scales (LASA Scales) for quality of life, anxiety and depression (Spitzer et al., 1981). The Karnofsky Performance Scale (Karnofsky & Burchenal, 1949), measures the extent to which a patient’s symptoms require medical care and restrict their activity. Researchers had 108 cancer patients and their doctors complete questionnaires simultaneously. Correlations between doctors’ and patients’ responses were poor for all three factors measured: quality of life, anxiety and depression, accounting for less than 30% of the
variability in the patients’ scores on any of the scales. The researchers concluded that
doctors were not able to adequately measure patients’ quality of life through objective
measurement: “Quality of life is a concept that includes many subjective elements, and it
is therefore perhaps not surprising that a doctor may not have the necessary knowledge of
the patient’s feelings to evaluate their quality of life accurately.” (p. 110) They observed
that the interrater reliability in completing the objective Karnofsky score was only 54%.
They recommended that patients rate their own quality of life, not their doctors or nurses.

A great deal of research into the well-being of older Americans has been
conducted. In a meta-analysis of thirty years of research on the subjective well-being of
elder Americans (over age 60), Larson (1978) reported well-being to be most strongly
related to health, socioeconomic factors, and degree of social interaction. Marital status,
and living situation also related to well-being, but age, race, gender, or employment
demonstrated no consistent relationship. In a longitudinal study of elder Americans, Neal
Krause (1990) found that formal support, but not informal assistance, helps to reduce the
negative affects of poor health on satisfaction with life over time. In another longitudinal
study taking place over a three year period, Baur and Okun (1983) found little change in
respondents’ reported life satisfaction in spite of reports by 76 of the 87 respondents of
dramatic situational changes over the period of the study. They concluded that the best
predictor of future life satisfaction is satisfaction with life in the past. Duff and Hong
(1982) found that the quality of social interaction with friends and relatives is
independent from and more important than how often the interaction occurs for older
Americans. They concluded that *consensual validation*—when someone else matters as much to you as yourself—is a significant factor in satisfaction with life.

*Measures of well-being and mental illness.* The development of instruments to measure subjective well-being among persons with severe and persistent mental illness has been quite extensive. Bigelow and associates (Bigelow, Gareau, & Young, 1990; Bigelow, McFarland, & Olson, 1991) developed a measure based on the concept that quality of life consists of the fulfillment of needs and the meeting of demands which society places upon its members. Needs are met through environmental opportunities. Demands are met through basic psychological abilities. For instance, work requires the worker to be able to tolerate the stress and concentration demands of a job or school, and provides opportunities for developing self-esteem, social affiliation and other basic needs. A disability (such as mental illness) can interfere with a person’s ability to fully meet demands or have opportunities to have needs met. Bigelow’s instrument contains 146 items, and is administered through use of a lengthy, unstructured interview.

Lehman (1983, 1988) borrowed items from Andrew and Withey’s study (1976), and added items from Test & Stein (1978b) and others to develop an interview instrument designed specifically to ascertain the well-being of people with severe and persistent mental illness. He chose to use a highly structured interview format because of concerns that mentally ill respondents would have difficulty completing a written questionnaire, or might not be able to sustain interest in completing it. Lehman’s model for global well-being includes three components: (a) Demographic/diagnostic characteristics, including
demographic and clinical characteristics; (b) Functioning and risk indicators, including measures of resources and functioning, and (c) Subjective quality-of-life measures, including items in nine domains: living situation, family relations, social relations, leisure, work, finances, safety, health, and religion. Lehman found that prediction of global well-being was substantially improved by each successive stage of measures. In a study of 278 mental health consumers living in thirty large board-and-care homes in Los Angeles, Lehman and colleagues (Lehman, Ward, & Linn, 1982) found that respondents were less satisfied than the general population in most domains especially finances, work, safety, and family and social relations. In a second study, Lehman (1983) combined the data from his first study with data collected from 99 randomly selected respondents from a psychiatric inpatient unit, and 92 from supervised community residences to test his instrument.

Greenley, Greenberg, and Brown (1997) developed a self-administered a Quality of life Questionnaire (QLQ) based on Lehman’s instrument and designed to be widely distributed to consumers, who would complete it on their own and return it by mail. QLQ utilizes 24 items in seven subjective areas: living situation, finances, leisure, family, social life, health, and access to medical care. Each question elicits the respondent’s perspective using a seven point scale from “terrible” to “delighted”, as in the Andrews & Withey (1976) instrument. Scores on QLQ have correlated significantly with consumers’ functioning and satisfaction with services.

In a large-scale trial, QLQ surveys were distributed to 1,179 Wisconsin consumers with severe mental illness; with an 87.3 % return rate. Of those returned, 971
(94.4 %) were complete and usable. Cronbach’s alpha reliability for each subjective area were as high as for Lehman’s interview instrument (QLQ value listed first): living situation, .88, .88; finances, .89, .86; leisure, .87, .84; family, .91, .87; social life, .90, .86; health, .81, .82. Factor analysis indicated a seven factor structure, which was confirmed by goodness-of-fit index. A second order factor analysis was conducted to determine if there was a single underlying overall quality of life score. Goodness-of-fit indexes confirmed the appropriateness of a second order factor. The correlation between a total score obtained by a simple averaging of individual scale scores versus a total score, based on factor regression coefficients was .97, indicating that a global score derived from an averaging of means is quite satisfactory. Overall, QLQ provided the validity and reliability of Lehman’s instrument, and was much easier and less expensive to distribute and use.

Well-being and empowerment. There have been a number of studies of consumers of mental health services that have incorporated measures of well-being. Services which enhance work or financial stability, mastery, self-esteem, and which combat the negative aspects of stigma, correlate positively with well-being. In her 1992 study, Sarah Rosenfield interviewed 157 members of a Fountain House model community clubhouse about their services, quality of life, and perceptions of mastery. She found that services that provided economic resources and an empowerment approach were related to overall quality of life, and that respondents’ perceptions of mastery accounted for their impact on life satisfaction. She concluded that opportunities to improve consumers’ economic
situations (meaningful work) and services which empower consumers will positively influence well-being.

Another study (Priebe, Warner, Hubschmid, & Eckle, 1998) found that work was associated with significantly improved sense of well-being for people treated for schizophrenia. Investigators interviewed 72 randomly selected participants, half of whom were employed. Unemployed participants demonstrated higher levels of psychopathology and negative symptoms. They found that more severely disturbed people were less likely to find work, but that work contributed to greater symptom stability. Employed participants had significantly higher scores on both objective and subjective measures of satisfaction with work, leisure, finances, and global well-being, even when controlled for level of psychopathology. The authors concluded that work improves well-being by enhancing subjective elements such as self-esteem and positive affect, while also improving objective factors, such as income level.

In a study measuring the effects of mental health services and participants’ level of perceived stigma on life satisfaction, Rosenfield (1997) hypothesized that the process of labeling someone with a psychiatric diagnosis while essential for treatment, stigmatizes the person, damaging self-esteem and well-being. Treatment, on the other hand, can teach skills, provide social support and empowerment. Researchers interviewed 157 participants using Lehman’s (1982) Quality Of Life scale. Participants also provided information regarding mental health services they had used within the past month and completed a 21 item mutual empowerment scale that measured decision-making power and supportive interactions. Stigma was measured using a 12 item scale of devaluation-
discrimination; self-esteem measured by a survey of feelings of worthlessness, usefulness and failure; and a mastery scale measured feelings of helplessness, control over forces affecting oneself, and the ability to solve problems or change. Researchers also collected objective quality of life and symptomatology data from staff. Hypotheses were tested using regression analysis. Results indicated that a majority of participants believed that mental health consumers are not accepted by most people as friends (65 %), are seen as less intelligent (57 %) or trustworthy (53 %) than other people, and that their applications for work would be passed over (77 %). Just over 50 % believed that consumers are stigmatized. Participants who perceived more devaluation and discrimination had lower perceived satisfaction with life. As in her 1992 study, Rosenfield found that use of services which increased economic resources, such as vocational or financial services was related to enhanced overall life satisfaction ($p < 0.06$). Services that were status enhancing, such as substance abuse programs or empowerment groups, or time spent in activities and time structuring assistance also were found to be associated with enhanced self esteem. These results were diminished when perception of stigma and self-esteem were held constant. Rosenfield concluded that perceptions of mastery and self-esteem mediate the association between received services and overall quality of life, but that services promote participants’ satisfaction with life by enhancing their confidence in themselves and their sense of control over their lives.

Well-being and housing and supports. Seilheimer and Doyal (1996) examined self-efficacy and consumer satisfaction with housing as well. They found that more
independent housing, vocational participation, and higher levels of self-efficacy were associated with higher levels of housing satisfaction. Over half of the participants reported they would prefer to move from their current residential situation, and two-thirds of that sub-group expressed the preference for more independence in housing.

A study by Warner et al. (1998) compared the quality of life of 100 people with schizophrenia living in Boulder, Colorado to 70 of their counterparts in Bologna, Italy. Researchers compared demographic and diagnostic data, and interviewed participants using the Brief Psychiatric Rating Scale and the Lancashire Quality of Life Profile (LQOLP). LQOLP, which is based on Lehman’s (1983) Quality of Life questionnaire, includes subjective ratings of satisfaction and objective questions in nine domains including employment, income, housing, and social and family relations. Using t tests and chi-square analysis, investigators identified several objective Quality of Life differences between sites, but few differences in subjective satisfaction. For working participants, the number of months worked in the last two years, and hourly wage were both higher for Bologna residents (18. months, $9.38/hr.), than for Boulder residents (12.1 months, $4.68/hr.). More Boulder participants felt they had insufficient money to be able to enjoy life.

Bologna participants were more likely to live with family and to live in personally owned accommodation, and less likely to live in supervised accommodation. Average length of stay in current accommodation was six times greater for Bologna residents, and more participants in Boulder expressed the wish to move from their current accommodations. Participants from Bologna were more frequently in contact with
relatives than were Boulder participants; conversely, Boulder participants were more likely to have visited a friend. Both well-being and self-esteem were positively correlated with satisfaction with frequency of family contact (well-being: $r = 0.371, p = 0.0001$; self-esteem: $r = 0.216, p = 0.007$) and with satisfaction with family relationships and contact (well-being: $r = 0.353, p = 0.0001$; self-esteem: $r = 0.172, p = 0.031$). Bologna participants reported more satisfaction with frequency of physician visits, and attended religious services more frequently. Factor analysis of QOL variables revealed four factors with an eigenvalue of 3.0 or greater, contributing to 6% of the variance, and objective and subjective variables loaded on different factors. Subjective variable factors included measures of social relations (satisfaction with number of friends, family and interpersonal relations, and leisure activities outside of the home), and living circumstances (satisfaction with living situation, satisfaction with privacy, independence and influence in the home, and willingness to stay for a song time in current accommodation). Objective variable factors included measures of family/home circumstances (living with family, frequency of contact with relatives, type of accommodation, and length of time in current accommodation), and measures of income and work status (number of hours worked, earnings, and total income). Italian cultural values of family relationships and religion, or the American desire for independence and the work disincentive effect of the US Social Security disability benefits system no doubt played a role in the differences between the two cities.

In a review of 29 studies examining the relationship of housing type and health and quality-of-life related issues, Kyle and Dunn (2007) found that the strongest evidence
of the health effects of housing on people with serious mental illness came from studies involving homeless people. The authors felt that other study designs, involving non-homeless participants, were generally of poor quality, with inconsistent definitions and measures, resulting in little guidance as to what works or doesn’t work. Regarding how housing affects mental status, the authors found that many of the studies presented promising results, but that more research is necessary to confirm the findings. The results suggested that interventions to improve housing quality might positively affect participants’ mental health, and household conflict with roommates for those living in congregate settings led to anger, frustration, and depression. In regards to quality-of-life, the authors found that fewer than half the studies examined produced findings supported by medium or stronger evidence. The authors concluded that

acquiring permanent, affordable housing has the potential to improve the mental health and quality of life of persons with severe and persistent mental illness. . . .

[They] also require housing that is appropriate for their individual needs and support services that are individualized and flexible.” (pp. 13-14)
Summary

Group homes have been developed throughout the United States as a primary mode of treatment in the community for people suffering from severe and persistent mental illness. They were developed with precious little research into their efficacy, and their high cost put them out of reach as a treatment modality to the majority of people who need services. When asked their opinion about group home treatment, consumers have raised many concerns about treatment in such settings, and prefer to receive support while living where they choose to live.

“Alternative” residential support programs, such as Intensive Case Management and PACT, have been very well studied, and results indicate that the vast majority of consumers can be effectively treated in such programs. They remain however, alternative programs, rather than the primary community treatment modality, and funding for such programs is limited because state hospitals continue to capture the lion’s share of state mental health funding. Mental health authorities have been slow to acknowledge the research findings in support of alternative residential programs and to modernize state mental health systems. Community treatment for most mental health consumers in the United States remains fragmented, and services vary widely from place to place (New Freedom Commission on Mental Health., 2003; Interim report to the President, 2002). Intensive residential support services attempt to ameliorate this fragmentation by bringing adequate support to consumers where they live and work.

A traditional assumption made by mental health administrators is that people who have severe symptoms of mental illness and/or low functioning levels need almost
constant structure and support. As they “recover”—and learn new skills or re-learn lost ones, they can progress to less support/more independence. This assumption is not supported by research.

In fact, consumers are assigned to type and level of residential support through a complex, and somewhat arbitrary and artificial process. Assignment is based not just on an objective measurement of the client’s level of functioning and risk. It is also based on such things as available program “slots”, the culture of the treatment environment, the assignor’s beliefs and biases, the level of risk that the assignor is willing to take, etc. Except in the case of Assertive Community Treatment (ACT/PACT) program research, where participants needing intensive treatment have been randomly assigned to experimental or control groups without regard to functional level or risk, the literature has paid little attention to how clients are assigned to residential support. Proponents of ACT/PACT contend that such programs can deal with most issues of functioning and risk, while allowing people to live independently.
Theoretical Framework

This study proposal is guided by two conceptual models; the Lehman (1983, 1988) *Quality-of-Life* model, and Stein & Test’s (1978) *Assertive Community Treatment* model.

The Lehman Quality-of-life model (QOL) contains two central tenants:

1. Ultimately, quality of life is subjective in nature, a personal and individual question, and is reflected in a person’s sense of their own *global well-being*.
2. The individual’s global well-being can be best predicted as a product of three components: (a) demographic/diagnostic characteristics, such as age and gender; (b) objective life conditions in various domains, such as functioning level; and (c) subjective quality of life indicators in these domains, such as satisfaction with income (figure 1).

![Lehman Quality-of-life Model](image-url)
This model contrasts with the more common approach for evaluating quality of life through use of objective measures only. Objective observations of quality of life have been shown to have at best a modest relationship to well-being in the general population (Campbell, Converse & Rodgers, 1976), as well as in treatment of medical problems (Slevin, Plant, Lynch, Drinkwater, & Gregory). Objective indicators have appeal to clinicians and policy-makers because they are tangible, reflect accepted social norms of behavior, address environmental conditions that can be manipulated within programs, and often can be extrapolated from data already collected for other purposes. However, objective assessments alone provide little information about how individuals feel about their lives (Lehman, 1983). Subjective indicators reflect the converse. An individual may not perceive dissatisfaction with poor housing conditions, for instance, but may experience an overall improvement in well-being if poor housing conditions are identified and improved.

The importance of understanding well-being of consumers can be viewed on two levels. On the level of clinical intervention, the clinician can learn through well-being assessment what concerns a particular consumer, what is important to that person, of the sources of dissatisfaction or pleasure. For instance, the consumer may be very motivated to make changes in areas in which he or she is highly dissatisfied. Conversely, in areas where he or she feels well satisfied, no matter how dysfunctional these areas may look to the observer, there may be little motivation on the individual’s part to change.

On the level of program evaluation, QOL assessment provides information not often available to decision-makers, who may assume that either consumers are unable to
provide such information reliably, or that their opinions would concur with the more accessible opinions of professionals who treat them. QOL assessments reveal how consumers are functioning in various areas of their lives and tell us how consumers are functioning from their own perspective.

Intensive Outreach Residential Support is best defined by Stein & Test (1978), who developed the Assertive Community Treatment (ACT) conceptual model. ACT has as its basis a philosophy that the *locus of treatment* for people with severe and persistent mental illness must be shifted from the psychiatric hospital to the community. Stein & Test identify five factors required by consumers to achieve a satisfactory life in the community. The absence of one or more of these factors can lead to difficulties in functioning and eventual crisis:

1. Material resources, including food, shelter, clothing, medical care. Community programs must assume responsibility for helping the consumer obtain these resources.
2. Coping skills to meet the demands of community life. Skills that are often taken for granted, such as cooking, laundry, housekeeping, budgeting, use of public transportation. It is essential that these skills be taught *in vivo*, where the consumer will be needing and using them.
3. Motivation to persevere and remain involved with life. Consumers need a system of support to encourage them to solve real-life problems, and help them to feel they are not alone—that there are others concerned for their welfare.
4. Freedom from pathological dependent relationships. Stein & Test (1978) define a pathological relationship as one that “inhibits personal growth, re-enforces maladaptive behaviors, and generates feelings of panic in its members when its loss is threatened” (p.45). The program must help the consumer to break free of pathological dependent relationships while providing sufficient support and encouragement toward growth and greater autonomy.

5. A support system which assertively helps the consumer with the above four requirements. A program designed for their care must be prepared to “go to” the consumer to prevent drop out. It must also insure continuity of care between treatment providers, rather than expecting that the consumer can successfully navigate difficult pathways on her or his own. (pp. 44-46)

Intensive Outreach Residential Support is delivered to the consumer in vivo by a team of professional and paraprofessional staff. Team members collaborate with one another and monitor the consumer’s response to interventions so that they can be modified and adjusted to meet changing needs. Services are determined by each individual consumer’s needs, not a predetermined set of interventions. The team provides for most or all consumers’ needs; little is brokered out. Consumer to staff ratios are small, generally below 1:10. There is no pre-determined time limit on the service; it is continued for as long as the consumer requires it. Support is available when the consumer needs it, including nights and weekends (Phillips, et al., 2001).
Group home programs generally insure that residents have material resources, such as food, shelter, clothing and medical care. However, these resources are provided by staff and the consumer has little or no input into where she or he lives or with whom. Teaching residents coping skills requires a well-trained staff and perseverance. It is often easier for staff to do the cooking and cleaning and shopping for residents, who become passive recipients of assistance and dependent upon staff. Group home life can sink into the routine of schedules and shifts. Staff easily lose motivation to help residents to become more independent and competent (Nagy & Gates, 1992, Rog & Raush, 1975).

Intensive Outreach Residential Support contrasts significantly with group home treatment but, in spite of its proven efficacy, it remains the “alternative” community residential model. It is the aim of this study to demonstrate that Intensive Outreach Residential Support is at least as effective as the traditional group home residential model, while actively motivating consumers to participate in their own recovery.

Discussion

Controlled research designs testing the efficacy of intensive outreach residential models indicate they are effective at eliminating the need for other forms of institutional or residential care for the vast majority of consumers (New Freedom Commission on Mental Health., 2003; Leheman, et al., 2004; Bellack, 2006; Mueser, Bond, Drake, & Resnick, 1998; Rog, 2004). However, group homes continue to exist, and there remains a number of consumers for whom independent community placement is seen as too risky, either to the consumer or to the community. For whom is group home placement appropriate or even necessary? What combination of demographic, diagnostic, and level
of function data predicts what type of residential support a consumer requires? Is there a
subset of consumers for whom we can predict, based on distinguishing demographic,
diagnostic, objective level-of-function indicators, or subjective quality-of-life indicators,
will need group home care? For all other consumers requiring residential support, is there
any justification for placement in staffed group homes when they would prefer to live
independently as long as they receive enough support?

Based on a review of the literature and experience in providing community-based
service, it could be assumed that almost no one who is mentally ill needs the
constant/almost constant support and structure of a group home, and would prefer not to
have it. Current research evidence for ACT/ICM is that those models are superior when
compared to either traditional outpatient services or acute/long-term inpatient care.
However, there is little research comparing ACT/ICM to staffed group home treatment.
Most research of group home treatment is dated and descriptive in nature; including some
poorly designed outcome studies published 30 years ago.

Current evidence suggests that when people with severe and persistent mental
illness are able to assume the primary responsibility of taking care of themselves while
given enough support to do so, they rise to the occasion and quickly function well enough
(to live on their own), and are happier for it. People who live independently with enough
support adapt quickly (in their functioning ability) in order to succeed. Self esteem,
empowerment, self-determination are related to success: Am I in charge of my own
destiny? Am I a competent adult? If I can successfully manage my own life I feel much
better about myself and about life in general. Success, in turn, results in enhanced well-being.

Anthony Lehman (1983; 1988) defines well-being as a construct of (a) demographic/diagnostic characteristics, such as age and gender; (b) objective life conditions, such as functioning level; and (c) subjective quality of life factors, such as satisfaction with income. My hunch is that initially there is not much difference demographically, diagnostically, and in functioning level between people who are referred to group homes and those referred to intensive residential support programs. I believe that well-being is much more related to environment, locus of control, and autonomy than to objective functioning level and severity of symptoms. With adequate outreach support, most people with mental illness can find a living situation best suited to their wishes and needs, and gain a measure of control over their environment. The natural consequences of interacting with landlords, neighbors, family, and other social service (social control) agencies such as housing authorities and the police and courts will positively influence people’s functioning level and behavior (symptom control).

At times, risk (to self or others) can become a significant issue for residential assignment—particularly if the person is unable to take care of her/himself, is actively suicidal, or at risk of harming others. However, determination of risk can itself be very subjective, and may be tainted by the assessor’s unwillingness to take risks or their own need for control. I believe that when providers of service are willing to support consumers to live independently with enough support, the consumer will succeed and improve, except in relatively few situations where their behavior presents a serious risk of
harm to self or others. Consumers don’t need to live in group homes to be “trained” in independent living. When there is adequate outreach support, they can receive “on-the-job training” in their own apartment. The process of participating in a program offering outreach residential support, as opposed to group home treatment, results in enhancement of the participant’s quality-of-life. Over time, enhanced quality-of-life may result in improved functioning and reduction in symptom severity. These changes add up to enhanced well-being.

Research Hypotheses

This study will test the following research questions:

Personal Characteristics Domain

1. There are no significant differences in personal (demographic and diagnostic) characteristics between persons with severe mental illness who live in group homes and their counterparts living independently with outreach residential support.

Objective Functioning and Risk Domain

2. People with severe mental illness who live independently with intensive outreach residential support function more independently than their counterparts living in group homes.
3. People with severe mental illness who live in group homes are more likely to present risk behaviors than their counterparts living independently with outreach residential support.

4. People with severe mental illness who live independently with intensive outreach residential support have fewer psychiatric crises, respite evaluations, and hospital admissions than their counterparts living in group homes.

Subjective QOL Domain

5. People with severe mental illness who live independently with intensive outreach residential support experience higher levels of subjective quality-of-life than their counterparts living in group homes.

6. It is possible to identify variables that may indicate best “fit” between a particular candidate for residential services and particular type of residential support.
CHAPTER II

Methodology

Study Design

In this study I used a quantitative, cross-sectional design, using a relational, between-subjects approach (Anastas, 1999; Cook & Campbell, 1979), and employing Lehman’s (1983, 1988) Well-being conceptual model. I compared two groups of DMH consumers: participants living in group homes to their counterparts who live independently and receiving intensive outreach residential support. I focused on three domains: demographic/diagnostic characteristics; functioning and risk indicators; and subjective quality-of-life indicators (Lehman 1983, 1988). I collected these data from participants through use of a survey containing demographic/diagnostic, functioning and risk, and quality-of-life components (Appendix A). I also asked participants three open-ended questions: how they feel about their current living situation, to describe what their ideal living situation would be, and to identify any barriers preventing them from living in their ideal situation.

Sample

Participants included adults (age 19 and older) living in the Berkshire, Hampshire, and Franklin Service Areas of the Massachusetts Department of Mental Health (DMH) who receive intensive support through two types of DMH-funded residential programs: those living in group settings with 24-hour on-site staff support; and those living
independently with intensive outreach residential (Supported Housing) support.

All participants have met the eligibility criteria for receiving DMH services, and have been referred to residential, as well as other services, by DMH.

Out of 227 potential respondents who receive these intensive residential services, 165 (72.69%) anonymously completed and returned surveys (Table 1).

Table 1

**Sample Size by Level of Residential Support and County**

<table>
<thead>
<tr>
<th>Residential Population</th>
<th>Hampshire</th>
<th></th>
<th>Franklin</th>
<th></th>
<th>Berkshire</th>
<th></th>
<th>Total Sample</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Actual Respondents</td>
<td>Percent of Population</td>
<td></td>
<td>Actual Respondents</td>
<td>Percent of Population</td>
<td></td>
<td>Actual Respondents</td>
<td>Percent of Population</td>
</tr>
<tr>
<td>Group Home</td>
<td>17</td>
<td>12</td>
<td>16</td>
<td>23</td>
<td>16</td>
<td>16</td>
<td>62</td>
<td>49</td>
</tr>
<tr>
<td>Supported Housing</td>
<td>44</td>
<td>32</td>
<td>34</td>
<td>34</td>
<td>27</td>
<td>27</td>
<td>62</td>
<td>49</td>
</tr>
<tr>
<td>Total</td>
<td>61</td>
<td>44</td>
<td>57</td>
<td>57</td>
<td>43</td>
<td>43</td>
<td>109</td>
<td>78</td>
</tr>
<tr>
<td>Total Sample</td>
<td>102</td>
<td>77</td>
<td>125</td>
<td>125</td>
<td>88</td>
<td>88</td>
<td>227</td>
<td>165</td>
</tr>
</tbody>
</table>
Overall, 77 of 102 (75.49%) group home residents, and 88 of 125 people who receive supported housing services (70.4%) returned completed surveys. By Service Area, the sub-group that showed the greatest variation in return rate was Berkshire, where a greater proportion of group home residents responded (49 of 62, or 79.3%), as well as the smallest proportion of people receiving supported housing services, where 29 of 47 responded (61.7%). Of 165 respondents, 153 indicated their gender. Overall, more men (n=84, 54.9%) than women (n=69, 45.1%) completed surveys. In Hampshire Service Area, an equal number of male and female group home residents responded, and an almost equal number of men and women in supported housing responded (Table 2). In Franklin Service Area an equal number of men and women receiving supported housing responded, but from those who live in group homes men respondents outnumbered women. In Berkshire Service Area, 27 men who lived in group homes completed surveys compared to 19 women. Fourteen men and twelve women who receive supported housing responded (Table 2).
Table 2

*Gender by Level of Residential Support and Service Area*

<table>
<thead>
<tr>
<th>County</th>
<th>Gender</th>
<th>24 Hour Supervision</th>
<th>Supported Housing</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hampshire</td>
<td>Man</td>
<td>5</td>
<td>16</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>Woman</td>
<td>5</td>
<td>15</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>10</td>
<td>31</td>
<td>41</td>
</tr>
<tr>
<td>Franklin</td>
<td>Man</td>
<td>10</td>
<td>12</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>Woman</td>
<td>6</td>
<td>12</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>16</td>
<td>24</td>
<td>40</td>
</tr>
<tr>
<td>Berkshire</td>
<td>Man</td>
<td>27</td>
<td>14</td>
<td>41</td>
</tr>
<tr>
<td></td>
<td>Woman</td>
<td>19</td>
<td>12</td>
<td>31</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>46</td>
<td>26</td>
<td>72</td>
</tr>
</tbody>
</table>

One-hundred, forty-eight respondents indicated their age. Mean age was 42.65 years with a standard deviation of 12.48, median age of 43.5, mode of 34, and range of 19 to 74. When the variable was banded in five-year intervals (Figure 2), the interval 45-49 was the largest group ($n=24, 16.2\%$). The 25-29 age range made up the second-largest group ($n=20, 13.5\%$). Respondents ages 19-29 made up approximately one-fifth of the total ($n=31, 20.9\%$), as did respondents in the 30-39 age group ($n=28, 18.9\%$), and those in the 51-60 age group ($n=34, 23\%$). Those between 60 and 69 years of age made up 6% of the total ($n=10$), and only two people 70 or older responded.
Of participants in the study who disclosed their marital status (n=146, 93.5%) the vast majority are single (n=117, 75%), or divorced/separated (n=28, 17.9%). Six respondents (3.8%) reported they are married, four (2.6%) reported a significant other, and one is widowed (.6%). Nine respondents (5.5%) did not indicate their marital status.

There was little ethnic diversity in this group. Most respondents identified themselves as Caucasian (n=146, 90.7%), followed by African American (n=8, 5.0%), Native American, (n=5, 3.1%), Latino (n=1, 0.6%), and “Other” (n=1, 0.6%). Four respondents did not indicate their ethnicity. Overall this is consistent with the general population of the region: according to the United States Census of 2000, Caucasian residents made up 93.4% of the population of the three counties, African Americans
1.8%, Asians, 2.0%, Native Americans 0.2%, and Latinos 2.5% of the population (U.S. Census Bureau, 2000). Asian and Latino groups were under-represented in the study, perhaps because of cultural traits, in which extended families for those two groups tend to provide many of the supports that residential services also provide (McGoldrick, Pearce, & Giordano, 1982).

Almost one-fourth of respondents have not completed high school ($n=39, 24.8\%$). Not quite half ($n=75, 47.8\%$) completed high school or have a GED, and 31 respondents (19.7\%) have some college. Twelve (7.6\%) completed college, and eight of those (5.1\%) went on to graduate school. Only one respondent (0.6\%) has a graduate school degree. Eight respondents did not indicate their educational level.

Respondents were asked how long they have been receiving residential support, and 141 (85.5\%) responded. Almost half ($n=68, 48.2\%$) reported that they have received residential support for six years or less, including 20 (14.2\%) who had received residential services for less than a year, and 39 (27.7\%) have received residential supports for less than three years (Table 3). Fully two-thirds of respondents ($n=94, 66.7\%) reported that they had been receiving residential support for ten years or less.
When asked the age they were when they began having psychiatric problems, 139 responded, and indicated a wide range, with a mean age of onset of 18.2 years, and a standard deviation of 8.98. Twenty-four respondents (17.3%) indicated that their psychiatric problems began before the age of eleven. The vast majority (n=129, 92.8%) had experienced psychiatric problems by age 30.

Respondents were asked to indicate their psychiatric diagnosis(es), and were provided three spaces on the survey instrument to do so. As shown in Table 3, 132 respondents provided at least one diagnosis; 43 provided at least two diagnoses, and 12 indicated three diagnoses. Almost two-thirds of those indicated a primary diagnosis of Schizophrenia, Schizoaffective Disorder, or Psychotic disorder (n=95, 63.4%). More than
one-fifth indicated a mood disorder Bipolar Disorder or Major Depression as their first
diagnosis ($n=28$, or 21.2%)

Table 4

Diagnoses

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<tr>
<th></th>
<th>DIAGNOSIS I</th>
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<th>DIAGNOSIS II</th>
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<td></td>
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<td>$n=12$</td>
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<tr>
<td>Bipolar Disorder</td>
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<td>8</td>
<td>18.6</td>
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<td>4</td>
<td>9.3</td>
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<td>2.3</td>
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<td>6</td>
<td>14.0</td>
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<td>8.3</td>
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<tr>
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<td>5</td>
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<tr>
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<tr>
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<td>43</td>
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<td>12</td>
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</tbody>
</table>
Setting

The western region of Massachusetts is comprised of a mix of rural and suburban communities, and four small cities. According to the 2000 United States Census, the population of the region is estimated to be just over 800,000, approximately 13% of the state’s population (U.S. Census Bureau, 2006). The Massachusetts Department of Mental Health (DMH) has located an administrative Area Office in the region, which is responsible for administering mental health services to eligible residents in the region. DMH has further divided the region into six Service Areas, each of which correspond to population and commerce centers. This system allows for decentralization of service, insuring that most types service are available relatively close to where people live and work.

Because of a serendipitous combination of human rights litigation and several statewide mental health initiatives, the locus of mental health care in the western region of Massachusetts has shifted from the regional state hospital (which was closed in 1993) to the community, resulting in a natural laboratory for testing the effectiveness of community residential support models. Settlement of a federal class-action lawsuit in 1978 resulted in state funding for a rich array of community services (Schwartz & Costanzo, 1990). Types of service include medication and outpatient therapy clinics, staffed group homes, intensive residential outreach support programs, Fountain House model community clubhouses, supportive vocational/educational programs, and specialized residential services, such as sex offender and dual diagnosis programs. DMH purchases virtually all community mental health services in this region from private vendors. Contracts for services are awarded through a competitive bid process, and are
coordinated and monitored by a state-operated broker-model case management system (Massachusetts Department of Mental Health, 1992; Mueser, et al., 1998). A proprietary managed care company, under contract with the state, purchases emergency and acute psychiatric services from a network of free-standing crisis teams and local community hospitals (Fisher & Dickey, 1995).

It is estimated that in the western Massachusetts region approximately 20% of the total population of persons with severe and persistent mental illness are eligible for and receiving DMH services and are case managed (Nagy, 1994). Masters-level licensed clinicians are responsible for screening consumers who are referred for DMH services. Statewide regulation guides and standardizes the eligibility, assessment, and ISP process (Massachusetts Department of Mental Health, 1989b). Statewide consumer eligibility standards were first defined in 1983 by Massachusetts regulation, and were updated in 1989, and again in 1996. State regulations governing DMH activities were last revised in 1999.

DMH Case management is an integral service for these most disabled consumers, including all those receiving residential services or services from more than one agency or program. For each eligible client, a case manager is assigned to complete a comprehensive clinical assessment, make referrals to appropriate services, and develop an Individual Service Plan (ISP) based on each consumer’s particular needs. The case manager coordinates services, reviews each program’s treatment plans, and meets regularly with each assigned consumer to monitor their services. Case managers have at least five years’ experience in the mental health field, or a graduate-level clinical degree.
and at least two years’ experience, and have passed a civil service exam (Massachusetts Department of Mental Health, 1989a). Masters-level clinicians provide clinical and administrative supervision to case managers.

Residential support is integral to providing community services in the region. Each service area has both staffed group homes and intensive outreach residential support available. Some service areas, however, rely more upon staffed group-homes for treatment of consumers they serve, rather than on intensive outreach residential support (Nagy, 1994). For instance, one area places more than one-third of its clients in group homes, while another places less than 10% in such settings. Staffed group home programs are more than twice as expensive per consumer than intensive outreach residential support, and so service areas which are more reliant upon group homes for residential support either spend appreciably more for residential services, or provide services to a smaller percentage of their clients. Massachusetts spends approximately $60,000 annually for residential services for each group home client, compared to $24,000 per client receiving intensive outreach residential support (Leibowitz, M., personal communication, September 2005). Very little research has been conducted to identify how intensive outreach residential services compare to group-homes, and how well this innovative network of residential services is working (W. Fisher, personal communication, September 1997).

This study focused on DMH consumers who are currently receiving intensive residential services in three of the six western Massachusetts service areas. Those three areas are similar to one another in that they are predominantly suburban and rural. DMH
contracts with four service providers for all residential services in these areas. One of the three areas (Hampshire) has the lowest percentage of consumers receiving residential support living in staffed group homes (n=16, 11.7%), and another (Berkshire), has the highest (n=61, 36%).

Variables

Demographic/diagnostic Characteristics. Operationally, the first well-being domain, demographic/diagnostic characteristics, includes demographic and diagnostic data for all participants. This domain comprises independent variables: age, gender, race/ethnicity, education level, employment status, marital status, psychiatric diagnosis, and length of residential treatment.

Functioning and Risk Indicators. The second domain refers to tangible accepted norms of function and lifestyle. Functioning and Risk variables include level of functioning, as measured by survey items adapted from the Current Evaluation of Risk and Functioning—Revised (CERF-R) rating instrument (McCorkle, et al., 1999). The Independent Living Skills Self-Report (ILS-SR) scale includes twelve items designed to measure current functioning, two items pertaining to physical health, and five items to measure current risk:

1. Cooking/food preparation (Preparing and eating a balanced diet).
2. Food shopping (Buying nutritious foods).
3. Housekeeping (Wash dishes, sweep or vacuum floors, clean bathroom, make bed, take out trash).
4. **Personal hygiene** (Cleanliness of body, clothing).

5. **Laundry** (Ability to perform laundry chores).

6. **Social/interpersonal skills** (How respondent gets along in social situations).

7. **Personal finances**.

8. **Use of medications**.

9. **Ability to find and use health care**

10. **Use of services that promote recovery** (Such as outreach, medication clinic, clubhouse, therapy).

11. **Pursuit of one’s goals and recovery**.

12. **Ability to keep oneself safe**.

ILS-SR also measures two additional items, including:

1. **Current health status**.

2. **Work status** (Could be volunteer, part-time, or full-time work).

ILS-SR contains five Risk items including:

1. **Risk to self** (Suicidal thoughts, plans, or attempts; self-harming or injurious behaviors).

2. **Risk to others**.

3. **Substance use/abuse**.

4. **Leaving services prematurely**.

5. **Impulse control**.
Subjective Quality Of Life Indicators. The third domain is a consumer self-assessment of quality-of-life, using a self-administered respondent questionnaire that has been developed by Greenley, et al. (1997) based on Lehman’s interviewer-dependent instrument (1983; 1988), to measure the subjective QOL of people with severe mental illness. This Quality of life Questionnaire (QLQ) uses 24 items in seven domains: Living situation, Finances, Leisure, Family, Social life, Health, Access to medical care.

In addition, each participant was asked three questions designed to identify what they think about their current consider to be an “ideal” living situation, and barriers preventing them from living in such a situation.

Dependent Variable. The dependent variable is type of residential support. In western Massachusetts there are essentially two types of residential support offered to consumers: Group homes with overnight, on-site staffing, and Intensive outreach residential support: either through supported housing programs that offer Assertive Community Treatment, Supported Housing, or Intensive Case Management.

Data Collection Procedure

Surveys containing Demographic/Diagnostic and living situation, ILS-SR, QOL (Greenley, Greenberg, & Brown, 1997) items and three open-ended questions were distributed to all consumers who live in residential group homes or who participate in intensive residential outreach programs. A residential program staff person or resident at each program site was trained by the researcher to distribute and collect survey instruments, and pay participants $5. each (Appendix C). Participants returned
questionnaires by placing them in sealed boxes that I provided to research assistants. Surveys included a cover letter explaining the purpose of the study and that completion of the survey was voluntary (Appendix B). Surveys were coded by color to identify type of residential program (group home or intensive outreach), and did not contain names or other identifying information, in order to insure anonymity. Respondents who completed surveys were paid $5.00 in cash.

Ideally, a longitudinal study—in which upon entry into residential support participants are evaluated by trained staff for demographic/diagnostic data, their level of risk and functioning and are asked to complete a quality of life questionnaire; and then periodically re-examined over time—might best determine how these two groups vary. Such a study might determine a causal relationship between type of residential program a person participates in and well-being. Unfortunately, for the purposes of this proposal, such a study was not feasible. Time constraints prevented use of a longitudinal design, and because this research was not directly connected to DMH program evaluation, the DMH Institutional Review Board for human subjects research (IRB) would not permit a study in which demographic/diagnostic and functioning and risk data which had already been collected by trained DMH staff to be combined with data collected directly from DMH clients, I conducted a cross-sectional study comparing participants who are already placed in one of two types of residential treatment, and collected all data directly from participants. The IRB also strongly preferred that the study be anonymous, and so I developed a method to do this. While use of cross-sectional methodology prevented identification of causality of any difference between the types of residential support, it
was useful to identify relationships between type of residential support and well-being, and to explore factors that might be used to associate best fit for a candidate for residential support with a particular residential model.

Once their conditions for anonymity and data collection were met, the DMH-IRB approved the project, and the Boston College IRB waived review.

*Measures/Instruments*

*Independent Living Skills—Self-Report* (ILS-SR). The ILS-SR survey instrument was adapted from the *Current Evaluation of risk and functioning—Revised* (CERF-R), an instrument which is used by the Massachusetts Department of Mental Health to annually measure clients’ functioning and risk status. CERF-R is a 21 item instrument which includes a nine-item subscale measuring functional ability, two items measuring current health status and ability to access and use medical care, and a seven-item subscale which identifies and measures risk factors. Each of the first 18 items is rated on a 6-point anchored Likert scale. CERF-R was designed by a team of administrators and clinicians at the Massachusetts Department of mental Health (McCorkle, et al., 1999).

ILS-SR was adapted from CERF-R in order that survey respondents could self-rate their functioning and risk. ILS-SR contains several modifications. Because CERF-R was developed to measure a much broader range of functioning (including long-term patients in state hospitals as well as DMH clients in the community), ILS-SR functioning level items contain four instead of six-point likert scale range, and Risk items contain a three-point likert range. Because CERF-R Functioning Level section provides limited
information about respondents who live in the community, two items were expanded. *Hygiene* was expanded from one to three items, including *Personal Hygiene*, *Housekeeping*, and *Laundry* for ILS-SR. The *Nutrition* section was expanded from one to two items: *Cooking/food preparation*, and *Food Shopping*. The language in several items was changed to better elicit self-report responses. The CERF-R item *Able to Pursue Appropriate Independence* was modified to *Pursuit Of Goals And Recovery*, to better reflect the consumer’s perspective on the meaning of independence. The CERF-R *Risk item Risk for Committing Sexual Offenses* was not included in ILS-SR, and Risk of *Significant Consequences for other Unacceptable Behavior* was changed to *Impulse Control* in ILS-SR. Because of the modifications, psychometric data analysis of CERF-R completed by McCorkle, et al. were not valid for ILS-SR, so those scales were tested for reliability (alpha) and concurrent validity as part of this study.

*Quality of life Questionnaire (QLQ).* QLQ, developed by Greenley and colleagues (Greenley, Greenberg, & Brown, 1997), is a self-administered questionnaire based on Lehman’s (1983, 1988) Quality of Life Interview of participants’ general well-being. QLQ contains 24 items in seven areas: living situation, finances, leisure, family, social life, health, and access to medical care. Each question elicits the respondent’s feelings about the area on a seven point scale from “terrible” to “delighted”. It is designed to be a paper-and-pencil survey which is given or mailed directly to participants, who complete on their own. The authors provide an instruction manual to researchers who wish to use the instrument, and offer recommendations regarding how it is administered, which were followed in this study.
Scores on QLQ have correlated significantly with consumers’ functioning and satisfaction with services compared to Lehman’s interview instrument. Cronbach’s alpha reliability for each subjective area were as high as for Lehman’s instrument (QLQ value listed first): living situation, .88, .88; finances, .89, .86; leisure, .87, .84; family, .91, .87; social life, .90, .86; health, .81, .82. Factor analysis indicated a seven factor structure, which was confirmed by goodness-of-fit index. A second order factor analysis was conducted to determine if there was a single underlying overall quality of life score. Goodness-of-fit indexes confirmed the appropriateness of a second order factor. The correlation between a total score obtained by a simple averaging of individual scale scores versus a total score, based on factor regression coefficients was .97, indicating that a global score derived from an averaging of means is quite satisfactory. Overall, QLQ provided the validity and reliability of Lehman’s instrument, and was much easier and less expensive to distribute and use, since it could be completed by consumers.

**Statistical Analysis:**

Analysis was made using the Statistical Package for Social Services (SPSS), Windows version 13.0. I entered all data into a codebook, and then entered those data into the SPSS data file, and then completed data analysis. I began my analysis of the data by obtaining descriptive statistics, including frequencies and percentages, means, medians, and modes, and measures of variation such as standard deviation and range on each variable in the study.

I then compared participants who live independently with intensive residential support to those living in group homes, using bivariate Pearson’s chi-square, Mann-
Whitney U, and t test analyses to determine differences between variables in the three domains of well-being: demographic/diagnostic characteristics, objective quality of life indicators, and subjective quality of life indicators. I coded and entered into SPSS consumer-participant and case manager/supervisor responses to open ended questions about housing preferences and barriers to independent living.

Finally I completed an exploratory non-parametric logistic regression analysis to determine whether this analysis model might be used to measure whether individuals might have a better “fit” with either a group home or supported housing type of residential support (Cone & Foster, 1993; Field, 2000). Because this is a cross-sectional study, it was not possible to determine whether variables in the demographic, functioning, and risk domains could actually predict type of residential support, since objective functioning may actually be the result of type of treatment that occurs. However, such an analysis model might be used to predict best fit if variable data are collected at baseline, before services begin.
CHAPTER III

Findings

This study has sought to answer the following research questions: What differences are there, if any, between people with severe and persistent mental illness who live in supervised group homes, and mentally ill people who live in their own apartments with support? Based on those differences, is there a way to associate best type of residential support with the specific needs and attributes of a particular individual?

Using Lehman’s Quality-of-Life (QOL) model (1983, 1988), I compared a sample of participants living in supervised group homes to participants living independently and receiving supported housing services in three domains: Personal Characteristics, Objective Quality-of-Life measures, and Subjective Quality-of-life measures. I then attempted to identify indicators that may predict placement to one type of residential support or the other.

Demographic/Diagnostic Indicators

Research Hypothesis 1: There are no significant differences in personal (demographic and diagnostic) characteristics between persons with severe mental illness who live in group homes and their counterparts living independently with outreach residential support.
I examined demographic variables to determine if there were differences between respondents who live in group homes and those living independently with supported housing services. Lehman’s Well-being model (1983; 1988) takes into account various demographic variables, which relate to one’s subjective quality of life (QOL). Previous research has indicated that things such as marital status, education, where one lives, and work all relate to QOL (Andrews & Withey, 1976; Campbell, Converse, & Rodgers, 1976, Larson, 1978, Lehman, 1983). Other research has indicated that demographic variables are not a primary consideration in type of residential program assigned to a particular client (de Girolamo, et al., 2005; Geller & Fisher, 1993). My assumption at the outset of this study was that the two groups were similar demographically.

Demographic variables, including age, age when psychiatric problems began, length of residential support of participants living in group homes were compared to participants in supported housing, using t-test analysis. I determined that there were no significant differences in respondents’ mean age, their age when psychiatric problems began, or length of residential support (Table 5). However, those respondents receiving supported housing have a significantly higher level of education compared to respondents living in group homes.
Table 5

*Demographic Information – Type of Residential Support*

<table>
<thead>
<tr>
<th></th>
<th>Group Home</th>
<th>Supported Housing</th>
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<tr>
<td></td>
<td>M</td>
<td>SD</td>
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<tr>
<td>Age</td>
<td>42.93</td>
<td>13.31</td>
</tr>
<tr>
<td>Years of School</td>
<td>11.46</td>
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<tr>
<td>Onset Age of Mental Illness</td>
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<tr>
<td>Length of Residential Support</td>
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<td>7.10</td>
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</table>

*p < .05

Regarding diagnosis, I expected that there might be a significant difference in participants’ diagnoses related to type of residential support they received. Previous research has indicated that referral to community treatment programs is influenced by diagnosis (Holcomb & Ahr 1987). The most predominant diagnoses for people found eligible for DMH services in Massachusetts are schizophrenia and bipolar disorder, and schizophrenia is considered to be the more disabling, so I assumed that I may find that significantly more participants who lived in group homes carried that diagnosis, and significantly more participants receiving supported housing would carry the diagnosis of bipolar disorder.

I compared diagnoses for respondents receiving the two types of residential support using chi-square analysis. The survey instrument provided space for respondents to list up to three diagnoses, but for purposes of analysis I used the first diagnosis they listed. In order to maintain a minimum of five expected cases in at least 80% of cells, I
combined several diagnoses listed by only a few participants into one category. This resulted in five choices of diagnosis: Schizophrenia, Schizoaffective Disorder, Bipolar Disorder, Depression, and Other (Table 6). Chi-square test of differences was utilized and no significant differences were found between respondents living in group homes and their counterparts receiving supported housing (chi-square (4, 132) = 6.324, p = .176).

Table 6

*Primary Diagnosis*

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Level of Residential Support</th>
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<tbody>
<tr>
<td></td>
<td>Group Home</td>
<td>Supported Housing</td>
<td>Total %</td>
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</tr>
<tr>
<td>Schizophrenia</td>
<td>46.3%</td>
<td>38.5%</td>
<td>41.7%</td>
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<tr>
<td>Schizoaffective Disorder</td>
<td>13%</td>
<td>25.6%</td>
<td>20.5%</td>
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<tr>
<td>Bipolar Disorder</td>
<td>11.1%</td>
<td>17.9%</td>
<td>15.2%</td>
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<tr>
<td>Depression</td>
<td>9.3%</td>
<td>7.7%</td>
<td>8.3%</td>
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</tr>
<tr>
<td>Other</td>
<td>20.4%</td>
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<tr>
<td>Total</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td></td>
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</tbody>
</table>

*Objective Quality of Life Indicators*

Research Hypothesis 2: People with severe mental illness who live independently with intensive outreach residential support function more independently than their counterparts living in group homes.
At the outset of this study I expected to find that participants who receive supported housing services function more independently than those who live in group homes, for two reasons: it is possible that participants receiving supported housing were originally referred to that type of support because their function skills were higher. Equally possible is that, as indicated in previous research (Dorvil, Morin, Beaulieu, & Robert 2005; Nelson, Sylvestre, Aubry, George, & Trainor, 2007), the combination of housing services and independent living has resulted in those participants improving their independent living skills over time. Because the current study employed a cross-sectional method, data would provide an indication of relationship between type of residential support and independent functioning level, but would not be able to determine causality.

Initially I conducted descriptive statistical analysis for each of the independent functioning variables. Then I compared items using the categorical variables Group Home and Supported Housing in order to determine if there were differences in functioning between the two types of residential support, using Mann-Whitney U statistical analysis. Finally, I created an aggregate Global Functioning scale by combining scores for the 12 function items, and using Cronbach’s alpha analysis measured its internal reliability. I compared global functioning for the two types of residential support utilizing both Mann-Whitney U and t-test statistical methods. An alpha level of .05 was used for all tests.
Functioning Level. Twelve items in the Independent Living Skills (ILS) section of the survey instrument related to how independently respondents are able to manage common activities of daily living, including: cooking, shopping, housekeeping, personal hygiene, laundry, social/interpersonal skills, personal finances, use of medications, active pursuit of treatment, pursuit of recovery goals, ability to find and use health care, and ability to avoid common hazards. Response rate for these items ranged from 93.3% to 100% (Table 7).

Regarding cooking and food preparation skills, almost two-thirds of respondents indicated that they either prepare their food independently or “cook a little”; the remainder depend on others for food preparation or prepare only simple meals such as sandwiches or cereal. One-fourth of respondents food-shop independently, and another third shop with staff support, but one-fourth of respondents do not shop at all. Almost two-thirds (41.2%) of respondents reported that they did housekeeping independently, or did housekeeping with support. The remaining either required a lot of help with housekeeping or had someone else clean for them. The overwhelming majority of respondents do their laundry independently or with some support, and four out of five respondents manage personal hygiene tasks independently or with only occasional support. Only a small minority of respondents indicated they needed help with laundry or that someone else did their laundry. A third of respondents indicated they had little or no difficulty in social situations, another third reported that they were working to improve their skills, while the remainder indicated that social situations were either difficult or
Table 7

Functioning Skills

<table>
<thead>
<tr>
<th>Functioning Skills</th>
<th>D n (%)</th>
<th>SD n (%)</th>
<th>SI n (%)</th>
<th>I n (%)</th>
<th>Total n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooking/Food Preparation</td>
<td>28 (17.1)</td>
<td>32 (19.5)</td>
<td>54 (32.9)</td>
<td>50 (30.5)</td>
<td>164</td>
</tr>
<tr>
<td>Food Shopping</td>
<td>42 (25.5)</td>
<td>20 (12.1)</td>
<td>60 (36.4)</td>
<td>43 (26.1)</td>
<td>165</td>
</tr>
<tr>
<td>Housekeeping</td>
<td>23 (13.9)</td>
<td>37 (22.4)</td>
<td>37 (22.4)</td>
<td>68 (41.2)</td>
<td>165</td>
</tr>
<tr>
<td>Personal Hygiene</td>
<td>9 (5.5)</td>
<td>20 (12.3)</td>
<td>20 (12.3)</td>
<td>114 (69.9)</td>
<td>163</td>
</tr>
<tr>
<td>Laundry</td>
<td>14 (8.5)</td>
<td>6 (3.7)</td>
<td>27 (16.5)</td>
<td>117 (71.3)</td>
<td>164</td>
</tr>
<tr>
<td>Social/Interpersonal Skills</td>
<td>18 (11.0)</td>
<td>30 (18.3)</td>
<td>61 (37.2)</td>
<td>55 (33.5)</td>
<td>164</td>
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<tr>
<td>Personal Finances</td>
<td>72 (44.2)</td>
<td>30 (18.4)</td>
<td>25 (15.3)</td>
<td>36 (22.1)</td>
<td>163</td>
</tr>
<tr>
<td>Use of Medication</td>
<td>66 (41.3)</td>
<td>28 (17.5)</td>
<td>24 (15.0)</td>
<td>42 (26.3)</td>
<td>160</td>
</tr>
<tr>
<td>Active Pursuit of Treatment</td>
<td>66 (42)</td>
<td>41 (26.1)</td>
<td>22 (14)</td>
<td>28 (17.8)</td>
<td>157</td>
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<tr>
<td>Pursuit of Goals &amp; Recovery</td>
<td>24 (15.6)</td>
<td>27 (17.5)</td>
<td>58 (37.7)</td>
<td>45 (29.2)</td>
<td>154</td>
</tr>
<tr>
<td>Ability to Find &amp; Use Health Care</td>
<td>63 (39.6)</td>
<td>27 (17)</td>
<td>38 (23.9)</td>
<td>31 (19.5)</td>
<td>159</td>
</tr>
<tr>
<td>Avoid Hazardous Situations</td>
<td>-</td>
<td>21 (13.4)</td>
<td>24 (15.3)</td>
<td>112 (71.3)</td>
<td>157</td>
</tr>
</tbody>
</table>

D = Dependent
SD = Somewhat Dependent
SI = Somewhat Independent
I = Independent
very difficult for them. The next three areas—money management, medication use, and active pursuit of treatment—were most problematic to respondents. Almost two-thirds of respondents indicated that either someone else manages their money or needed regular assistance to manage their money. Only 36 respondents indicated that they manage their money independently. More than two-thirds of respondents reported that either someone makes sure they take their medications or they receive daily reminders and support around taking medication. Only 42 respondents reported that they took their medications on their own. Regarding active pursuit of treatment, which has to do with the person’s ability to schedule and attend treatment appointments, two-thirds of respondents reported that they were either completely dependent on others to schedule and/or take them to appointments, or they received regular support or assistance in scheduling and attending treatment appointments. Only twenty-eight respondents reported they scheduled and attended appointments independently.

Regarding respondents’ recovery goals, two-thirds indicated that they are able to pursue their goals and recovery, either independently or with encouragement, instruction, and suggestions on how to pursue them. Approximately a third of respondents indicated that they have a lot of difficulty pursuing goals, or that they accept new responsibilities, but don’t initiate them.

The next item related to respondents’ ability to find and use health care. The majority of respondents reported they needed assistance in arranging health care, or relied on someone else to arrange and bring them to health care. The last survey item relating to functioning level referred to respondents’ ability to keep themselves safe and to recognize
dangerous and hazardous situations. Almost three-quarters of respondents indicated that they are able to recognize and avoid hazards and dangerous situations.

To test how respondents living in group homes compared to their counterparts receiving supported housing services in the *functioning* dimension, initially I employed Mann-Whitney *U* statistical analysis, since level of measurement for these items is ordinal. As indicated in Table 8, mean rank in all areas of functioning except laundry was higher for respondents receiving supported housing services, and significantly higher in eight areas, including cooking, shopping, housekeeping, personal finances, use of medications, active use of services, pursuit of recovery goals, and ability to find and use health care.

Table 8

<p>| Table 8 Functioning Level for Activities of Daily Living – Type of Residential Support |
|-----------------------------------|-----------------|-----------------|----------|--------|</p>
<table>
<thead>
<tr>
<th>Variable</th>
<th><em>n</em></th>
<th><em>Mean</em></th>
<th><em>Mean Rank</em></th>
<th><em>U</em></th>
<th><em>P</em> (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cooking/Food Preparation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group Home</td>
<td>76</td>
<td>2.54</td>
<td>73.32</td>
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<td>.02</td>
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<td>90.43</td>
<td>2646.0</td>
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<td>66.49</td>
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<td>.000</td>
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<tr>
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</tr>
<tr>
<td>Variable</td>
<td>n</td>
<td>Mean</td>
<td>Mean Rank</td>
<td>U</td>
<td>P (2-tailed)</td>
</tr>
<tr>
<td>--------------------------------</td>
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<td>-----------</td>
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<td></td>
</tr>
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<td>Group Home</td>
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<td>77.01</td>
<td>2926.5</td>
<td>.12</td>
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<td>87</td>
<td>3.57</td>
<td>86.36</td>
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<td></td>
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<tr>
<td><strong>Laundry</strong></td>
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<tr>
<td>Group Home</td>
<td>76</td>
<td>3.51</td>
<td>82.41</td>
<td>3337.0</td>
<td>.98</td>
</tr>
<tr>
<td>Supported Housing</td>
<td>88</td>
<td>3.50</td>
<td>82.57</td>
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<tr>
<td><strong>Social Skills</strong></td>
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<td>Group Home</td>
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<td>87.85</td>
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<td></td>
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<td><strong>Personal Finance</strong></td>
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<td>Group Home</td>
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<td>72.75</td>
<td>2606.0</td>
<td>.01</td>
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<td>89.89</td>
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<td></td>
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<tr>
<td><strong>Use of Medications</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group Home</td>
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<td>72.42</td>
<td>2581.5</td>
<td>.03</td>
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<tr>
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<td>87.63</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Use of services that promote recovery</strong></td>
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<tr>
<td>Group Home</td>
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<td>70.23</td>
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<td>86.82</td>
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<tr>
<td><strong>Pursuit Of Goals/Recovery</strong></td>
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<tr>
<td>Group Home</td>
<td>71</td>
<td>2.56</td>
<td>69.56</td>
<td>2382.5</td>
<td>.03</td>
</tr>
<tr>
<td>Supported Housing</td>
<td>83</td>
<td>2.98</td>
<td>84.30</td>
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<td></td>
</tr>
<tr>
<td><strong>Ability to find and use medical care</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group Home</td>
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<td>2.03</td>
<td>71.84</td>
<td>2541.0</td>
<td>.03</td>
</tr>
<tr>
<td>Supported Housing</td>
<td>85</td>
<td>2.41</td>
<td>87.11</td>
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<td></td>
</tr>
<tr>
<td><strong>Ability to avoid hazardous situations</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group Home</td>
<td>74</td>
<td>2.50</td>
<td>75.49</td>
<td>2811.5</td>
<td>.25</td>
</tr>
<tr>
<td>Supported Housing</td>
<td>83</td>
<td>2.65</td>
<td>82.13</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
To determine whether there was a significant difference in *global functioning* for those respondents living in group homes compared to their counterparts receiving supported housing, I first tested the internal reliability of the functioning level subscale. Cronbach’s Alpha analysis revealed a moderately strong internal reliability when all twelve items were included (alpha = .77, N = 145, number of items = 12). Reliability improved if only one of the twelve items were eliminated: ability to avoid hazardous/dangerous situations. With this item deleted from the analysis, Cronbach’s alpha improved slightly to .80, and so I continued analysis using all 12 items.

By combining scores for the twelve functioning level items, I derived a Global Functioning Score. I then compared mean rank for the two groups using this combined score, utilizing Mann-Whitney *U* analysis, and determined there was a significant difference (*U* = 1772.0, *p* = .000). Respondents receiving supported housing function at a significantly higher level (mean rank = 85.57) than respondents living in group homes (mean rank = 60.56).

Because skew values for all of the twelve items in this scale were acceptably normal, ranging between −1.86 and 0.61 (George & Mallery, 2003, p. 98), I also conducted *t*-test analysis of the Global Functioning Score. I found there was a significantly higher level in mean global functioning (*t* (145) = -3.86, two-tailed *p* = .000) for respondents receiving supported housing (mean = 33.29) to those living in group homes (mean = 29.16).

CERF-R (McCorkle, et al., 1999) contained additional functioning items that I incorporated into ILS. Three items referred to work status. Forty-five respondents
(28.1%) reported that they were working. Of that group, only one (2.4%) was working full-time, 27 (65.9%) were working part-time, and 13 (31.7%) were volunteering. Of the group who reported they weren’t working, 16 (10%) were looking for work, 34 (21.3%) reported that they weren’t yet ready for work, 65 (40.6%) indicated that they were not able to work. Of the group reporting they were unable to work, 52 respondents (80%) indicated that they were disabled, four (6.2%) reported they were retired, eight (12.3%) were not interested in work, and one (1.8%) reported she is a full-time mother. Analyses of these work items revealed that while respondents receiving supported housing were more likely than group home residents to be working; this was not to a significant level (Table 9).

Table 9

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>Mean</th>
<th>Mean Rank</th>
<th>U</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work status</td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>Group Home</td>
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<td>2.07</td>
<td>74.31</td>
<td>2723.0</td>
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<td>Supported Housing</td>
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<td>2.42</td>
<td>85.96</td>
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<td></td>
</tr>
<tr>
<td>Work Type</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Group Home</td>
<td>17</td>
<td>1.71</td>
<td>20.79</td>
<td>200.5</td>
<td>.71</td>
</tr>
<tr>
<td>Supported Housing</td>
<td>25</td>
<td>1.76</td>
<td>21.98</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

One survey item related to respondents’ general health. Seventy-three respondents (45.3%) indicated that they had no serious health problems, 60 respondents (37.3%) have ongoing mild or moderate health problems, and 28 (17.4%) reported serious health
problems. analysis using Mann-Whitney $U$ indicated that, though group home residents reported better health (mean = 2.34; mean rank = 84.51) than respondents receiving supported housing (mean = 2.22; mean rank = 77.86), the difference was not to a significant level. ($U = 2963.5$, $p = .33$).

Research Hypothesis 3: People with severe mental illness who live in group homes are more likely to present risk behaviors than their counterparts living independently with outreach residential support.

At the outset of this study I expected to find that participants who live in staffed group homes were significantly more likely to present with risk behavior than those who were receiving supported housing services, because authorities responsible for referral decisions would refer consumers presenting more serious risk behaviors to the more structured and supervised type of residential service.

Initially I conducted descriptive statistical analysis for each of the independent risk variables. Then I compared variables using the categorical variables Group Home and Supported Housing in order to determine if there were differences in level of risk between the two types of residential support, using Mann-Whitney $U$ statistical analysis. Then I created a Global Risk scale by combining scores for the five risk items and, using Cronbach’s alpha analysis, measured it’s internal reliability. I then compared global risk for the two types or residential support, utilizing both Mann-Whitney $U$ and $t$-test statistical methods. An alpha level of .05 was used for all tests.
The survey contained five items concerning risk behaviors (Table 10). Regarding suicidal thoughts or plans, or self-harming, self-injurious behavior, two-thirds of respondents reported no risk to self in the past year, but one out of seven respondents reported they had either harmed themselves or required crisis intervention to prevent them from harming themselves in the last year. A large majority of respondents indicated that they have not done anything which might cause harm to others in the last year, but one in ten respondents reported that their behavior in the past year had put someone else at risk of getting hurt.

Table 10

<table>
<thead>
<tr>
<th>Risk</th>
<th>No Risk</th>
<th>Small Risk</th>
<th>Serious Risk</th>
<th>Total n</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n (%)</td>
<td>n (%)</td>
<td>n (%)</td>
<td></td>
</tr>
<tr>
<td>Suicide/ Self-harm</td>
<td>112 (67.9)</td>
<td>25 (15.7)</td>
<td>22 (13.8)</td>
<td>159</td>
</tr>
<tr>
<td>Harm to Others</td>
<td>129 (80.8)</td>
<td>18 (11.3)</td>
<td>13 (8.1)</td>
<td>160</td>
</tr>
<tr>
<td>Substance Abuse</td>
<td>129 (79.4)</td>
<td>25 (15.6)</td>
<td>8 (5)</td>
<td>162</td>
</tr>
<tr>
<td>Leave Services</td>
<td>113 (72)</td>
<td>33 (21)</td>
<td>11 (7)</td>
<td>157</td>
</tr>
<tr>
<td>Impulse Control</td>
<td>103 (64.8)</td>
<td>40 (25.2)</td>
<td>16 (10.1)</td>
<td>159</td>
</tr>
</tbody>
</table>

Similarly, a large majority of respondents reported that they had not had problems with substance abuse in the last year, about 15% acknowledged some problems with substance abuse, but were working to control it and seeking help, and 5% identified that they had serious problems with substance abuse in the past year. When asked if they had
been able to “stick with services” without missing appointments or quitting in the past year, almost three-quarters of respondents reported that they had. Another fifth admitted that they had some trouble following through with services, and a small group reported serious problems with follow-through. Almost two thirds of respondents reported no impulse control problems, while one-fourth identified some problems with impulse control, and 10% of respondents admitted to serious impulse control problems.

Group home residents reported being at a greater risk of harm to themselves or to others, were more likely to have substance abuse problems, and were at greater risk of leaving services prematurely than respondents receiving supported housing. Because these items were ordinal, I utilized Mann-Whitney U analysis to compare mean rank. Analysis indicated that only with substance abuse was the difference to a significant level (Table 11). Respondents living in group homes and receiving supported housing were at about equal risk from impulse control problems.

To determine whether there was a significant difference in global risk for those respondents living in group homes compared to their counterparts receiving supported housing, first I tested the internal reliability of the risk subscale items. Cronbach’s Alpha analysis revealed a moderately strong internal reliability when all five items were included (alpha = .71, N = 149, number of items = 5). Reliability improved slightly to .74 if the substance abuse problems variable was eliminated, and so I included this item in the scale.
Table 11

**Risk Behaviors – Type of Residential Support**

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>Mean</th>
<th>Mean Rank</th>
<th>U</th>
<th>p (2-tailed)</th>
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</thead>
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<td><strong>Risk to self</strong></td>
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<tr>
<td>Group Home</td>
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<td>1.50</td>
<td>84.06</td>
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<tr>
<td><strong>Risk to others</strong></td>
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<td><strong>Substance abuse problems</strong></td>
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<td>1.37</td>
<td>88.09</td>
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<td>Supported Housing</td>
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<td>1.15</td>
<td>73.64</td>
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<tr>
<td><strong>Risk of leaving services prematurely</strong></td>
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<td>1.45</td>
<td>79.87</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

By combining the scores for the five risk items, I derived a *Global Risk Score*. I compared mean rank for this combined score, utilizing Mann-Whitney $U$ analysis, and determined there was not a significant difference ($U = 2293.5$, $p = .067$). Mean rank for respondents living in group homes was 81.77, while mean rank for respondents receiving supported housing was 69.31, indicating that group home residents were more likely to have problems that could put them or others at risk, but not to a significant level.

Skew values for two of the five items in this scale were only just above acceptably normal (George & Mallery, 2003, p. 98): for the item risk to others, skew was
–2.06, and for the item substance abuse problems, skew was 2.04. Skew for the other three risk items ranged between -1.55 and -1.19, and so I also conducted t-test analysis. I found that the mean global risk (t (147) = 1.37, two-tailed p = .17) for respondents living in group homes (mean = 6.91) to those receiving supported housing (mean = 6.29) was higher, but not to a significant level.

Because none of the five risk variables that make up this scale had missing values exceeding 15%, I replaced missing values with mean scores, using the SPSS Replace Missing Values procedure (George & Mallery, 2003, pp. 48-50) and repeated the analysis using the entire study sample. Using systems means, the mean rank for respondents living in group homes was 92.16, while mean rank for respondents receiving supported housing was 74.98, and Mann-Whitney analysis (U = 2682.5, p = .018), indicated that group home residents were significantly more likely to have problems that could put them or others at risk. Using systems means in completing t-test analysis, I found that mean global risk was significantly higher (t (163) = 2.07, two-tailed p = .04) for respondents living in group homes (mean = 7.13) compared to those receiving supported housing (mean = 6.45).

Research Hypothesis 4: People with severe mental illness who live independently with intensive outreach residential support have fewer psychiatric crises, respite evaluations, and hospital admissions than their counterparts living in group homes.
At the outset of this study I expected to find that participants who live in staffed group homes were significantly more likely to experience more psychiatric crises resulting in more inpatient admissions than those who were receiving supported housing services, related to their greater problems with risk, because authorities responsible for referral decisions would refer consumers presenting more serious risk behaviors to the more structured and supervised type of residential service.

Respondents were queried about whether in the past year they had experienced a mental health crisis, had been evaluated by a crisis service, spent time in a crisis respite program, or had been psychiatrically hospitalized. All respondents answered this question. Overall, 64 respondents (38.8%) indicated they had not been in crisis in the past year, 42 (25.5%) had been in crisis but had not been hospitalized, and 59 (35.8%) experienced a psychiatric crisis requiring hospitalization.

For each of these items, I compared mean rank for respondents living in group homes compared to respondents receiving supported housing, using Mann-Whitney U analysis. I found that mean rank was higher for group home residents for each of the four items, but significantly higher for respite stay only \((U = 2761.0, p = .027, \text{two-tailed})\). Mean rank for group home residents was higher (89.19) than for respondents receiving supported housing (75.88), indicating that a higher percentage of group home residents spent time in respite in the past year.

Then I combined crisis, ES evaluation, respite stay, and hospitalization variables to produce a four-tier Global Crisis variable \((0 = \text{no crisis}, 1 = \text{crisis}; 2 = \text{ES evaluation}; 3 = \text{respite stay}; 4 = \text{hospitalization})\). While mean rank for respondents living in group
homes (86.21) was higher than for respondents receiving supported housing (75.59), it was not to a significant level.

Subjective Quality of Life Indicators.

Research Hypothesis 5: People with severe mental illness who live independently with intensive outreach residential support experience higher levels of subjective quality-of-life than their counterparts living in group homes.

The final component of the survey instrument is the Quality of Life Questionnaire (QLQ) survey developed by Greenley, Greenberg, & Brown (1997), consisting of 24 items in seven dimensions. For all QLQ items, respondents were asked to rate their response to each item question, using a seven point Likert scale, ranging from “Terrible” to “Delighted”. At the outset of this study I expected to find that participants who receive supported housing services would report a higher quality of life than those who live in group homes. Previous research has indicated that choice in where one lives and more autonomy about how one manages their daily life correlates with their subjective quality-of-life perspective (Dorvil, Morin, Beaulieu, & Robert, 2005; George & Trainer, 2007; Rog, 2004).

Initially I conducted descriptive statistical analysis for each of the QLQ variables. Then, using Mann-Whitney \( U \) statistical analysis I compared items using the categorical variables Group Home and Supported Housing in order to determine if there were
differences in functioning between the two types of residential support. Finally, I created seven aggregate *QLQ Dimension* scales and, using Cronbach’s alpha analysis measured their internal reliability to Greenley, Greenberg, & Brown’s (1997) reliability results. I compared seven QLQ dimensions and global QLQ scales for the two types of residential support utilizing both Mann-Whitney *U* and *t*-test statistical methods. An alpha level of .05 was used for all tests.

Overall, the response rate for each QLQ survey item ranged from a low of 154 (93.3%) to a high of 162 (98.2%). All items skewed negatively, but skew value was below 2 for all items, ranging from –1.40 to -.35. Mode value for all 24 items was either “Mostly Satisfied” or “Pleased” (Table 12).
Table 12

*Satisfaction with Current Living Situation*

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Mode</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feelings about current living arrangements</td>
<td>162</td>
<td>5.01</td>
<td>6</td>
<td>1.58</td>
</tr>
<tr>
<td>Feelings about rules in current living situation</td>
<td>154</td>
<td>5.09</td>
<td>5</td>
<td>1.41</td>
</tr>
<tr>
<td>Privacy in current living situation</td>
<td>162</td>
<td>5.27</td>
<td>6</td>
<td>1.51</td>
</tr>
<tr>
<td>Freedom in current living situation</td>
<td>160</td>
<td>5.39</td>
<td>6</td>
<td>1.05</td>
</tr>
<tr>
<td>Prospects of staying in current home</td>
<td>158</td>
<td>5.01</td>
<td>6</td>
<td>1.64</td>
</tr>
<tr>
<td>Happy with current income</td>
<td>159</td>
<td>4.53</td>
<td>6</td>
<td>1.61</td>
</tr>
<tr>
<td>Comfortable/well-off financially</td>
<td>159</td>
<td>4.45</td>
<td>5</td>
<td>1.52</td>
</tr>
<tr>
<td>Enough money to have fun</td>
<td>161</td>
<td>4.32</td>
<td>6</td>
<td>1.69</td>
</tr>
<tr>
<td>Enough spare time</td>
<td>162</td>
<td>4.91</td>
<td>5</td>
<td>1.51</td>
</tr>
<tr>
<td>Chance to enjoy pleasant or beautiful things</td>
<td>161</td>
<td>4.98</td>
<td>6</td>
<td>1.52</td>
</tr>
<tr>
<td>Amount of relaxation</td>
<td>160</td>
<td>5.06</td>
<td>6</td>
<td>1.46</td>
</tr>
<tr>
<td>Pleasure from TV/radio</td>
<td>159</td>
<td>5.42</td>
<td>6</td>
<td>1.37</td>
</tr>
<tr>
<td>Feelings about one's family in general</td>
<td>159</td>
<td>4.84</td>
<td>6</td>
<td>1.87</td>
</tr>
<tr>
<td>How family treats one another</td>
<td>158</td>
<td>4.89</td>
<td>6</td>
<td>1.79</td>
</tr>
<tr>
<td>Feelings about family relations</td>
<td>158</td>
<td>4.81</td>
<td>6</td>
<td>1.74</td>
</tr>
<tr>
<td>Feelings about things done with others</td>
<td>161</td>
<td>4.98</td>
<td>5</td>
<td>1.46</td>
</tr>
<tr>
<td>Feelings about amount of time spent with others</td>
<td>161</td>
<td>4.91</td>
<td>5</td>
<td>1.45</td>
</tr>
<tr>
<td>Feelings about people seen socially</td>
<td>154</td>
<td>5.09</td>
<td>5</td>
<td>1.37</td>
</tr>
<tr>
<td>Chances to know people with whom one feels comfortable</td>
<td>161</td>
<td>4.96</td>
<td>5</td>
<td>1.43</td>
</tr>
<tr>
<td>Amount of friendship</td>
<td>162</td>
<td>4.75</td>
<td>5</td>
<td>1.60</td>
</tr>
<tr>
<td>General health</td>
<td>161</td>
<td>4.58</td>
<td>5</td>
<td>1.46</td>
</tr>
<tr>
<td>Physical condition</td>
<td>160</td>
<td>4.51</td>
<td>5</td>
<td>1.50</td>
</tr>
<tr>
<td>Medical care available</td>
<td>157</td>
<td>5.49</td>
<td>6</td>
<td>1.23</td>
</tr>
<tr>
<td>Frequency of doctor’s appointments</td>
<td>158</td>
<td>5.28</td>
<td>6</td>
<td>1.30</td>
</tr>
</tbody>
</table>
Because measurement level of QLQ items is ordinal, I utilized Mann-Whitney $U$ analysis to compare mean rank for all 24 QLQ items in seven dimensions. In the first dimension, Current Living Situation, respondents receiving supported housing reported higher satisfaction than their counterparts living in group homes for all five items (Table 13), and differences were to a significant level for the first four: “feelings about current living arrangements”; “rules in current living situation”; “privacy in current living situation”; and “freedom in current living situation”.

**Table 13**

*Satisfaction with Current Living Situation – Type of Residential Support*

<table>
<thead>
<tr>
<th>Variable</th>
<th>$n$</th>
<th>Mean</th>
<th>Mean Rank</th>
<th>$U$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feelings about current living arrangements</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group Home</td>
<td>75</td>
<td>4.72</td>
<td>73.17</td>
<td>2638.0</td>
<td>.03</td>
</tr>
<tr>
<td>Supported Housing</td>
<td>87</td>
<td>5.25</td>
<td>88.68</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feelings about rules in current living situation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group Home</td>
<td>72</td>
<td>4.71</td>
<td>64.85</td>
<td>2041.5</td>
<td>.001</td>
</tr>
<tr>
<td>Supported Housing</td>
<td>82</td>
<td>5.43</td>
<td>88.60</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Privacy in current living situation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group Home</td>
<td>75</td>
<td>5.00</td>
<td>73.95</td>
<td>2696.5</td>
<td>.05</td>
</tr>
<tr>
<td>Supported Housing</td>
<td>87</td>
<td>5.51</td>
<td>88.01</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Freedom in current living situation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group Home</td>
<td>73</td>
<td>5.05</td>
<td>72.15</td>
<td>2566.0</td>
<td>.03</td>
</tr>
<tr>
<td>Supported Housing</td>
<td>87</td>
<td>5.67</td>
<td>87.51</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prospects of staying in current home</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group Home</td>
<td>73</td>
<td>4.79</td>
<td>73.99</td>
<td>2700.0</td>
<td>.15</td>
</tr>
<tr>
<td>Supported Housing</td>
<td>85</td>
<td>5.20</td>
<td>84.24</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The next dimension, *Satisfaction with Finances*, consists of three items. Group home residents reported higher satisfaction for all three items, but Mann-Whitney *U* analysis indicated that only the third, “enough money to have fun,” was at a statistically significant level (Table 14).

Table 14

*Satisfaction with Finances – Type of Residential Support*

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>Mean</th>
<th>Mean Rank</th>
<th>U</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Happy with current income</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group Home</td>
<td>72</td>
<td>4.56</td>
<td>81.96</td>
<td>2991.0</td>
<td>.62</td>
</tr>
<tr>
<td>Supported Housing</td>
<td>87</td>
<td>4.52</td>
<td>78.38</td>
<td>2959.5</td>
<td>.54</td>
</tr>
<tr>
<td>Comfortable/well-off financially</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group Home</td>
<td>72</td>
<td>4.49</td>
<td>82.40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supported Housing</td>
<td>87</td>
<td>4.41</td>
<td>78.02</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enough money to have fun</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group Home</td>
<td>74</td>
<td>4.57</td>
<td>88.71</td>
<td>2648.5</td>
<td>.05</td>
</tr>
<tr>
<td>Supported Housing</td>
<td>87</td>
<td>4.10</td>
<td>74.44</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In the next dimension, *Satisfaction with Leisure*, respondents receiving supported housing were more satisfied than their counterparts living in group homes for all four items, but not to a significant level (Table 15).
Table 15

Satisfaction with Leisure – Type of Residential Support

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>Mean</th>
<th>Mean Rank</th>
<th>U</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Enough spare time</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group Home</td>
<td>74</td>
<td>4.74</td>
<td>77.96</td>
<td>2994.0</td>
<td>.36</td>
</tr>
<tr>
<td>Supported Housing</td>
<td>88</td>
<td>5.06</td>
<td>84.48</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Chance to enjoy pleasant or beautiful things</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group Home</td>
<td>75</td>
<td>4.83</td>
<td>79.61</td>
<td>3120.5</td>
<td>.72</td>
</tr>
<tr>
<td>Supported Housing</td>
<td>86</td>
<td>5.12</td>
<td>82.22</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Amount of relaxation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group Home</td>
<td>74</td>
<td>4.97</td>
<td>79.95</td>
<td>3141.0</td>
<td>.89</td>
</tr>
<tr>
<td>Supported Housing</td>
<td>86</td>
<td>5.14</td>
<td>80.98</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Pleasure from TV/radio</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group Home</td>
<td>73</td>
<td>5.29</td>
<td>77.96</td>
<td>2990.0</td>
<td>.59</td>
</tr>
<tr>
<td>Supported Housing</td>
<td>86</td>
<td>5.53</td>
<td>81.73</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The dimension Satisfaction with Family Relations contains three items.

Respondents who receive supported housing reported more satisfaction for all three, but to a significant level in only the third, “feelings about family relations” (Table 16)
In the dimension *Satisfaction With Social Relations*, group home residents were more satisfied than their counterparts receiving supported housing regarding the first two items, “feeling about things done with others” and “feelings about amount of time spent with others,” but not to a significant level (Table 17). Respondents receiving supported housing were more satisfied in the remaining three items in this dimension, but not to a significant level.
Table 17

*Satisfaction With Social Relations – Type of Residential Support*

<table>
<thead>
<tr>
<th>Variables</th>
<th>n</th>
<th>Mean</th>
<th>Mean Rank</th>
<th>U</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feelings about things done with others</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group Home</td>
<td>75</td>
<td>5.11</td>
<td>84.51</td>
<td>2962.0</td>
<td>.36</td>
</tr>
<tr>
<td>Supported Housing</td>
<td>86</td>
<td>4.89</td>
<td>77.94</td>
<td>2962.0</td>
<td>.36</td>
</tr>
<tr>
<td>Feelings about amount of time spent with others</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group Home</td>
<td>75</td>
<td>4.93</td>
<td>81.69</td>
<td>3173.5</td>
<td>.86</td>
</tr>
<tr>
<td>Supported Housing</td>
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<td>4.88</td>
<td>80.40</td>
<td>3173.5</td>
<td>.86</td>
</tr>
<tr>
<td>Feelings about people seen socially</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group Home</td>
<td>72</td>
<td>4.99</td>
<td>74.35</td>
<td>2725.0</td>
<td>.40</td>
</tr>
<tr>
<td>Supported Housing</td>
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<td>5.18</td>
<td>80.27</td>
<td>2725.0</td>
<td>.40</td>
</tr>
<tr>
<td>Chances to know people with whom one feels comfortable</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group Home</td>
<td>75</td>
<td>4.89</td>
<td>79.83</td>
<td>3137.0</td>
<td>.76</td>
</tr>
<tr>
<td>Supported Housing</td>
<td>86</td>
<td>5.01</td>
<td>82.02</td>
<td>3137.0</td>
<td>.76</td>
</tr>
<tr>
<td>Amount of friendship</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group Home</td>
<td>75</td>
<td>4.64</td>
<td>78.59</td>
<td>3044.0</td>
<td>.45</td>
</tr>
<tr>
<td>Supported Housing</td>
<td>87</td>
<td>4.85</td>
<td>84.01</td>
<td>3044.0</td>
<td>.45</td>
</tr>
</tbody>
</table>

Of the two items in the dimension *Satisfaction with Health*, group home residents were more satisfied regarding both their “general health,” and “physical condition,” but not to a significant level (Table 18).
Table 18

*Satisfaction with Health– Type of Residential Support*

<table>
<thead>
<tr>
<th>Variables</th>
<th>n</th>
<th>Mean</th>
<th>Mean Rank</th>
<th>U</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General health</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group Home</td>
<td>73</td>
<td>4.68</td>
<td>83.07</td>
<td>3061.0</td>
<td>.60</td>
</tr>
<tr>
<td>Supported Housing</td>
<td>88</td>
<td>4.49</td>
<td>79.28</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Physical condition</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group Home</td>
<td>72</td>
<td>4.61</td>
<td>83.40</td>
<td>2959.5</td>
<td>.46</td>
</tr>
<tr>
<td>Supported Housing</td>
<td>88</td>
<td>4.42</td>
<td>78.13</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Of the two items in the dimension *Satisfaction with Access to Health Care*, respondents receiving supported housing reported greater satisfaction with “medical care available,” and “frequency of doctor’s appointments,” but neither of these differences were to a significant level (Table 19).

Table 19

*Satisfaction with Access to Health Care – Type of Residential Support*

<table>
<thead>
<tr>
<th>Variables</th>
<th>n</th>
<th>Mean</th>
<th>Mean Rank</th>
<th>U</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Medical care available</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group Home</td>
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<td>5.31</td>
<td>75.23</td>
<td>2781.0</td>
<td>.33</td>
</tr>
<tr>
<td>Supported Housing</td>
<td>87</td>
<td>5.63</td>
<td>82.03</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Frequency of doctor’s appointments</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group Home</td>
<td>72</td>
<td>5.21</td>
<td>78.30</td>
<td>3009.5</td>
<td>.75</td>
</tr>
<tr>
<td>Supported Housing</td>
<td>86</td>
<td>5.34</td>
<td>80.51</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Greenley, Greenberg, and Brown (1997), the researchers who developed QLQ, recommended a procedure for averaging scores for individual items in order to derive scores for each of seven QLQ dimensions (pp. 14-15). Following their instructions, I calculated scores for each dimension for each respondent by adding scores for each answered item in the dimension, and then divided the sum by the number of items answered. A respondent did not need to answer every item in each dimension, as long as he or she answered at least half of the items in each dimension, thereby minimizing missing values.

To determine whether there was a significant difference in each of the seven Life Satisfaction dimensions, as well as global QLQ for those respondents living in group homes compared to their counterparts receiving supported housing, I first tested the internal reliability of the seven Life Satisfaction dimensions. Cronbach’s Alpha analysis revealed at least moderately strong internal reliability for all seven dimensions, and strong reliability for five. Reliability results compared favorably with Greenley, et al.’s (1997) results (Table 20).
Table 20  

*Cronbach's Alpha Reliability – QLQ Scale*

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Cronbach’s Alpha</th>
<th>Greenley, et al. 1997</th>
<th>Murphy, 2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Living Situation</td>
<td>.88</td>
<td>.90</td>
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<tr>
<td>Finances</td>
<td>.88</td>
<td>.88</td>
<td></td>
</tr>
<tr>
<td>Leisure</td>
<td>.77</td>
<td>.81</td>
<td></td>
</tr>
<tr>
<td>Family</td>
<td>.91</td>
<td>.93</td>
<td></td>
</tr>
<tr>
<td>Social Life</td>
<td>.89</td>
<td>.90</td>
<td></td>
</tr>
<tr>
<td>Health</td>
<td>.82</td>
<td>.90</td>
<td></td>
</tr>
<tr>
<td>Access to Health Care</td>
<td>.72</td>
<td>.74</td>
<td></td>
</tr>
</tbody>
</table>

Using averaged scores for each of the seven Life Satisfaction dimensions, I compared mean ranks for respondents living in staffed group homes to their counterparts receiving supported housing, using Mann-Whitney *U* analysis. Respondents receiving supported housing indicated higher satisfaction for five of the seven dimensions (Table 21): Current Living Situation, Leisure, Family Relations, Social Relations, and Access to Health Care. Group home residents indicated higher satisfaction for Finances and General Health. Of the seven dimensions, in only one, Current Living situation, was the difference to a significant level. I calculated a *Global Satisfaction with Current Living Situation* score by adding averaged scores for each of the seven dimensions, and dividing by seven (Greenley et al., 1997, p 15). Using Mann-Whitney *U* statistical analysis, I compared mean rank for respondents living in group homes to those receiving supported housing. While respondents who receive supported housing indicated a higher global satisfaction with life than those living in group homes, this was not to a significant level.
Table 21

*Life Satisfaction, Seven QLQ Dimensions – Mann-Whitney U Analysis*

<table>
<thead>
<tr>
<th>Variables</th>
<th></th>
<th>Mean</th>
<th>Mean Rank</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td></td>
<td></td>
<td>U</td>
<td>p</td>
</tr>
<tr>
<td><strong>Current Living Situation</strong></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Group Home</td>
<td>75</td>
<td>4.86</td>
<td>71.25</td>
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</tr>
<tr>
<td>Supported Housing</td>
<td>87</td>
<td>5.40</td>
<td>90.33</td>
<td>2494.0</td>
<td>.01</td>
</tr>
<tr>
<td><strong>Finances</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group Home</td>
<td>74</td>
<td>4.50</td>
<td>84.85</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supported Housing</td>
<td>87</td>
<td>4.35</td>
<td>77.72</td>
<td>2934.0</td>
<td>.33</td>
</tr>
<tr>
<td><strong>Leisure</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group Home</td>
<td>75</td>
<td>4.95</td>
<td>77.38</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supported Housing</td>
<td>87</td>
<td>5.21</td>
<td>85.05</td>
<td>2953.5</td>
<td>.30</td>
</tr>
<tr>
<td><strong>Family Relations</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group Home</td>
<td>73</td>
<td>4.54</td>
<td>72.29</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supported Housing</td>
<td>85</td>
<td>5.13</td>
<td>85.69</td>
<td>2576.5</td>
<td>.07</td>
</tr>
<tr>
<td><strong>Social Relations</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group Home</td>
<td>74</td>
<td>4.90</td>
<td>78.03</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supported Housing</td>
<td>84</td>
<td>5.00</td>
<td>80.79</td>
<td>2999.5</td>
<td>.70</td>
</tr>
<tr>
<td><strong>General Health</strong></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group Home</td>
<td>73</td>
<td>4.65</td>
<td>84.14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supported Housing</td>
<td>88</td>
<td>4.45</td>
<td>78.39</td>
<td>2982.5</td>
<td>.43</td>
</tr>
<tr>
<td><strong>Access to Health Care</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group Home</td>
<td>75</td>
<td>5.25</td>
<td>78.14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supported Housing</td>
<td>87</td>
<td>5.48</td>
<td>82.43</td>
<td>2998.0</td>
<td>.55</td>
</tr>
<tr>
<td><strong>Global Life Satisfaction</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group Home</td>
<td>75</td>
<td>4.64</td>
<td>78.59</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supported Housing</td>
<td>87</td>
<td>4.85</td>
<td>84.01</td>
<td>3044.0</td>
<td>.45</td>
</tr>
</tbody>
</table>
Because skew values for all QLQ items were between -2 and 2, and I was able to produce a scale with relatively strong internal reliability, I repeated analysis of the seven life satisfaction dimensions using $t$-test analysis. Respondents receiving supported housing had a significantly higher satisfaction with their living situation compared to respondents living in group homes (Table 22). In addition, I found that supported housing residents were significantly more satisfied with Family Relations. I combined all 24 averaged items to form a *Global Life Satisfaction* variable. While the mean score for respondents receiving supported housing was higher than for group home residents, indicating higher Global Satisfaction, $t$-test analysis indicated that this difference was not significant.
Table 22

*Life Satisfaction – Seven QLQ Dimensions, t-test analysis*

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>Mean</th>
<th>SD</th>
<th>t</th>
<th>df</th>
<th>p</th>
</tr>
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<tr>
<td><strong>Current Living Situation</strong></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>Group Home</td>
<td>75</td>
<td>4.86</td>
<td>1.39</td>
<td>-2.70</td>
<td>143.27</td>
<td>&lt; .01</td>
</tr>
<tr>
<td>Supported Housing</td>
<td>87</td>
<td>5.40</td>
<td>1.14</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Finances</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group Home</td>
<td>74</td>
<td>4.50</td>
<td>1.51</td>
<td>.72</td>
<td>159</td>
<td>.48</td>
</tr>
<tr>
<td>Supported Housing</td>
<td>87</td>
<td>4.35</td>
<td>1.40</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Leisure</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group Home</td>
<td>75</td>
<td>4.95</td>
<td>1.29</td>
<td>-1.40</td>
<td>137.10</td>
<td>.17</td>
</tr>
<tr>
<td>Supported Housing</td>
<td>87</td>
<td>5.21</td>
<td>.99</td>
<td></td>
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</tr>
<tr>
<td><strong>Family Relations</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group Home</td>
<td>73</td>
<td>4.54</td>
<td>1.86</td>
<td>-2.19</td>
<td>135.53</td>
<td>.03</td>
</tr>
<tr>
<td>Supported Housing</td>
<td>85</td>
<td>5.13</td>
<td>1.46</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Social Relations</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group Home</td>
<td>74</td>
<td>4.90</td>
<td>1.19</td>
<td>-.52</td>
<td>156</td>
<td>.60</td>
</tr>
<tr>
<td>Supported Housing</td>
<td>84</td>
<td>5.00</td>
<td>1.23</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Health</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group Home</td>
<td>73</td>
<td>4.65</td>
<td>1.32</td>
<td>.88</td>
<td>159</td>
<td>.38</td>
</tr>
<tr>
<td>Supported Housing</td>
<td>88</td>
<td>4.45</td>
<td>1.48</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Access To Health Care</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group Home</td>
<td>72</td>
<td>5.25</td>
<td>1.31</td>
<td>-1.29</td>
<td>158</td>
<td>.20</td>
</tr>
<tr>
<td>Supported Housing</td>
<td>88</td>
<td>5.48</td>
<td>.96</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Global life satisfaction</strong></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Group Home</td>
<td>75</td>
<td>4.82</td>
<td>1.03</td>
<td>-1.45</td>
<td>161</td>
<td>.15</td>
</tr>
<tr>
<td>Supported Housing</td>
<td>87</td>
<td>5.03</td>
<td>.87</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Research Hypothesis 6: It is possible to identify variables that may indicate best “fit” between a particular candidate for residential services and particular type of residential support.

I conducted an analysis to determine which variables (demographic, functioning, risk, and quality of life), if any might indicate a best residential “fit” for persons receiving residential services. Because the outcome variable—type of residential support—is dichotomous (group home vs. supported housing) and predictor variables include nominal, ordinal, and interval levels of measurement, I determined that the most appropriate analysis method to be logistic regression (Field, 2000; Hosmer & Lemeshow, 1989). I expected to find that it might be difficult or impossible to identify specific variables which would predict the best fit between a particular individual and type of residential program, based on past DMH experience in trying to identify predictors of residential support, and the choice of variables available in the current study. There are many factors which go into the decision for why a particular candidate for residential support is referred to either supported housing or group home, some of which are unrelated to variables measured in this study, such as available vacancies, the individual client’s preferences, and community pressures.

Because the nature of this analysis was exploratory regarding whether particular variables might be related to a more suitable residential type (and not the testing of a particular theory), I chose to use a forward step-wise (likelihood ratio) logistic regression
method (Field, pp. 168-174). First I analyzed six demographic variables, including ethnicity, marital status, diagnosis, age, time in residential placement, and onset age of mental illness. None of these variables appeared to be influential in identifying a preferable residential placement fit.

I analyzed twelve variables related to functioning ability. For the 12 variables that measured functioning ability, there were 20 missing cases in total (of 165 participants), resulting in 145 participants (87.9%) being included in the analysis. Omnibus test indicated that chi-square was positive and significant (p-value < 0.05), and the model was improved through four steps as variables were added to the model. Significance at the fourth step was 0.03. Scores for -2 log likelihood test for the four-step model indicated a moderate explanatory power, with R-square values of 0.223 (Cox & Snell) and 0.298 (Naglekerke).

Hosmer and Lemeshow Goodness-of-Fit test indicated the model has good fit with the data, with a chi-square score at the fourth step of 8.134, and significance of 0.42 (null hypothesis is that the model fits the data; therefore, p-value that is greater than 0.05 indicates good fit). Cross-tabulation of expected versus observed responses for the model at each step indicated that 72.4% of cases were correctly estimated (59.1% of Group Home cases; 83.5% of Supported Housing cases).

Wald statistics for each of the four variables in the model, including “shopping,” “laundry,” “finances,” and “medication,” indicated that all four variables made a significant contribution to the outcome (p – value < 0.05) (Table 23).
Table 23

_Logistic Regression of Functioning Skills Indicating best “fit” to Type of Residential Support_

<table>
<thead>
<tr>
<th>Predictor</th>
<th>β</th>
<th>SE</th>
<th>Odds Ratio</th>
<th>Wald Statistic</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shopping</td>
<td>0.83</td>
<td>0.18</td>
<td>2.28</td>
<td>21.01</td>
<td>.00</td>
</tr>
<tr>
<td>Laundry</td>
<td>-0.54</td>
<td>0.21</td>
<td>0.58</td>
<td>6.51</td>
<td>.01</td>
</tr>
<tr>
<td>Finances</td>
<td>0.34</td>
<td>0.15</td>
<td>1.41</td>
<td>4.92</td>
<td>.03</td>
</tr>
<tr>
<td>Medication</td>
<td>0.34</td>
<td>0.15</td>
<td>1.40</td>
<td>4.83</td>
<td>.03</td>
</tr>
</tbody>
</table>

An odds ratio value greater than 1.0 for the variables shopping, finances, and medication indicated that as the value increased (signifying more independent functioning), the odds that those variables would be associated with participants who receive supported housing also increased. Participants who function more independently in these three areas “fit” better in the supported housing group. For the variable laundry, the odds ratio value of 0.58 indicated that, with an increasing value for the variable, the odds for that variable to be associated with participants who live in group homes also increased; that participants who do their laundry more independently “fit” better in a group home living situation.

Correlation matrix indicated that the highest correlation between significant variables is -0.45, suggesting there is little chance that multicollinearity has occurred. When each of the significant variables was removed from the model, there was
significant change in the – 2 log likelihood score, indication that all of the variables are important to the model and should be retained).

I repeated logistic regression analysis of functioning variables using systems means, which allowed the analysis to be completed with no missing cases and inclusion of all 165 participants. Results were very similar, with the same variables identified through four steps.

I analyzed six risk variables, including “harm to self,” “harm to others,” “substance abuse,” “risk of leaving services prematurely,” “impulse control” and “risk of crisis/hospitalization,” again using a forward step-wise (likelihood ratio) logistic regression method. There were 16 missing cases, and 149 (90.3%) of participants were included in the analysis. None of these variables was influential in identifying best “fit” of residential placement.

I repeated the analysis using systems means, and omnibus test of model coefficient indicated that the variable “substance abuse” had a chi-square of 6.43 and a significance of 0.01. The -2 log likelihood of 221.58, however, indicated very low explanatory power of 0.038 (Cox and Snell R square) and 0.051 (Nagelkerke R square). Hosmer and Lemeshaw test resulted in a chi-square of 3.71 (df = 2) and significance of 0.16, indicating the model has good fit to the data.

Observed versus predicted responses for the model estimated that the “fit” for participants receiving supported housing was high, at 88.6%, but was much poorer at estimating “fit” with group home placement at 29.9%, well below a random selection rate of 0.50. The Wald statistic for the variables “substance abuse” indicated a significant
contribution to predicting outcome ($\beta = -0.78, SE = 0.32, \text{ Wald } = 5.79, \text{ sig. } = 0.02, \text{ Exp} (\beta) = 0.46$). Odds ratio of 0.46 indicates that an increasing value for the variable “substance abuse” corresponds to decreasing odds of that event’s occurrence, meaning participants who indicated more serious substance abuse problems were more likely to have a better “fit” with a group home type of residential support.

I analyzed 24 variables related to life satisfaction. For those 24 variables, there was a total of 37 missing cases (of 165 participants), resulting in 128 participants (77.57%) being included in the analysis. Omnibus test indicated that chi-square was positive and significant (p-value < 0.05)—and the model was improved—through four steps as variables were added to the model. Significance at the fourth step was 0.03. The $-2 \text{ Log Likelihood}$ scores for the four-step model indicated a moderate explanatory power, with R-square values of 0.243 (Cox & Snell) and 0.326 (Naglekerke).

Hosmer and Lemeshow Goodness-of-Fit test indicated the model has good fit to the data, with a chi-square score at the fourth step of 8.245, and significance of 0.41. Cross-tabulation of expected versus observed responses for the model at each step indicated that 70.3% of cases were correctly estimated (56.4% of Group Home cases; 80.8% of Supported Housing cases).

Wald statistics for each of the four variables in the model, including “house rules,” “tenancy,” “fun money,” and “family relations,” indicated that all four variables made a significant contribution to the outcome (p-value < 0.05) (Table 24).
Table 24

**Logistic Regression of QLQ Variables Indicating Best “Fit” to**

**Type of Residential Support**

<table>
<thead>
<tr>
<th>Predictor</th>
<th>$\beta$</th>
<th>SE</th>
<th>Odds Ratio</th>
<th>Wald Statistic</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>House Rules</td>
<td>1.21</td>
<td>0.30</td>
<td>3.35</td>
<td>16.33</td>
<td>.00</td>
</tr>
<tr>
<td>Tenancy</td>
<td>-0.46</td>
<td>0.20</td>
<td>0.63</td>
<td>5.30</td>
<td>.02</td>
</tr>
<tr>
<td>Fun Money</td>
<td>-0.66</td>
<td>0.17</td>
<td>0.51</td>
<td>15.01</td>
<td>.00</td>
</tr>
<tr>
<td>Family Relations</td>
<td>0.40</td>
<td>0.13</td>
<td>1.49</td>
<td>8.88</td>
<td>.03</td>
</tr>
</tbody>
</table>

An odds ratio value greater than 1.0 for the variables house rules and family relations indicated that as the value increased (signifying more independent functioning), the odds for those variables to be associated with participants who receive supported housing also increased. In other words, participants who reported higher satisfaction in these two areas had a better “fit” with supported housing type of residential support. For the variables tenancy and fun money, the odds ratio value of less than 1.00 indicated that with an increasing value for the variable, the odds for that variable to be associated with participants who live in group homes also increased; a participant who felt more positively about their tenancy and having money available for fun things “fit” better with a group home living situation.
Correlation matrix indicated that the highest correlation between significant variables is -0.71, suggesting there is a possibility of multicollinearity between the variables “house rules” and “tenancy”. When each of the significant variables were removed from the model, there was significant change in the – 2 log likelihood score, indication that all of the variables are important to the model and should be retained.

Logistic regression analysis of QLQ data using systems means eliminated missing cases and allowed for the entire sample of 165 participants to be used. Omnibus test indicated that chi-square was positive and significant (p-value < 0.05)—and the model was improved through three steps as variables were added to the model. Significance at the third step was 0.00. The -2 log likelihood scores for the three-step model indicated a moderate explanatory power, with R-square values of 0.168 (Cox & Snell) and 0.225 (Naglekerke).

Hosmer and Lemeshow Goodness-of-Fit test indicated the model has good fit to the data, with a chi-square score at the third step of 5.583, and significance of 0.69. Cross-tabulation of expected versus observed responses for the model at each step indicated that 66.7% of cases were correctly estimated (63.6% of Group Home cases; 69.3% of Supported Housing cases).

When systems means were used, Wald statistics for each of the three variables in the model, including “house rules,” “fun money,” and “family relations,” indicated that all three variables made a significant contribution to the outcome (p-value < 0.05) (Table 25).
Table 25

**Logistic Regression of QLQ Variables using System Means, Indicating Best “Fit” to Type of Residential Support**

<table>
<thead>
<tr>
<th>Predictor</th>
<th>β</th>
<th>SE</th>
<th>Odds Ratio</th>
<th>Wald Statistic</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>House Rules</td>
<td>0.64</td>
<td>0.17</td>
<td>1.90</td>
<td>14.91</td>
<td>.00</td>
</tr>
<tr>
<td>Fun Money</td>
<td>-0.51</td>
<td>0.13</td>
<td>0.60</td>
<td>14.72</td>
<td>.00</td>
</tr>
<tr>
<td>Family Relations</td>
<td>0.29</td>
<td>0.11</td>
<td>1.34</td>
<td>6.51</td>
<td>.01</td>
</tr>
</tbody>
</table>

An odds ratio value greater than 1.0 for the variables house rules and family relations indicated that as the value increased (signifying more independent functioning), the odds for those variables to be associated with participants who receive supported housing also increased. Participants who reported higher level of satisfaction in these three areas have a better “fit” with supported housing type of residential support. For the variable fun money, the odds ratio value of less than 1.00 indicated that with an increasing value for the variable, the odds for that variable to be associated with participants who live in group homes also increased; that a participant who felt more positively about having money available for fun things “fit” better in a group home living situation.

Correlation matrix indicated that the highest correlation between significant variables is -0.71, suggesting there is a possibility of *multicollinearity* between the
variables “house rules” and “tenancy”. When each of the significant variables was removed from the model, there was significant change in the –2 log likelihood, indication that all of the variables are important to the model and should be retained.

I analyzed seven combined dimension variables related to life satisfaction. For those seven dimensions there was a total of 15 missing cases (of 165 participants), resulting in 150 participants (90.90%) being included in the analysis. Logistic regression revealed three steps that significantly improved the model, including the variables: “living arrangements,” “finances,” and “family relations”. Omnibus test indicated that chi-square was positive and significant (p-value < 0.05) and the model was improved, through three steps as variables were added to the model. Significance at the third step was 0.00. The -2 Log Likelihood scores for the three-step model indicated a low explanatory power, with R-square values of 0.107 (Cox & Snell) and 0.143 (Naglekerke).

Hosmer and Lemeshow Goodness-of-Fit test indicated the model has good fit to the data, with a chi-square score at step 3 of 3.981, and significance of 0.86. Cross-tabulation of expected versus observed responses for the model at each step indicated that 70.3% of cases were correctly estimated (56.4% of Group Home cases; 80.8% of Supported Housing cases).

Wald statistics for each of the three variables in the model, including “living arrangements,” “finances,” and “family relations,” indicated that all three variables made a significant contribution to the outcome (p-value < 0.05) (Table 26).
Table 26

**Logistic Regression of 7 QLQ Dimensions Indicating Best “fit” to Type of Residential Support**

<table>
<thead>
<tr>
<th>Predictor</th>
<th>β</th>
<th>SE</th>
<th>Odds Ratio</th>
<th>Wald Statistic</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Living Arrangements</td>
<td>0.53</td>
<td>0.18</td>
<td>1.70</td>
<td>9.16</td>
<td>.00</td>
</tr>
<tr>
<td>Finances</td>
<td>-0.48</td>
<td>0.16</td>
<td>0.62</td>
<td>8.52</td>
<td>.00</td>
</tr>
<tr>
<td>Family Relations</td>
<td>0.40</td>
<td>0.12</td>
<td>1.28</td>
<td>4.13</td>
<td>.04</td>
</tr>
</tbody>
</table>

An odds ratio value greater than 1.0 for the variables living arrangements and family relations indicated that as the value increased (signifying greater satisfaction), the odds for those variables are associated with participants who receive supported housing also increased. In other words, participants who are more satisfied in these three areas “fit” better in the supported housing group. For the variable finances, an odds ratio value of less than 1.00 indicated that with an increasing value for the variable, the odds for that variable are associated with participants who live in group homes also increased; that a participant who felt more positively about their financial situation “fit” better in a group home type of residential support.

Correlation matrix indicated that the highest correlation between significant variables is -0.56, suggesting there is a small possibility of multicollinearity between the variables “living arrangements” and “finances”. When each of the significant variables was removed from the model, there was significant change in the – 2 log likelihood, indication that all of the variables are important to the model and should be retained.
Finally, I analyzed seven combined dimension variables related to life satisfaction using systems means, which eliminated all missing cases, resulting in all 165 participants being included in the analysis. As with the previous analysis, logistic regression revealed three steps that significantly improved the model, including the variables: “living arrangements,” “finances,” and “family relations,” and data results were almost identical, and the model was not improved through use of system means.

Open-ended Questions

There were three open-ended survey questions asking respondents to indicate how they felt about their current living situation; what their ideal living situation would be given their current life circumstances; and what, if anything, is preventing them from being able to live in a more ideal situation.

Almost all respondents answered the first question (n = 160, 97%) using one-word or short phrase answers, and I was able to code responses into four ordinal categories: “very happy/great”; “good/like it/fine/happy”; “fair/OK/would like it better”; and “unhappy/don’t like it/not OK”. Overall, a large majority of respondents (n = 116, 71.5%) were either happy (n = 83, 59.1%) or very happy (n = 33, 20.6%) with their current living situation, and only 13 respondents (8.1%) reported they were very unhappy.
In an effort to assess whether there were differences in the way respondents who receive supported housing view their current living situation from their counterparts who live in group home, I completed a chi-square analysis of difference (Table 27). The result indicated a significant difference (Chi-square (3, 160) = 11.11, p = .01). Those respondents receiving supported housing were more likely to be “very happy,” and less likely to be “unhappy” than expected, and those living in group homes were less likely to be “very happy,” and more likely to be “unhappy” than expected.

Table 27

*Feelings About Current Living Situation*

<table>
<thead>
<tr>
<th></th>
<th>Group Home N = 74</th>
<th>Supported Housing N = 86</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Happy/Great</td>
<td>9 (12.2%)</td>
<td>24 (27.9%)</td>
</tr>
<tr>
<td>Good/Happy</td>
<td>45 (60.8%)</td>
<td>38 (44.2%)</td>
</tr>
<tr>
<td>Fair/Would like it better</td>
<td>11 (14.9%)</td>
<td>20 (23.3%)</td>
</tr>
<tr>
<td>Unhappy/Don’t like it</td>
<td>9 (12.2%)</td>
<td>4 (4.7%)</td>
</tr>
</tbody>
</table>

Most respondents (n = 153) indicated at least one response to characterize their ideal living situation, and some listed two (n = 22), or even three (n = 3) responses (Table 28).
<table>
<thead>
<tr>
<th>Ideal Living Situations</th>
<th>1st Choice Freq.</th>
<th>Valid Percent</th>
<th>2nd Choice Freq.</th>
<th>Valid Percent</th>
<th>3rd Choice Freq.</th>
<th>Valid Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Out of program/on own/live alone/&quot;normal&quot;</td>
<td>45</td>
<td>27.3</td>
<td>7</td>
<td>4.2</td>
<td>2</td>
<td>66.7</td>
</tr>
<tr>
<td>The way it is/current</td>
<td>38</td>
<td>23.0</td>
<td>1</td>
<td>4.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beach/mountains/woods/jungle/Cape/Boston/out of state</td>
<td>14</td>
<td>8.5</td>
<td>2</td>
<td>9.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Own house/own property/no landlord</td>
<td>10</td>
<td>6.1</td>
<td></td>
<td></td>
<td>1</td>
<td>33.3</td>
</tr>
<tr>
<td>Different apartment</td>
<td>7</td>
<td>4.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married/fiancé/significant other</td>
<td>5</td>
<td>3.0</td>
<td>1</td>
<td>4.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Live with friend/educated, peaceful people</td>
<td>5</td>
<td>3.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>With family</td>
<td>5</td>
<td>3.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Good support/help I need/better quality care/more respect</td>
<td>4</td>
<td>2.4</td>
<td>2</td>
<td>9.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Job</td>
<td>4</td>
<td>2.4</td>
<td>1</td>
<td>4.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fewer neighbors</td>
<td>3</td>
<td>1.8</td>
<td>2</td>
<td>9.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not as many bills</td>
<td>3</td>
<td>1.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Car/car &amp; money</td>
<td>3</td>
<td>1.8</td>
<td>1</td>
<td>4.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Busier neighborhood</td>
<td>2</td>
<td>1.2</td>
<td>1</td>
<td>4.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Near kids</td>
<td></td>
<td></td>
<td>1</td>
<td>4.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>More privacy</td>
<td>1</td>
<td>.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clean and sober</td>
<td>1</td>
<td>.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not as many medications</td>
<td></td>
<td></td>
<td>1</td>
<td>4.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Near Stores</td>
<td></td>
<td></td>
<td>1</td>
<td>4.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bagel &amp; ice coffee every day</td>
<td>1</td>
<td>.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nothing</td>
<td>1</td>
<td>.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Better furniture</td>
<td>1</td>
<td>.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>153</strong></td>
<td><strong>92.7</strong></td>
<td><strong>22</strong></td>
<td><strong>13.3</strong></td>
<td><strong>3</strong></td>
<td><strong>1.8</strong></td>
</tr>
<tr>
<td><strong>No response</strong></td>
<td><strong>12</strong></td>
<td><strong>7.3</strong></td>
<td><strong>143</strong></td>
<td><strong>86.7</strong></td>
<td><strong>162</strong></td>
<td><strong>98.2</strong></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>165</strong></td>
<td><strong>100.0</strong></td>
<td><strong>165</strong></td>
<td><strong>100.0</strong></td>
<td><strong>165</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>
I attempted to assess whether there were differences in the way respondents receiving supported housing view their ideal living situation from their counterparts who live in group homes. Chi-square analysis of difference for the two most often used responses (the respondent considered their current living situation to be ideal, or that they wanted a more independent situation), indicated a significant difference (Chi-square (3, 158) = 13.21, p = .00). While only 83 out of 165 total respondents provided answers in these two categories, those respondents receiving supported housing were more likely to consider their current living situation to be ideal, while those living in group homes were more likely to indicate their ideal situation would be on their own or out of their current program (Table 29).

Table 29

<table>
<thead>
<tr>
<th>Ideal Living Situation</th>
<th>Group Home (n = 46)</th>
<th>Supported Housing (n = 37)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The way it is/Current living situation</td>
<td>12 (26.1%)</td>
<td>26 (70.3%)</td>
</tr>
<tr>
<td>Out of program/On own/Live alone/”Normal”</td>
<td>34 (73.9%)</td>
<td>11 (29.7%)</td>
</tr>
</tbody>
</table>
Of the seven respondents who indicated in their second “ideal” choice that they wanted to be out of the program/on own/live alone/“normal,” all lived in staffed group homes. The one respondent who indicated a second ideal choice as “happy the way it is/current” is living independently with supported housing.

In response to the question about what barriers were preventing them living in their ideal living situation, respondents again gave many reasons, although a substantial percentage identified either they liked their current situation, or that lack of money or mental illness was preventing them from living in their ideal residential situation (Table 30). When respondents living independently with supported housing were compared to their counterparts in staffed group homes, a higher percentage for people living independently were happy with their current situation, but Chi-square analysis indicated this was not to a significant level.
Table 30

*Barriers to Living in Ideal Situation*

<table>
<thead>
<tr>
<th></th>
<th>Overall Freq.</th>
<th>Valid Percent</th>
<th>Group Home Freq.</th>
<th>Valid Percent</th>
<th>Supported Housing Freq.</th>
<th>Valid Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Like current situation</td>
<td>41</td>
<td>29.3</td>
<td>17</td>
<td>25.4</td>
<td>24</td>
<td>32.9</td>
</tr>
<tr>
<td>Money</td>
<td>32</td>
<td>22.9</td>
<td>16</td>
<td>23.9</td>
<td>16</td>
<td>21.9</td>
</tr>
<tr>
<td>Mental illness</td>
<td>18</td>
<td>12.9</td>
<td>11</td>
<td>16.4</td>
<td>7</td>
<td>9.6</td>
</tr>
<tr>
<td>Illness</td>
<td>7</td>
<td>5.0</td>
<td>3</td>
<td>4.5</td>
<td>4</td>
<td>5.5</td>
</tr>
<tr>
<td>Don't know</td>
<td>7</td>
<td>5.0</td>
<td>4</td>
<td>6.0</td>
<td>3</td>
<td>4.1</td>
</tr>
<tr>
<td>Staff</td>
<td>6</td>
<td>4.3</td>
<td>5</td>
<td>7.5</td>
<td>1</td>
<td>1.4</td>
</tr>
<tr>
<td>Unable to do ADLs on my own</td>
<td>4</td>
<td>2.9</td>
<td>2</td>
<td>3.0</td>
<td>2</td>
<td>2.7</td>
</tr>
<tr>
<td>No job</td>
<td>3</td>
<td>2.1</td>
<td>1</td>
<td>1.5</td>
<td>2</td>
<td>2.7</td>
</tr>
<tr>
<td>Can't find apartment</td>
<td>3</td>
<td>2.1</td>
<td>2</td>
<td>3.0</td>
<td>1</td>
<td>1.4</td>
</tr>
<tr>
<td>My past</td>
<td>2</td>
<td>1.4</td>
<td></td>
<td></td>
<td>2</td>
<td>2.7</td>
</tr>
<tr>
<td>Time</td>
<td>2</td>
<td>1.4</td>
<td></td>
<td></td>
<td>2</td>
<td>2.7</td>
</tr>
<tr>
<td>Not involved in neighborhood</td>
<td>2</td>
<td>1.4</td>
<td></td>
<td></td>
<td>2</td>
<td>2.7</td>
</tr>
<tr>
<td>No right to quality care/low self-esteem</td>
<td>2</td>
<td>1.4</td>
<td>1</td>
<td>1.5</td>
<td>1</td>
<td>1.4</td>
</tr>
<tr>
<td>Lonely</td>
<td>1</td>
<td>.7</td>
<td>1</td>
<td>1.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lazy</td>
<td>1</td>
<td>.7</td>
<td></td>
<td></td>
<td>1</td>
<td>1.4</td>
</tr>
<tr>
<td>Sale of apartment complex</td>
<td>1</td>
<td>.7</td>
<td></td>
<td></td>
<td>1</td>
<td>1.4</td>
</tr>
<tr>
<td>Job commitment</td>
<td>1</td>
<td>.7</td>
<td></td>
<td></td>
<td>1</td>
<td>1.4</td>
</tr>
<tr>
<td>Medication</td>
<td>1</td>
<td>.7</td>
<td></td>
<td></td>
<td>1</td>
<td>1.4</td>
</tr>
<tr>
<td>No health insurance</td>
<td>1</td>
<td>.7</td>
<td></td>
<td></td>
<td>1</td>
<td>1.4</td>
</tr>
<tr>
<td>Conflict</td>
<td>1</td>
<td>.7</td>
<td>1</td>
<td>1.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>140</td>
<td>100</td>
<td>67</td>
<td>100</td>
<td>73</td>
<td>100</td>
</tr>
<tr>
<td>No response</td>
<td>25</td>
<td>100</td>
<td></td>
<td></td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>165</td>
<td>77</td>
<td></td>
<td></td>
<td>88</td>
<td></td>
</tr>
</tbody>
</table>
CHAPTER IV

Discussion

This study has sought to answer the following research questions: What differences are there, if any, between people suffering from severe and persistent mental illness who live in supervised group homes, and their counterparts who live in their own apartments with intensive staff support? Based on those differences, is there a way to associate best type of residential support with the specific needs and attributes of a particular individual? Using Lehman’s Quality-of-Life (QOL) model (1983, 1988), I compared the QOL of a sample of study participants living in supervised group homes to participants living independently and receiving supported housing services, in three domains: Personal Characteristics, Objective QOL measures, and Subjective QOL measures. I then sought to identify indicators that may associate a candidate with a best “fit” with either staffed group home or supported housing types of residential support.

In the aggregate, there was very good survey return rate. At the outset of this project, an experienced researcher for Massachusetts Department of Mental Health (DMH) had cautioned me (based on his own research experience with DMH clients) to expect no more than 25% of potential participants to complete and return surveys (Altafer, F., personal communication, September 2004). However, almost three-fourths of people who were approached did complete and return surveys. I believe that there were several reasons for this. First, I offered a modest remuneration of $5.00 to respondents, and also paid research assistants $5.00 for each person they persuaded to
complete surveys. Because almost all participants are poor, living on approximately $700.00/month Supplemental Security Income (SSI), $5.00 is a not-inconsequential amount. I hired research assistants who were well known to participants—either a staff person with whom they worked every day, or a fellow resident of their program. I trained research assistants personally and made sure they understood how important it was to inform participants that their opinion was important and would be carefully considered. I also made certain research assistants emphasized that participation was anonymous and that I had no way to track who filled out each survey instrument, and that their participation—or non-participation—would not affect their services in any way. In preparing the Functioning/Risk segment of the survey instrument, I was careful to rephrase CERF-R items (McCorkle, 1999) in a way that was respectful to participants and not condescending.

Personal Characteristics

Research Hypothesis 1: There are no significant differences in personal (demographic and diagnostic) characteristics between persons with severe mental illness who live in group homes and their counterparts living independently with outreach residential support.

Overall, respondents of this study reflected the type of client that has been found in previous research on residential support programs (Mueser, Bond, Drake, & Resnick,
1998). The predominant diagnoses reported by respondents were schizophrenia and schizoaffective disorder, two of the most disabling psychiatric conditions. As a group, respondents had a lower level of education than the general population (U.S. Census Bureau, 2006). This may reflect academic difficulties they may have encountered during the prodromal stage of their psychiatric problems.

With the exception of education level, respondents living in group homes are very similar to their counterparts receiving supported housing. While there was a slightly higher proportion of respondents with schizophrenia living in group homes, and a higher proportion of respondents receiving supported housing diagnosed with schizoaffective and bipolar disorders, these differences were not significant. The difference in mean current age between the two groups is six months; the difference in mean age when respondents first became mentally ill was one year, and length of time they have been receiving residential support is almost identical.

Educational level was the one demographic variable in which the mean difference between group home residents and respondents receiving supported housing was significant, with respondents receiving supported housing having, on average, one more year of education than their counterparts in group homes. This might have been even more important a difference if it signified that a greater percentage of respondents receiving supported housing had graduated from high school, since the mean number of years of education for group home residents was 11.46, while respondents receiving supported housing reported 12.34 years of education. However, median years of education for respondents in the two types of residential services was 12, indicating that
50% of both groups had completed high school. The difference in mean level of education may be attributed to more respondents in supported housing with post-high school education.

**Objective Quality of Life Indicators—**

**Group Home Compared to Supported Housing Treatment**

Research Hypothesis 2: People with severe mental illness who live independently with intensive outreach residential support function more independently than their counterparts living in group homes.

In the aggregate, participants in this study manage to function fairly independently in many areas in spite of their serious disabilities. Most respondents are able to maintain their personal hygiene and do their laundry, and are able to avoid hazardous situations. More than two-thirds of respondents reported they accomplish these tasks independently. Conversely, the majority of respondents had much more difficulty with managing personal finances, taking medication, actively pursuing treatment, and finding and using health care. Most respondents are poor, living on approximately $700.00 a month, which they receive in one payment at the beginning of each month.
Managing such a low income without some help may present financial problems for anyone, whether or not they have severe mental illness.

Regarding respondents’ difficulties taking medication and pursuing treatment, other researchers have identified anosognosia, a lack of awareness of one’s illness, as a prevalent problem that affects at least 50% of people with severe and persistent mental illness (Amador & David, 2004; Torrey, 2005). It might be difficult for someone who has impaired understanding of their illness and its symptoms to remember to take their medications and to follow up with doctor’s appointments.

Respondents receiving supported housing reported significantly higher functioning than respondents living in group homes in 8 of the 12 areas of functioning measured. However, this study’s cross-sectional design prevents us from understanding causality, and raises additional questions: Are people living independently with supported housing able to function better because the environment is conducive to more independent functioning? Alternatively, were they assigned to supported housing services because their functioning level was higher initially? In their study refuting the “continuum of care” theory of residential service provision to people disabled by mental illness, Geller and Fisher (1993) found that residential clients are placed in group homes or supported housing for many reasons besides their need for that level of care. Their findings indicated that people rarely progressed from a more structured level of care to a less structured one. Once individuals were placed in a particular level of care they remained there.
For the participants in this study, it is impossible to know the reasons why they were placed in their current residential program, and how much their functioning ability before admission played a part in the placement decision. A better way to determine if the functioning level of residential clients changes over time—and how residential services may help or impede the development of functioning skills—would be to measure each individual’s functioning ability at the outset of residential treatment, and then repeat those measures periodically as treatment progresses. In that way we might best be able to determine a relationship between type of care and change in functioning level, and to compare various types of residential treatment. The segregated, overprotective nature of group homes may in fact promote and foster poorer functioning for its residents (Nagy & Gates, 1992; Rosenberg, 1992; Willer et al. 1992), but this study is unable to determine that.

Most respondents in this study aren’t working. Only one respondent works full-time, 27 work part-time, and 13 are volunteering. Fully 137 respondents (87%) do not hold jobs that pay, which may an indication of how disabled this group is, or how ineffective vocational support is for this group. In a qualitative study of a similar sample (Dorvil, Morin, Beaulieu, & Robert, 2005) a number of participants reported that “the regular job market was so unattainable to them that in many cases, they gave up on the idea of achieving this goal” (p. 512).

Work is such an important aspect of our culture, and inability to work is a primary indicator of disability (Bigelow, McFarland, & Olson, 1991; Lehman, Ward, & Linn, 1982; Rosenfield, 1997). Inability to work is a common problem for people with severe
and persistent mental illness (Marwaha & Johnson, 2004). In a meta-analysis of randomized controlled trials of vocational rehabilitation programs, only 18% of participants in non-experimental vocational programs were employed (Twamley, Jeste, & Lehman, 2003). There are also severe institutional disincentives to working, including stigma, economic disincentives, loss of health insurance (especially prescription coverage), and loss of the “safety net” of being sure there will be steady income, food stamps, fuel assistance, and other supports (Marwaha & Johnson, 2004; Warner, 1998). Although there is a widely held belief that employment brings the self-image of a mentally ill person closer to his or her ideal self-image, resulting in higher self-esteem, research examining the effect employment has on self-esteem is equivocal, indicating little or no effect (Torrey, Mueser, McHugo, & Drake, 2000).

Research Hypothesis 3: People with severe mental illness who live in group homes are more likely to present risk behaviors than their counterparts living independently with outreach residential support.

While a larger percentage of group home residents than respondents receiving supported housing reported problems in four of the five risk areas measured, only one variable—risk of abusing substances—was significantly different. When these variables were combined to create a global risk score, and missing values were replaced using
SPSS’ *Replacing Missing Values* procedure (George & Mallery, 2003), respondents living independently with supported housing reported a significantly lower level of risk.

Given the wealth of literature indicating that intensive outreach programs are the most appropriate and efficacious type of community support service for people with severe and persistent mental illness (Drake et al., 2001; Mueser, Bond, Drake & Resnik, 1998), increased level of risk may be the best clinical argument for providing the more intensive and restrictive (as well as expensive) level of support and structure of a group home to people who present a high level of risk to themselves or the community.

In the aggregate, respondents reported they were at relatively low risk in all five areas measured in this study. Fewer than 10% indicated that, in the past year, they were at high risk to harm others, to abuse substances, to leave services prematurely, and/or to have problems with impulse control. More than a quarter (*n* = 40, 25.2%) of respondents reported they had moderate or problems with impulse control, and another 10.2% reported serious problems. Suicide risk was the highest reported high-risk area, with 13.8% of respondents having presented a serious risk of suicide in the course of the past year.

This sample reported a much lower incidence of substance abuse problems than has been reported in the literature for similar samples (Regier et al., 1990; Sacks & Ries, 2005). For instance, in a large epidemiological catchment area study, Regier found that 47% of clients diagnosed with schizophrenia also met criteria for some form of substance use disorder.
Research Hypothesis 4: People with severe mental illness who live independently with intensive outreach residential support have fewer psychiatric crises, respite evaluations, and hospital admissions than their counterparts living in group homes.

Overall, more than 60% of respondents reported experiencing psychiatric crisis in the past year. Two-thirds of those who had experienced a crisis, and more than one-third of the total group, required psychiatric hospitalization. While the majority of participants were able to live and function in the community, some quite independently, many still struggle with acute exacerbation of their mental illness.

Group home residents reported a higher rate of crisis than respondents receiving supported housing for all four crisis variables (“mental health crisis,” “crisis evaluation,” “respite stay,” and “psychiatric hospitalization”), but this difference was significant for “respite stay” only. More than 60% of group home residents spent at least some time in respite in the previous year. When variables relating to crisis were combined to create a four-tier ordinal Global Crisis variable, group home residents experienced global crisis at a higher rate as well, but not to a significant level.

This is an interesting and unexpected result. Group homes have staff around at all times and are structured similarly to respite, so it might be expected that such programs could provide more support and structure to residents in crisis, especially in the evening and overnight, reducing the need for respite during crises. Supported housing programs have few or no staff on duty, especially at night to respond to clients’ crises, and so it might be expected that people would be more apt to seek the extra support of a respite
program during a crisis. Are people who live independently with support more resilient to problems that might lead to crises to start with, or have they developed resilience as the result of living independently with enough support? This study’s cross-sectional design prevents understanding of how the participants in the two types of residential support compared upon entry, so difficult.

**Subjective Quality of Life Indicators**

Research Hypothesis 5: People with severe mental illness who live independently with intensive outreach residential support experience higher levels of subjective quality-of-life than their counterparts living in group homes.

*Individual Life Satisfaction items.* Perhaps the most important finding regarding subjective quality-of-life is that people receiving supported housing are significantly more satisfied with their current living situation. This reflects findings in previous research literature, where, given the choice, people with severe and persistent mental illness prefer to live independently with enough support Tanzman, Wilson, & Yoe, 1992; Tanzman, 1993).

The two groups report similar satisfaction with finances, with the exception of “satisfaction with money for fun,” where group home residents indicated a significantly higher level of satisfaction. In a discussion of this result with an experienced residential
program director, he suggested that group home residents may be happier with the
amount of discretionary money because, he speculated, they are likely to have more help
managing their money, and so their money goes further (Yao, R., personal
communication, September 2006). He pointed out that group home residents generally
pool household expenses with other residents, sharing costs that people living
independently bear alone.

The financial arrangements for group home residents versus those in supported
housing are complex. Group home residents in Massachusetts pay the service agency
75% of their income as a program fee. This goes toward rent, utilities, food, and all other
household expenses. This leaves 25% of their income for discretionary purposes. People
living independently with supported housing pay one-third of their income either to the
residential support program as a program fee, or directly to a landlord (for a subsidized
apartment); and there are many other expenses related to living alone. Specifically, for
group home residents there is a large saving on utilities. Telephone service may cost $38-
40/month, and TV cable, $50/month. Group home residents share this expense, while
people living independently must bear this expense alone. Group home residents have
heat and electricity included in their program fee, while people living independently pay
for these utilities on their own.

Individuals living independently have to buy their own food, which is more
expensive than when a household of four or five residents buys food in quantity. Often
group home staff cook meals, or assist residents in preparing meals, more often from
scratch, using less expensive ingredients than prepared foods. Household and cleaning
supplies and implements can be shared by group home residents, whereas people living independently need to each have their own supplies. Dr. Yao (personal communication, September 2006) suggested that group home residents usually have free clothes washers and dryers right on site, while people living independently need to go to laundromats and pay to use the machines. Group home residents’ clothes may even last longer because staff help residents care for clothes better than individuals living on their own can. People living independently may also need to pay for public transportation more often than group home residents, who get rides from staff.

Dr. Yao (personal communication, September 2006) pointed out that smoking is regulated to some degree in most group homes, where residents are often required to smoke outside or in a designated area away from others, so residents tend to smoke less. The cost of cigarettes is probably the highest discretionary expense for most people receiving residential services, and the vast majority of persons with severe and persistent mental illness—perhaps 80-90%—smoke (de Leon et al, 1995; Lyon, 1999; McCloughen, A., 2003).

Perhaps the most important possible reason that people in supported housing are less satisfied with the amount of discretionary money they have may be related to their higher functioning level; they want to go places that cost money, such as the movies, out for food, and to socialize with others: these all may put a greater strain on their spending money.

Respondents receiving supported housing reported significantly higher satisfaction for the single item “Family Relations,” as well as for the dimension “Family
Relations” when analyzed using t-test method. This may be explained by several important structural differences between the two types of residential support. Group homes are mini-institutions, where it can be difficult for residents to connect with, or re-connect with estranged family members. Families may find the environment intimidating, and consequently may be less likely to visit. Families who are used to and therefore fairly tolerant of their own family member’s symptoms and idiosyncratic behavior may be frightened or put off by group home housemates’ behavior. Families of people in group homes may feel less need to reach out and support their disabled family member because of the obvious staff supports available in the program.

The staff support in supported housing may be less visible to family members, who then can carve out a supportive role for themselves. People receiving supported housing are living in a more “normal” setting, perhaps more comfortable for visiting family members, who may be more assured by the setting that their family member is recovering from mental illness. A person living alone might be more likely to reach out to family for social connection and support, because they’re alone, and can’t rely on a built-in social network the way that group home residents can.

In a similar study conducted in Sweden (Brunt & Hanson, 2004) examining quality of life of severely mentally ill persons living in small congregate group homes compared to others living in independent settings and receiving supported housing services, researchers found no significant difference between the two groups. Those authors suggested that limitations due to randomization or selection bias may have resulted in the lack of significant differences between the two groups.
Identifying Best “Fit” Relating Individuals’ Needs and Type of Residential Support

Research Hypothesis 6: It is possible to identify variables that may indicate best “fit” between a particular candidate for residential services and particular type of residential support.

This aspect of the project utilized an exploratory research method to identify characteristics of candidates for residential services that might indicate a best fit with either staffed group home or supported housing type of residential service. Since this research method was cross-sectional, it isn’t possible to know participants’ functioning level, level of risk, or subjective quality of life at the time they began residential services. Data collected represent participants’ current functioning, risk, and subjective quality-of-life, which perhaps has been influenced by their residential support experience. Nonetheless, this project demonstrated the viability of logistic regression analysis as a method to identify variables that, by using a longitudinal design, may be associated with a better placement fit with one or the other type of residential support.

While there were no demographic, diagnostic or risk variables associated with type of residential setting most appropriate to a person’s needs of residential placement, there were several function, risk, and quality-of-life (QLQ) variables that were. Four functioning-level variables, including “shopping,” “finances,” “medication” and “laundry,” appear to show promise as variables that might indicate better “fit” for a particular residential type. Based on data provided for this study, individuals who function
better in these areas would appear to fit better in a supported housing type of residential support, while individuals who more independently do their own laundry would fit better with the group home model.

Of the 24 variables related to life satisfaction, four variables, including “house rules,” “tenancy,” “fun money”, and “family relations,” made a significant contribution to the model, indicating a better “fit” with one or the other residential support type. Participants who reported higher satisfaction regarding house rules, and family relations had a better fit with supported housing, and participants who reported higher satisfaction regarding tenancy and fun money had a better fit with group home placement. Of the seven combined dimension variables related to live satisfaction, three variables, including “living arrangements,” “finances,” and “family relations” made a significant contribution to the model, indicating a better fit with one or the other residential support type. Participants who reported higher satisfaction regarding living arrangements, and family relations had a better fit with supported housing, and participants who reported higher satisfaction regarding finances had a better fit with group home placement.

While these results show promise statistically, the type of residential service respondents are already receiving has influenced these results. For instance, people who live independently probably have, by necessity, developed their shopping and finance skills, and are more likely to need to take their own medication. People living in group homes have a washer and dryer in the basement, and so can much more easily do their laundry than someone who lives alone in an apartment and may need transportation and assistance to go to a laundromat. Staff of group homes can slip into routines that resemble
institutional or custodial care, where they take on more responsibility for assisting in or even doing these functions rather than encouraging or insisting that clients of the program learn to function in these areas more independently (Nagy & Gates, 1992). When allowed the choice of mastering a skill or letting someone else do it, residents may just let the staff do it for them. Given the current study’s methodology, it is impossible to know how much of the difference in functioning between respondents living independently and those in group homes has been impacted by the caregivers themselves.

This model of analysis might be useful in a study where baseline functioning, risk, and life satisfaction data were collected for candidates to residential services before they actually begin those services, and then a model might be developed in which variables might predict best fit to a particular type of residential service type.

However, it may be that treatment issues presented by people with severe mental illness are too complex, and so entwined with other issues, for us to be able to predict quantifiable attributes for one type of residential support or another. Temperament and personality, self-esteem, pre-morbid functioning, achievement and success, quality of support networks, the type of service available when the person has need for services, and other, unknown or unmeasurable factors make for an exceedingly complex model when trying to predict the best type of residential care for an individual (Geller & Fisher, 1993; Torrey, Mueser, McHugo, & Drake, 2000; Torrey, 2005).
Open-ended Questions

Respondents answered three open-ended questions about their housing. The first, how they feel about their current living situation, provided responses consistent with past research (Nelson, Hall, & Forchuk, 2003; Forchuk, Nelson, & Hall, 2006; Tanzman, Wilson, & Yoe, 1992; Tanzman, 1993). Respondents living independently with supported housing were significantly more satisfied with their current living situation than those living in supervised group homes.

When asked about their ideal living situation, some respondents provided answers that were geographically remote, or even fanciful, including the beach (n = 6), woods (n = 5), mountains (n = 4), Cape Cod (n = 2), Boston (n = 1), or out of state (n = 3). Ten respondents indicated they would like to own their own house or property, or to not have a landlord. Given respondents’ poverty and poor prospects for competitive employment, owning their own home is probably out of financial reach for most. Ten respondents indicated they would want to live with others of their choosing: friends, family, or educated, peaceful people.

When asked about their “ideal” living situation, over one fourth of respondents who responded indicated they would be to be out of their current program, be on their own, living alone, or “normal.” Conversely, almost one fourth indicated that their current living circumstances were ideal. Consistent with other research (Nelson, Sylvestre, Aubry, George, & Trainor, 2007; Rog, 2004; Wong, Filoromo, & Tennille, 2007), significantly more people living independently considered their current situation ideal than those living in group homes, and more people living in group homes wanted to be
out of their current living situations. Since most respondents’ living situations are far from luxurious—usually small, subsidized apartments, public housing, or group homes with little privacy located in older houses—it is interesting to note how many considered their current situations to be ideal.

When asked about barriers to obtaining their ideal living situation, almost a third of respondents indicated they like their current situation, so presumably there are no barriers for them. A higher percentage of these people are living independently, though this was not to a significant level. Four out of ten respondents identified the lack of money, their mental illness, and/or general illness as barriers to living in an ideal situation, indicating a good awareness of their situation.

**Limitations of This Study**

Regarding the collection of demographic, diagnostic, functioning, and risk data, I had originally intended to obtain that information from a dataset maintained and periodically updated by case managers for the Massachusetts Department of Mental Health (DMH). Unfortunately, the DMH Internal Review Board (IRB) for protection of human subjects will not approve any study design in which data from DMH client records are combined with data collected directly from clients. Therefore, I modified the design to obtain those data directly from respondents. At the outset of data collection there was some concern about whether participants would even know critical information, such as their psychiatric diagnoses or, even if they knew their diagnoses, would honestly provide them. It was gratifying to see that almost everyone did indicate
their diagnosis(es), and used appropriate psychiatric nomenclature. Of course there is no way of knowing whether they indicated the correct diagnoses, but validity and interrater reliability of diagnosis by trained and experienced professionals can also be problematic (DSM-IV-TR, 2000; McCorkle, 1999). Because I coded and entered data myself, I was able to observe whether there appeared to be a consistency between each respondent’s diagnosis, functioning, and risk, and responses did appear to be remarkably consistent.

The original study design presented interrater reliability problems, because demographic, diagnostic, functioning, and risk data would have been collected and coded by many case managers. This was a problem uncovered in the original testing of CERF (McCorkle, 1999). The problem was avoided in the methodology revisions by asking participants to provide information, but a new problem of subjective bias was created. Because of study limitations imposed by the IRB, it is impossible to know how aware of or how honest respondents were in rating their own functioning and risk.

Because of the modified methodology, the survey became a much longer instrument, because respondents provided demographic, diagnostic, and functioning and risk items as well as Life Satisfaction information. I was concerned that respondents would be unable or unwilling to complete surveys or would not respond to all items. However, respondents consistently completed surveys, and there was no obvious indication that a respondent just circled the same answers to each item, or skipped over sections. Most respondents provided responses to most or all items.

There was also concern that respondents would have difficulty answering survey questions because of impaired awareness of their psychiatric problems or symptoms
(Torrey, 2005), or because of shame or stigma associated with psychiatric problems. Anecdotally, DMH clients often appear to have an impaired perspective about their symptoms. During the process of coding and entering study data into SPSS, however, it was striking how consistent information appeared to be in each individual’s instrument. In future research it would be informative to actually compare consumers’ self-report of demographic, diagnostic, functioning, and risk to reports completed by staff who know those consumers well, as a check of both respondent bias and interrater reliability.

Other constraints were placed on this project regarding methodology used to examine the research problem. The most important of these was that it was impossible to collect data from participants at the time they entered residential service. Because residential services in western Massachusetts are provided to DMH clients for as long as those clients require that support, movement into and out of programs is infrequent, and most individuals remain in residential programs for years or even the rest of their lives (Geller, 1993; Nagy & Gates, 1992; Ware, Hopper, Tugesberg, Dickey, & Fisher, 2007).

In order to more fully answer the research questions a longitudinal research model would make most sense: data about participants’ functioning ability and risk concerns, and their Life Satisfaction could be collected upon entry into a residential program, and then periodically reassessed as they continue to receive residential support. With such a method, we could determine how the two types of residential treatment impact on each participant’s functioning level or risk problems.

In addition, mental health managers could be surveyed or interviewed about why they made their decisions for that particular placement at the point of each client’s entry
into residential services, and it might be possible to determine if rationales for those decisions stood up over time.

One more limitation of this study is that it cannot provide an explanation for why about one-third of clients receiving residential services in the Berkshire Area are in group homes, while only 9% of the Hampshire Area clients receiving residential support are in group home placements. Do Hampshire clients present a lower level of risk and therefore can be placed in supported housing programs? Or does the mental health authority for Hampshire accept a higher level of risk for their clients in independent settings with intensive residential support? How then, to decide that someone poses too great a potential risk, either to themselves or to others in the community, to allow them to live independently with minimal controls imposed by treaters (Wong, 2007)? Is it necessary to compel some consumers who pose the highest potential for risk to live in programs where there is more structure, more support, and more monitoring? Data from this study only begin to identify the differences between people living in such programs, and their counterparts who are able to live more independently. When mental health administrators who have insufficient data regarding risk err on the side of caution, they potentially inhibit some of their clients’ chances of more full recovery and integration.

Questions for Future Research

In the movement toward use of evidence practices (Drake, et al., 2001; New Freedom Commission on Mental Health, 2003; Soydan, 2007), it is critical that public mental health authorities continue to develop research methods to determine best community
treatment interventions. There is a preponderance of evidence-based research on the
efficacy of community mental health supportive outreach models (Mueser, Bond, Drake,
& Resnick, 1998) but almost no research on efficacy of staffed group home models, and
almost no research that compares the two models (Dorvil, Morin, Beaulieu, & Robert
2005; Nelson, Sylvestre, Aubry, George, & Trainor, 2007; Rog, 2004). It makes sense to
develop a research project to bridge community treatment and mental health services
research (Wells, Miranda, Bruce, Alegeria, & Wallerstein, 2004); to conduct research
concurrent with treatment that is already being provided. Specific to residential services,
can we use research to help us determine:

- How does treatment in various types of residential settings impacts on clients’
  functioning abilities, risk of harm potential, and subjective quality of life? Are
  some settings better at assisting clients with improving their functioning, reducing
  their risk of harm, and enhance their subjective quality of life?

- What type of residential service is most efficient and cost-effective? How do we
design the most efficient and effective system of community residential care in
order that scarce public-sector funding is available to the most people needing
residential support?

- What differences are there, if any, between the people referred to supported
  housing and those referred to staffed group homes? Is there a better “fit”? Can we
  identify attributes of those people who would most benefit from one type of
  service or the other?
• Do the negative aspects of supervised group home care (loss of consumer autonomy, dependence, risk of institutionalization of care) outweigh its benefits for clients needing residential supports?

• Is there a subset of persons with severe and persistent mental illness for whom supervised group home support is necessary and most appropriate because of risk issues?

In order to answer these research questions, a longitudinal research model periodically tracking participants’ functioning ability and risk concerns, and their life satisfaction could be built into the program structure, commencing upon each client’s entry into residential services. In a residential system as large as is operated by the Massachusetts Department of Mental Health, aggregate data would provide a wealth of information regarding how various models impact on participants’ functioning, risk, and life satisfaction, and logistic regression analysis may allow data allowing clinicians to predict best fit between particular residential candidates and residential type.
CHAPTER V

Summary

The method used for this study tapped into consumers’ own ability to report their functioning, risk, and quality-of-life. Greenley, Greenberg & Brown (1997) demonstrated in a large-scale study that consumers could report their quality-of-life using a survey instrument at least as well as trained interviewers could, using Lehman’s interview model (1983; 1988). The methodology used in this study demonstrated that when asked, people with severe and persistent mental illness can report on their functioning and risk levels as well.

As suspected, demographic and diagnostic makeup of persons living in staffed group homes was essentially the same as for people living independently and receiving intensive outreach support. However, people living independently functioned better, had fewer problems with risk behaviors, and had higher subjective life satisfaction than their counterparts in group homes. While people who live independently with intensive outreach support were significantly less likely to have engaged in risk behaviors, the actual difference between this group and those who live in staffed group homes was not that different.

Because of methodological limitations, it was impossible to predict in any meaningful clinical way the best type of residential care to refer a candidate based on
functioning, risk, or life satisfaction variables, but exploratory use of logistic regression analysis indicated that it shows promise as a methodology which could be used to predict variable values with best fit between an individual and either staffed group home or supported housing types of residential service.

It is recommended that a similar survey technique be used with residential services candidates at the outset of services, and periodically while they remain in those services, to determine how consumers’ functioning, problems with risk, and life satisfaction change over time and with residential support. When data are collected on enough people, researchers might begin to get a picture of causality—whether independent living with adequate support promotes improved functioning, lower risk, and higher life satisfaction.

Over the past decade, public-sector community mental health policy has shifted direction from rehabilitation toward recovery (Souter, 2007). A primary focus of this movement is to afford better social integration, connectedness, and citizenship for people with psychiatric disabilities (Ware, Hopper, Tugesberg, Dickey, & Fisher, 2007). It is not enough for mental health systems to provide community rehabilitative services; the next step is for people with psychiatric disabilities to become full members of their communities. The group home model of residential support has been identified as rehabilitative but to also foster “marginality” and hinder social integration (Dorvil, Morin, Beaulieu, & Robert, 2005).
[From the perspective of people using residential support,] . . . the importance of control over the environment is crucial if they are to gain experience in negotiation rather than coercion, choice rather than imposed decisions, dignity rather than abuse, and intimacy rather than promiscuity. It is living in society itself that must be normalized in order to promote greater acceptance of people who are perceived as marginal. (Dorvil, p. 514)

Supported housing is a model considered most conducive to the goals of social integration and consumer empowerment (Wong, Filoromo, & Tennille, 2007). A cornerstone of the concept of recovery and empowerment is a shift in the locus of control and locus of treatment, and an unbundling of housing from mental health support. In order for consumers to have a choice of whether or not to receive support, they need to be free to maintain their tenancy separate from services.

What makes the provision of public-sector residential support so complex is the dual role of the service provider. Not only are residential support providers expected to develop programs that foster social integration, autonomy, and empowerment for the people being served, there is an expectation that these programs assess potential for risk to each individual as well as to the general population, and impose enough safeguards, including enough support and structure on individuals who appear to present potential risk issues.
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APPENDIX A

CONSUMER SURVEY
Demographic information

Gender: □ Man □ Woman

Age: ___

Marital Status: □ Single □ Married □ Significant other
□ Separated/Divorced □ Widowed

Circle the highest grade completed in school:  6  7  8  9  10  11  12  GED
13  14  15  16/College Grad  Post-Grad

What is your ethnic/racial identification?
□ White □ Native American
□ African American □ Latino/Hispanic
□ Asian □ Pacific Islander
□ Other (specify) __________________

Questions About Your Living Situation

How long have you received residential support? ____

How do you feel about your current living situation?

Given your current life circumstances, what would your ideal living situation be?

What, if anything, is preventing you from being able to live in a more ideal situation?

Mental Health Information

What is your psychiatric diagnosis(es)? ____________ ____________ ____________

What was your age when you first had psychiatric problems? ____

Have you had a mental health crisis in the past 6 months? □ no □ yes

In the past year? □ no □ yes

Have you been evaluated by Emergency Services in the past 6 months? □ no □ yes

In the past year? □ no □ yes

Have you stayed in Respite in the past year? □ no □ yes

Have you been admitted to a psychiatric hospital or unit in the past 6 months? □ no □ yes

In the past year? □ no □ yes
**Independent Living Skills Survey**

The purpose of this questionnaire is to obtain your view of the daily living tasks that you perform in order to live a satisfying, independent life. The following questions will ask about many skills needed to live in the community. Some of the questions may seem irrelevant or even embarrassing, but we need to ask all in order to get a thorough picture of your strengths and needs. Remember this is anonymous. No one will know who has filled this out, so please be honest in your answers.

PLEASE READ EVERY QUESTION. These questions refer only to things you do in the place you normally live—not in a temporary situation such as respite or the hospital.

**RECOVERY SKILLS**

| 1. Cooking/Food Preparation | I prepare and cook meals from scratch |
| 2. Food Shopping (Buying nutritious foods) | I shop independently |
| 3. Housekeeping (Wash dishes, sweep or vacuum floors, clean bathroom, make bed, take out trash) | I clean my home myself |
| 4. Personal Hygiene (Bathe, brush teeth, comb or brush hair, wear clean clothes, shave) | I manage my personal hygiene independently |
| 5. Laundry | I do my own laundry independently (no help) |
| 6. Social/Interpersonal Skills (How I get along in social situations) | I have little/no difficulty in social situations |
| 7. Personal Finances | I manage my money and bills independently |
8. Use of Medications

- I have little or no trouble taking my medications on my own
- Someone assists me in preparing or packaging my medication once (or a few times) a week
- Someone helps me prepare or package my medications and reminds me to take them every day
- Someone assists me with my medications and makes sure I take them

9. Work
(Could be volunteer, part-time, or full-time work)

- I am working (check boxes below that apply)
  - volunteer job
  - part-time paid
  - full-time paid
- I’m not working but am looking for a job
- I’m interested in working some day but am not ready yet
- I’m not able to work (check one box below)
  - Retired
  - Disabled
  - Not interested
  - Other_______________

10. Use of Services that Promote my Recovery
(Such as outreach, Medication clinic, clubhouse, therapy)

- I schedule and go to my appointments independently
- I schedule and get to most of my appointments with minimal support and assistance
- I schedule and get to appointments with some support and assistance
- Someone schedules/takes me to my appointments

11. Pursuit of my goals and recovery

- I take charge of my recovery plan and express my preferences about the support I need
- I assume responsibility for my recovery, but benefit from encouragement, instructions and suggestions on how to pursue it
- I accept new responsibilities but don’t initiate them, and need frequent support and encouragement to do new things
- I have a lot of difficulty pursuing goals and new things unless someone is “pushing” me to do them

12. Ability to keep myself safe

- I generally recognize and avoid hazardous or dangerous situations
- Occasionaly I’ve found myself in hazardous or dangerous situations and have asked for help when needed
- I have found myself in dangerous or hazardous situations and have needed help getting out of them
**PHYSICAL HEALTH STATUS**

| 12. Current Health | ☐ I have no serious physical health problems  
☐ I have health problems that need ongoing treatment but are not life-threatening  
☐ I have serious health problems that need ongoing regular medical treatment |

| 13. Ability to Find and Use Health Care | ☐ I arrange for my medical care without assistance  
☐ I’m mostly able to arrange my medical care with some support  
☐ I need assistance in arranging health care  
☐ Someone else arranges my medical appointments and takes me to them |

**RISK**

| 14. Risk to Self | ☐ In the last year I haven’t done anything which might cause harm to me  
☐ I’ve considered harming myself or have been at risk of harming myself in the last year  
☐ In the last year I have harmed myself, or have had emergency/crisis services to prevent me from harming myself |

| 15. Risk to Others | ☐ In the last year I haven’t done anything which might cause harm to someone else  
☐ While I have had some difficulty during the last year in controlling my emotions, mood, or behavior, there has been minimal risk that someone else could be hurt  
☐ I’ve had some problems over the past year in controlling my emotions, mood, or behavior and there has been risk of someone else getting hurt |

| 16. Substance Use/Abuse | ☐ In the past year I’ve had no problems with alcohol or other substance abuse  
☐ In the past year I’ve had some problems with alcohol or other substance abuse but have worked on controlling it and in seeking help  
☐ My alcohol/substance abuse has been a serious problem for me over the past year |

| 17. Leaving Services Prematurely | ☐ I have been able to stick with services without missing appointments or quitting in the past year  
☐ I’ve had some trouble sticking with services and keeping appointments in the last year  
☐ I’ve had serious problems with missing appointments and/or dropping out of services before I’ve reached my goals |

| 18. Impulse Control | ☐ I’ve had no problems with impulse control in the past year  
☐ I sometimes have difficulty with impulse control  
☐ I have a serious problem controlling my impulses |
Consumer Experiences Questionnaire

Below are some questions about how satisfied you are with various aspects of your life. For each question, CIRCLE the answer that best corresponds to how you feel. There are no right or wrong answers.

**Concerning your living arrangements, how do you feel about:**

1. The living arrangements where you live?
   - TERRIBLE
   - UNHAPPY
   - DISSATISFIED
   - UNSATISFIED
   - SATISFIED
   - PLEASED
   - DELIGHTED

2. The rules there?
   - TERRIBLE
   - UNHAPPY
   - DISSATISFIED
   - UNSATISFIED
   - SATISFIED
   - PLEASED
   - DELIGHTED

3. The privacy there?
   - TERRIBLE
   - UNHAPPY
   - DISSATISFIED
   - UNSATISFIED
   - SATISFIED
   - PLEASED
   - DELIGHTED

4. The amount of freedom you have there?
   - TERRIBLE
   - UNHAPPY
   - DISSATISFIED
   - UNSATISFIED
   - SATISFIED
   - PLEASED
   - DELIGHTED

5. The prospect of staying on where you currently live for a long period of time?
   - TERRIBLE
   - UNHAPPY
   - DISSATISFIED
   - UNSATISFIED
   - SATISFIED
   - PLEASED
   - DELIGHTED

**Here are some questions about money. How do you feel about:**

6. The amount of money you get?
   - TERRIBLE
   - UNHAPPY
   - DISSATISFIED
   - UNSATISFIED
   - SATISFIED
   - PLEASED
   - DELIGHTED

7. How comfortable and well-off you are financially?
   - TERRIBLE
   - UNHAPPY
   - DISSATISFIED
   - UNSATISFIED
   - SATISFIED
   - PLEASED
   - DELIGHTED

8. How much money you have to spend for fun?
   - TERRIBLE
   - UNHAPPY
   - DISSATISFIED
   - UNSATISFIED
   - SATISFIED
   - PLEASED
   - DELIGHTED
Here are some questions about how you spend your spare time. How do you feel about:

9. The way you spend your spare time?
   - Partially
   - Equally satisfied/mostly
   - Terrible
   - Unhappy
   - Dissatisfied
   - Unsatisfied
   - Satisfied
   - Pleased
   - Delighted

10. The chance you have to enjoy pleasant or beautiful things?
    - Partially
    - Equally satisfied/mostly
    - Terrible
    - Unhappy
    - Dissatisfied
    - Unsatisfied
    - Satisfied
    - Pleased
    - Delighted

11. The amount of relaxation in your life?
    - Partially
    - Equally satisfied/mostly
    - Terrible
    - Unhappy
    - Dissatisfied
    - Unsatisfied
    - Satisfied
    - Pleased
    - Delighted

12. The pleasure you get from the TV or radio?
    - Partially
    - Equally satisfied/mostly
    - Terrible
    - Unhappy
    - Dissatisfied
    - Unsatisfied
    - Satisfied
    - Pleased
    - Delighted

Here are some questions about your family. How do you feel about:

13. Your family in general?
    - Partially
    - Equally satisfied/mostly
    - Terrible
    - Unhappy
    - Dissatisfied
    - Unsatisfied
    - Satisfied
    - Pleased
    - Delighted

14. The way you and your family act toward each other?
    - Partially
    - Equally satisfied/mostly
    - Terrible
    - Unhappy
    - Dissatisfied
    - Unsatisfied
    - Satisfied
    - Pleased
    - Delighted

15. The way things are in general between you and your family?
    - Partially
    - Equally satisfied/mostly
    - Terrible
    - Unhappy
    - Dissatisfied
    - Unsatisfied
    - Satisfied
    - Pleased
    - Delighted

Here are some questions about your social life. How do you feel about:

16. The things you do with other people?
    - Partially
    - Equally satisfied/mostly
    - Terrible
    - Unhappy
    - Dissatisfied
    - Unsatisfied
    - Satisfied
    - Pleased
    - Delighted

17. The amount of time you spend with other people?
    - Partially
    - Equally satisfied/mostly
    - Terrible
    - Unhappy
    - Dissatisfied
    - Unsatisfied
    - Satisfied
    - Pleased
    - Delighted

18. The people you see socially?
    - Partially
    - Equally satisfied/mostly
    - Terrible
    - Unhappy
    - Dissatisfied
    - Unsatisfied
    - Satisfied
    - Pleased
    - Delighted
19. The chance you have to know people with whom you feel really comfortable?

<table>
<thead>
<tr>
<th>TERRIBLE</th>
<th>UNHAPPY</th>
<th>DISSATISFIED</th>
<th>UNSATISFIED</th>
<th>SATISFIED</th>
<th>PLEASED</th>
<th>DELIGHTED</th>
</tr>
</thead>
</table>

20. The amount of friendship in your life?

<table>
<thead>
<tr>
<th>TERRIBLE</th>
<th>UNHAPPY</th>
<th>DISSATISFIED</th>
<th>UNSATISFIED</th>
<th>SATISFIED</th>
<th>PLEASED</th>
<th>DELIGHTED</th>
</tr>
</thead>
</table>

Here are some questions about your health. How do you feel about:

21. Your health in general?

<table>
<thead>
<tr>
<th>TERRIBLE</th>
<th>UNHAPPY</th>
<th>DISSATISFIED</th>
<th>UNSATISFIED</th>
<th>SATISFIED</th>
<th>PLEASED</th>
<th>DELIGHTED</th>
</tr>
</thead>
</table>

22. Your physical condition?

<table>
<thead>
<tr>
<th>TERRIBLE</th>
<th>UNHAPPY</th>
<th>DISSATISFIED</th>
<th>UNSATISFIED</th>
<th>SATISFIED</th>
<th>PLEASED</th>
<th>DELIGHTED</th>
</tr>
</thead>
</table>

23. The medical care available to you if you need it?

<table>
<thead>
<tr>
<th>TERRIBLE</th>
<th>UNHAPPY</th>
<th>DISSATISFIED</th>
<th>UNSATISFIED</th>
<th>SATISFIED</th>
<th>PLEASED</th>
<th>DELIGHTED</th>
</tr>
</thead>
</table>

24. How often you see a doctor?

<table>
<thead>
<tr>
<th>TERRIBLE</th>
<th>UNHAPPY</th>
<th>DISSATISFIED</th>
<th>UNSATISFIED</th>
<th>SATISFIED</th>
<th>PLEASED</th>
<th>DELIGHTED</th>
</tr>
</thead>
</table>

Thank you very much for your participation in this survey.
APPENDIX B

INFORMED CONSENT LETTER TO PARTICIPANTS
Dear potential participant:

I am a case manager at the Department of Mental Health, and also a doctoral candidate at Boston College School of Social Work. I am conducting a research project with people who are receiving DMH residential or outreach support in Berkshire, Franklin, and Hampshire Counties. I plan to survey participants to find out how you view the quality of your life, how you are functioning, and your mental health needs. I want to understand how people who live in their own homes and receive residential support compare to people who live in staffed group homes. I am conducting this research study for DMH and as part of my Ph.D. degree requirements, and hope to some day be able to publish the results. I will be responsible for the costs for this research.

YOUR OPINION IS IMPORTANT! Since you receive support from residential or outreach program staff I would very much appreciate your participation. By completing this survey, you will help us in DMH to understand better how residential and outreach support may help to improve the quality of people’s lives. With this information we hope to improve the quality of the residential support services we provide.

The attached survey has questions about various aspects of your life, including the supports you receive and your living situation. If you would like to participate, please complete the attached survey, following the instructions on the first page. The survey will take only a few minutes to complete. When you are done, place the survey in the sealed box I’ve provided. You should keep this letter.

Your participation is voluntary and independent of care and treatment. Services you receive now or in the future will not be affected by your decision to participate or not to participate. You may withdraw from the study at any time by not returning the survey. Your confidentiality will be protected to the extent allowed by law, and no one except the research assistant will know whether you have participated. To make sure your answers remain anonymous, I will not use your name anywhere in the study. I will keep all returned surveys in a locked container in my office and separate from your client or program files for a period of six years or until the study is concluded, as required by state and federal research regulations. There will never be information identifying you in the study results, and no identifying information will be used in my final report. Research records may be looked at for regulatory purposes by:

- Agencies of the U.S. Department of Health and Human Services
- The Chairman of my Boston College Dissertation Committee.
- The Central Office Research Review Committee (CORRC) or its designees. The CORRC is a group of people appointed by the Commissioner of the Department of Mental Health to perform independent reviews of research.

I will pay you $5.00 for your participation, either in cash or a gift certificate. Your opinion is important, and will potentially improve the residential services that you and others receive. Although this survey has been designed to minimize risk or discomfort to participants, you may possibly find that answering the questions in the survey may be unpleasant or upsetting. If so, please talk with your residential or outreach staff, or contact your case manager. Your participation in the survey will not disrupt your services or treatment.

When the study is complete, I will provide copies of the study summary to all participants. If you have any questions about the study, please call me at the phone number or write to me at the address below. Please keep this form for your records.

Do not complete and return the survey until you have had a chance to ask questions and have received satisfactory answers to all your questions.

If you have questions or want to discuss the research study, you may contact:

Michael Murphy
If you have questions or want to discuss your rights as a research subject, you may contact:

Michael Nagy, Human Rights Officer
DMH Western Massachusetts Area Office
One Prince Street, P.O. Box 389
Northampton, MA 01061
(413) 587-5312 Toll-free - (888) 967-6622, ext. 75312

Thank you very much for your Participation!

__________________________
Michael Murphy
Principal Investigator
APPENDIX C:

INSTRUCTIONS FOR RESEARCH ASSISTANTS
Instructions for Research Assistants:

I am a case manager with the Department of Mental Health, and a doctoral candidate at Boston College School of Social Work. I am conducting a research survey of DMH clients who are currently receiving intensive residential services in Berkshire, Franklin, and Hampshire Counties. I am interested in finding out how people who live in their own homes and receive residential support compare to people who live in staffed group homes, especially in how they function as well as how they view the quality of their lives. I am conducting this study for the Department of Mental Health and as part of my Ph.D. degree requirements, and hope to some day publish the results.

I am seeking your assistance in surveying consumers. The attached survey has questions about various aspects of participants’ lives. Participation in this survey will take only a few minutes to complete. I will provide $5.00 payment to participants who return surveys to me.

The study is entirely voluntary. Clients’ current and future services will not affected in any way whether or not they participate in this study. Therefore, completion (or non-completion) of this survey should not be linked to any other activity. For instance, you should not say to a potential participant: “Why don’t you fill out this survey, and when you’re done we’ll go for coffee.”. It is essential that participants fill out surveys anonymously and that we protect their confidentiality. To make sure answers remain anonymous, names are not used anywhere on the survey. If someone doesn’t want to participate, they should not fill out the survey.

Guidelines for Research Assistants

- Approach each potential participant individually and not in front of others so that no one else (clients or staff) will know whether that person has participated. Throughout the process of explaining the survey process to the participant, then having the participant fill out and return the survey, and then paying them for their participation, insure each person’s privacy and confidentiality by making sure no one else is aware they have participated—or have declined to participate.
- Clipped to each survey is a Participant Instruction Letter. Participants need to read this letter and understand the purpose of the research study. Please assist them if they have difficulty reading or understanding the consent letter.
- Participants will complete the survey by following the instructions on the first page. You can, if participants ask, support them around completing the survey and help them understand the meaning of questions, but you should not answer survey questions for them. Remember, participants should have privacy when completing surveys.
- If a participant does not understand a question or doesn’t wish to answer it, they should leave it blank.
- When a participant is done completing the survey, he or she should place it in the sealed box I’ve provided. You can then pay the participant $5 from the money I’ve provided you. Once
again, the process of returning the survey and being paid should occur in private so that others are unaware of the person’s participation.

- Participants may withdraw from the study at any time, up until the point they place the survey in the sealed box (once it’s in the box I won’t be able to tell which survey is theirs).
- Since you will be paying participants, you will know who has returned surveys, but no one else should know (even me), unless the participant chooses to tell them. It is up to individual participants to decide whether they want others to know they have (or have not) participated. We must do everything we can to protect their privacy.
- Keep the sealed box safe so that no one will be tempted to open it or remove completed surveys. Don’t leave it unattended.
- All surveys are to be kept separate from client or program files, and returned to me

Again, we must protect people’s confidentiality and anonymity. This is especially critical when participants return completed surveys

Although this survey has been designed to minimize risk or discomfort to participants, individuals may possibly find that answering the questions in the survey may be unpleasant or upsetting. If so, I encourage them to talk with their residential or outreach staff, or contact their case manager. I will be informing Case managers of this study.

All participants and residential staff will receive copies of the study summary when I have completed it. If they (or you) have any questions about the study, I can be reached at the phone number or address below.

Thank you very much for your help in this study!

__________________________
Michael Murphy
DMH Case Management
One Prince Street, P.O. Box 389
Northampton, MA 01061
(413) 587-5312
Toll-free - (888) 967-6622, ext. 75312
APPENDIX D:

INSTITUTIONAL REVIEW BOARD APPLICATION
RESEARCH PROPOSAL SUMMARY – May 5, 2004

RESIDENTIAL PLACEMENT AND WELL-BEING
AMONG PERSONS RECOVERING FROM SEVERE MENTAL ILLNESS

Investigator: Michael Murphy, MSW, LICSW
Supervisor, DMH Case Management, Hampshire Sub-Area
Ph.D. Candidate (ABD), Boston College School of Social Work
One Prince Street, P.O.Box 389, Northampton, MA 01061
(413) 587-5312
Michael.Murphy@DMH.state.ma.us

Project Description:

Overview and purposes. I propose to examine the relationship between Quality-of-Life/Well-being and type of residential service for persons receiving DMH-funded residential services. I also propose to compare residential service participants in a DMH Service Area which uses a relatively high percentage of intensive supported housing slots and a small percentage of staffed group homes, to a Service Area that uses a lower percentage of intensive supported housing and more group homes.

Methods and procedures. Study participants will be asked to complete an anonymous survey designed to collect demographic and diagnosis information, service use, functioning and risk data, and participants’ perspective of their quality-of-life (QOL) (Appendix B). The participants will also be surveyed regarding what they would consider to be an ideal living situation, and to identify barriers that prevent them from living in their ideal situation.

Participants—numbers, description, and inclusion criteria. Participants will include all adults (age 19 and older) living in the Berkshire, Hampshire, and Franklin Service Areas of the Massachusetts Department of Mental Health (DMH) who currently receive intensive support through DMH-funded residential programs. All participants have met the eligibility criteria for receiving DMH services, and have been referred to residential and other services by DMH case managers. According to data contained within the MHIS database (as of January 6, 2003) a total of 434 adults currently receive residential
services in Berkshire, Franklin, and Hampshire Service Areas. Of that number, 100 live in staffed group homes, and the remaining 334 live independently with outreach residential supported housing. I estimate that approximately 125 of those receive intensive outreach services.

**Data to be recorded.** The first section of the survey contains 11 questions about functioning, two about health, and five about risk. The next section contains four demographic questions, four regarding housing, and six questions about the participant’s mental health. The third section contains 24 Likert-scale questions categorized in six different quality-of-life topics.

**Start date and duration of study.** I hope to begin data collection in the spring of 2004, and to complete data analysis by end of summer 2004.

**DMH Area, Facilities, and Program Sites Involved in the Research:** Case management offices in three Service Areas (Berkshire, Franklin, and Hampshire) of the Western Massachusetts Area Office will be involved.

**Source of Funding:** I will underwrite expenses such as $5.00 cash payments or gift certificates to participants, postage, and copying.

**Potential Risks to Participants:** Participants will complete surveys anonymously. The quality-of-life survey instrument has been used extensively with similar populations, and previous researchers have not indicated that completing the survey has been stressful to participants. Demographic, mental health needs, functioning, and risk questions have been phrased to minimize stress. However, because of the nature of our client population, there is minimal risk that a participant completing the survey may experience psychological distress. I don’t foresee any physical, social, economic, or legal risk. In the Informed Consent Letter I explain to participants that their participation is completely voluntary, that their participation or non-participation in the study will have no direct effect on their services, now or in the future, and that they can end their participation in the study at any time.

**Potential Benefits to participants:** Through participation in the study, participants will potentially gain a sense of satisfaction that their opinions about how they are functioning and their quality-of-life count. They will be aware that their input will help administrators gain a better
understanding of how residential support services relate to consumers’ well-being. It is hoped and anticipated that the results of the study will have a long-term positive effect on participants’ treatment and, ultimately, their quality-of-life.

**How Research Will Promote DMH’s Mission:** This research proposes to use data collected from clients to examine their functioning, risk, ideal residential needs, and quality-of-life, and to compare those clients receiving intensive outreach residential support to their counterparts living in more traditional staffed group homes.

**Other IRBs involved:** Boston College IRB requires I gain approval from CORRC before submitting this research proposal to BC.
RESEARCH PROPOSAL

Project Title:

RESIDENTIAL PLACEMENT AND WELL-BEING
AMONG PERSONS RECOVERING FROM SEVERE MENTAL ILLNESS

Investigator:  Michael Murphy, MSW, LICSW

Summary of Investigator’s prior research in this field:

I have been principal investigator for three research studies to: identify housing needs for DMH clients; the effect of managed care and privatization of inpatient services on recidivism; and the relationship between demographics, diagnosis, level of functioning, and level of support on success of independent living. I have participated on a DMH committee to develop a survey instrument and then survey clients and their families regarding satisfaction with case management services; and a committee to develop an instrument to measure level-of-function of DMH clients. I have written and presented three conceptual/theoretical papers focusing on: privatization and managed-care of mental health services; Community-based mental health services closure of a state hospital; and support groups for families of mentally ill people (see Appendix A for complete list).

Specific Aims and Objectives of this Project:

The primary mission of the Department of Mental Health is to “improve the quality of life for adults with serious and persistent mental illness and children with serious mental illness or severe emotional disturbance.” (Massachusetts Department of Mental Health, 2003) In this study I propose to examine the Quality-of-Life and Well-Being of people receiving residential support by comparing DMH case-managed consumers living in group homes to their counterparts living in the same communities and receiving intensive outreach residential support. I plan to compare these two groups through focusing on three domains: 1). *Demographic and diagnostic characteristics*; 2). *functioning and risk indicators*; and 3). *quality-of-life indicators*, using Anthony Lehman’s (1983, 1988) well-being conceptual model. Lehman’s contention is that the consumer’s own perception of their quality-of-life is the critical and
central component of well-being. In order to assess and then improve the quality-of-life of DMH consumers we need an effective way to measure it.

Study participants will be asked to complete an anonymous survey designed to collect demographic and diagnosis information, service use, functioning and risk data, and participants’ perspective of their quality–of-life (QOL) (Appendix B). The participants will also be surveyed regarding what they would consider to be their ideal living situation, and to identify barriers that prevent them from living in their ideal situation.

I propose to survey DMH consumers who are currently receiving intensive residential support in three of the six western Massachusetts Service Areas (Berkshire, Franklin, and Hampshire Areas). Residential support is integral to providing community services in the western region of Massachusetts. Each of the six DMH Service Areas in the region has both staffed group homes and intensive outreach residential support available. Some service areas, however, rely more upon staffed group-homes than others for residential support for consumers they serve (Nagy, 1994). One of the areas I intend to study (Hampshire) has the lowest percentage of DMH consumers living in staffed group homes in western Massachusetts (n=16, 11.7%), and another (Berkshire), has the highest (n=61, 36%). Staffed group home programs are much more expensive to operate per consumer than intensive outreach residential support. Massachusetts spends approximately $60,000 annually for residential services for each group home client, compared to approximately $10,00-24,000 per client receiving intensive outreach residential support. Consequently, service areas that rely more on group homes for residential support either spend appreciably more for residential services, or provide fewer program “slots”.

Previous research into consumer preference for residential support has found that consumers prefer to live independently as long as they receive adequate support (Seilheimer & Doyal, 1996; Tanzman, 1993). While there has been a great deal of research to evaluate the efficacy of intensive residential outreach services (Mueser, Bond, Drake, & Resnick, 1998), very little research has been conducted to identify how intensive outreach residential services compare to group-homes, and how well
the combination of group home and supported housing services is working (W. Fisher, personal communication, September 1997).

Results of this proposed study may provide DMH policy makers with information helpful for development of more effective, efficient community residential programs that are more responsive to consumers’ wishes, goals, and needs. Because this study will seek consumers’ opinions about their quality-of-life, it will provide them a voice regarding how their services relate to their lives. This study will be naturalistic (DePoy & Gitlin, 1994), taking place in the communities in which participants live.

**Study Location:**
Western Massachusetts Area Office
Massachusetts Department of Mental Health
P.O. Box 389
Northampton, MA 01061-0389
(413) 587-6200
Elizabeth Sullivan, Area Director
Stuart Anfang, M.D., Area Medical Director

**Data Collection Procedure**

Data to be collected. I will meet with residential staff of DMH-funded intensive supported housing and residential group homes in Hampshire, Franklin, and Berkshire Service Areas to inform them of this study and to describe the procedure for surveying clients. With the assistance of program directors I will identify and train residential staff volunteers at each residential site who are interested in distributing QOL surveys to program clients (see Instructions for Research Assistants, Appendix D). Either these trained staff or I will hand-distribute surveys along with Participant Instruction Letters to all consumers receiving residential services.

All potential participants will be given Participant Instruction Letters, which will explain the purpose of the study, that completion of the questionnaire is voluntary and anonymous, and that services will not be affected if they decline to complete the survey (Appendix C). Either the principal investigator or trained residential staff research volunteers will be on hand to verbally explain the Participant Instruction Letter and answer questions. Type of residential support will be delineated by printing surveys
on different color paper (e.g., participants living in group homes will complete blue surveys; those living in supported housing will be given green surveys). Participants will acknowledge their agreement to participate in the study by completing the surveys and placing them in sealed boxes that I will provide to trained staff research volunteers.

Survey data will be coded with a simple consecutive numbering system to insure anonymity. The participant’s name will not appear on the survey itself and consumer names will not be included in study data in order to insure anonymity. All surveys and data will be stored in accordance with Federal research guidelines: surveys will be kept in a locked container for six years and then destroyed; electronic data will be password-protected.

Sample/Participants

Participants will include all adults (age 19 and older) living in the Berkshire, Hampshire, and Franklin Service Areas of the Massachusetts Department of Mental Health (DMH) who currently receive intensive support from DMH-funded residential programs. All participants have met the eligibility criteria for receiving DMH services, and have been referred to residential and other services by DMH case management.

According to data contained within the MHIS database (as of January 6, 2003) a total of 434 adults currently receive residential services in Berkshire, Franklin, and Hampshire Service Areas. Of that number, 100 live in staffed group homes, and the remaining 334 live independently with various levels of outreach residential support. I estimate that approximately 125 of those receive intensive outreach services. The youngest participant in residential services is 19 years of age, and the oldest is 89. Median age is 44. Forty-three percent (n=188) of participants are women. The group is predominantly white (91%). Nineteen participants are identified as African-American, 2 Asian, and 12 “other”. Only 5 participants are identified as non-English speakers: 2 who speak Khmer, 1 Spanish, and 2 “other”.

**Expected Benefits of the Research**

Through participation in the study, participants will potentially gain a sense of satisfaction that their opinions about functioning, risk, housing needs, and quality-of-life count. They will be aware that their input will help administrators gain a better understanding of how residential support services relate to consumers’ well-being. It is hoped and anticipated that the results of the study will have a long-term positive effect on participants’ treatment and, ultimately, their quality-of-life. I will pay participants who complete surveys $5.00 for their time, in the form of cash or $5.00 gift certificate in appreciation of their time and opinion.

**Financial Costs to Participants**

I anticipate no financial costs to participants.

**Rationale for Participation of Persons with Mental Illness:**

The central components to the understanding of well-being are the individual’s ability to function in the world, as well as how they perceive the quality of their life (Greenley, Greenberg, & Brown, 1997; Lehman, 1983, 1988). It is therefore critical that any research into participants’ well-being include a consumer survey.

**Research Methods and Procedures:**

**Overview.** The overall goal of this proposed research study is to examine those aspects of community based residential treatment that foster stability, recovery, and well-being for people with severe and persistent mental illness. To accomplish this, I will compare two groups of mental health consumers living in the same communities and receiving two types of residential assistance: those clients living in staffed group homes, and those living independently with intensive outreach residential support.

The proposed research initiative seeks to answer the following questions: How do people with severe and persistent mental illness who live independently with intensive outreach residential supports compare to their counterparts living in 24-hour staffed group homes? Specifically, how do they compare 
*demographically, functionally* and in their *satisfaction with life*? Are there consistent, significant
In order to achieve its goal the proposed study incorporates the following objectives:

5. To examine similarities and differences in demographic characteristics for people with severe and persistent mental illness who live in staffed group homes to those who live independently with intensive outreach residential support.

6. To compare functioning and risk measures, including functioning level and freedom from psychiatric hospitalization for people who live in staffed group homes to those who live independently with intensive outreach residential support.

7. To compare perception of life satisfaction for people who live in staffed group homes to their counterparts living independently with intensive outreach residential support.

8. To identify possible barriers to more independent living for those consumers currently living in group homes

In conducting this research, efforts will be made to incorporate concepts of consumer competency and empowerment, by eliciting information from consumers themselves and taking into consideration the context of natural environments (as opposed to treatment settings only) (Rapp, Shera, & Kishardt, 1993).

The majority of people who are disabled by mental illness don’t live in programs. Most live in apartments, rooming houses, or homes (or on the street); they live alone, with friends, or with family. They have lives and social attachments that service providers know little or nothing about. This research initiative hopes to tap into the consumer’s voice.

**Hypotheses.** The proposed study will test the following hypotheses:

**Personal Characteristics Domain**

7. There are no significant different differences in personal (demographic or diagnostic) characteristics between persons living in group homes to their counterparts living independently with outreach residential support

**Objective Functioning and Risk Domain**
8. Persons living in group homes are significantly more likely to present risk factors than their counterparts living independently with outreach residential support (as indicated by CERF data).

9. Persons living independently with outreach residential support will have fewer psychiatric crises, hospital admissions, and hospital bed-days than their counterparts living in group homes.

10. Persons living independently with outreach residential support have higher levels of functioning than their counterparts living in group homes.

Subjective QOL Domain

11. Persons living independently with outreach residential support have higher levels of perceived quality-of-life than their counterparts living in group homes.

Comparisons between service areas:

12. There are no significant differences in personal (demographic or diagnostic) characteristics between consumers receiving residential support services across the three service areas studied.

13. As a group, persons who live in Hampshire Area and receive residential support have higher levels of functioning than their counterparts living in Berkshire Area and receiving residential support.

14. As a group, persons who receive residential support in Hampshire Service Area rate their quality-of-life higher than their counterparts receiving residential support in Berkshire Service Area.

Duration of the research:

I hope to begin to distribute surveys in the summer of 2004, and anticipate that distribution, collection, and follow-up to take three months. I expect to complete analysis of all data within six months of research initiation.
Potential Risks to Participants:

Because there is a potential risk to participants from peer or program staff pressure when others know they are (or are not) participating, research assistants and I will insure they complete surveys anonymously. Research assistants will be instructed to structure the entire survey process so that participants’ privacy is maintained. That is, research assistants will inform each potential participant about the survey in a private location; each participant will be instructed to complete the survey in private; and research assistants will make sure each participant is able to place the completed survey in the designated sealed box and be paid $5.00 in private. While all of these steps are designed to maximize participants’ privacy, anonymity and confidentiality, there is a remote possibility that others may inadvertently come to know of a particular individual’s participation. Research assistants and I will do our utmost to prevent this from happening.

The quality-of-life survey instrument contained in the survey has been used extensively with similar populations, and previous researchers have reported that completing the survey has not been difficult or stressful to participants. Demographic, mental health needs, functioning, and risk questions have been phrased to minimize stress. However, because of the nature of our client population, there is minimal risk that a participant completing the survey may experience psychological distress. I don’t foresee any physical, social, economic, or legal risk. In the Participant Instruction Letter I will explain to participants that their participation is completely voluntary, that their participation or non-participation in the study will have no direct effect on their services, now or in the future, and that they can end their participation in the study at any time before returning the survey.
Procedures for Monitoring the Well being of Participants

Participants will receive instructions in the Participant Instruction Letter to stop completing the survey if they find the process disturbing, and to contact their residential support person(s) or DMH Case Manager. I will be informing residential and case management staff about their clients’ participation and ask that trained volunteer staff monitor clients for signs of problems (see Adverse Events section below).

Potential Effect of the Research on Participants’ Care and Treatment

I don’t anticipate that this research will have any negative effect on participants’ care and treatment. I assure participants in the Participant Instruction Letter that their participation (or non-participation) in the study will not affect their services in any way.

Informed Consent Procedure:

Potential participants will be provided a Participant Instruction Letter, which they will keep (Appendix C). Surveys will be anonymous. The principal investigator or trained residential research volunteer will be available to review the contents of the Participant Instruction Letter with each participant and answer any questions. We will explain to participants that their submission of the completed survey is their agreement to participate, and they can decline to participate simply by not returning the survey.

Safeguards For Maintaining Confidentiality in the Collection of Data and Payment:

In order to minimize the risk to participants’ privacy, research assistants will be instructed to approach potential participants individually so that other program clients or staff are unaware of whether they have chosen to participate. In addition, research assistants will instruct participants to fill out surveys in private as well, and will arrange for participants to be able to return completed surveys to the sealed box and be paid for their participation in a private location. As already stated, these steps are designed to maximize participants’ privacy, anonymity and confidentiality, but there remains a remote possibility that others may inadvertently come to know of a particular individual’s participation. Research assistants and I will do our utmost to prevent this from happening.
Because surveys will be completed anonymously there will be no way of recording who has completed surveys and then eligible for payment. Therefore, there is a possibility that a participant may complete and return a survey and not be paid, or of someone returning a blank survey and be paid. The data collection procedure is designed to minimize this possibility, but it cannot be prevented entirely.

Survey data will be coded with a simple consecutive numbering system and consumer names will not be included on the surveys in order to insure anonymity. Data will be stored in accordance with Federal research guidelines: completed surveys will be kept in a locked container for six years, and then will be destroyed. Electronic data will be password-protected.

**Dissemination of Results**

This research will be used as my Doctoral Dissertation research for Boston College School of Social Work. I expect to disseminate the final product to DMH as well as to the faculty of Boston College, and the final dissertation will be bound and placed in the Boston College Social Work Library. Data will remain the property of DMH. I may wish to publish study results elsewhere following completion of my dissertation.

**Copyright and Patent Intentions:**

I have no plans at this time to conduct any follow-up research, or to apply for copyrights or patents.

**Financial Summary:**

I will bear the costs of honoraria, copying and postage. I have no financial interest in the research.

**Available Medical Treatment and/or Financial Compensation:**

I don’t anticipate any injury as the result of completing the survey. I will not be serving a dual role with any participant beyond my role as supervisor to case managers for some of the participants.

**Insurance:**

I carry a $1,000,000 professional malpractice insurance policy through the NASW and American Professional Agency, Inc. (acct. # SWL-4704550). I do not plan to purchase any other insurance specifically for this project.
**Use of Department Resources:**

I will seek and train residential provider staff volunteers to assist in getting in touch with participants, especially those who live independently and receive outreach residential support. Because research assistants will be recruited from staff of DMH vendor agencies, I anticipate that no DMH employee beside myself will be contributing directly to the completion of this study. The DMH Deputy Commissioner for Mental Health Services, Western Massachusetts Area Director, and Site Directors for Berkshire, Franklin, and Hampshire Service Areas have been informed of and have given approval for this study.

**Review by Other Agencies:**

Boston College Graduate School of Social Work requires that I complete the DMH IRB Review process prior to submitting this proposal to BC for their Human Subjects Review process.

**Definition of “Adverse Events”**

*Adverse Event:* For the purposes of this study, “Adverse Event” is defined a situation in which a participant, during or immediately following participation in the study survey (or declining to participate), reports or demonstrates an increased level of distress or emotional dysregulation.

*Serious Adverse Event:* For the purposes of this study, “Serious Adverse Event” is defined a situation in which a participant, during or immediately participation in the study survey (or declining to participate), reports or demonstrates a substantially increased level of distress or emotional dysregulation, resulting in crisis evaluation by a psychiatric crisis team and/or treatment or hospitalization/respite stay.

Participants and trained residential staff volunteers will be instructed, as part of the informed consent process, to report any participant discomfort as a result of participating in the study, to a residential support person, their case manager, or the researcher. I will provide residential program directors and case managers with adverse event definitions and instruct them to contact me immediately if they observe participants who suffer apparent adverse effects.
In the case of a participant experiencing serious adverse effects, I will contact the CORRC immediately by phone and complete a DMH Critical Incident Report, and follow up within 24 hours with a written report to the CORRC. I will report all other adverse effects through a summation report to the CORRC every four months.
reference list


Appendix A: Investigator’s prior research experience

1998-2001: Participated on committee to develop an instrument and then survey consumers and their families regarding satisfaction with Case Management services, Western Mass. Area Office


Presented the paper: *The Asylum is closed! How to provide mental health service without a state hospital*, at the Fifth National Case Management Conference, Orlando, Florida, October 22-29, 1997.


1995: Principal Investigator for survey research: *Housing needs of adult chronic mentally ill living in the community*. Massachusetts Department of Mental Health.


1993: Principal Investigator, secondary data analysis: *The effect of managed care and privatization of inpatient services on recidivism*. Massachusetts Department of Mental Health.


Adjunct Professor of Research, Smith College School for Social Work.

Member, Smith College Human Subjects Review Committee.
Demographic information

Gender: □ Man □ Woman
Age: ___

Marital Status: □ Single □ Married □ Significant other □ Separated/Divorced □ Widowed

Circle the highest grade completed in school: 6 7 8 9 10 11 12 GED 13 14 15 16/College Grad Post-Grad

What is your ethnic/racial identification? □ White □ Native American □ African American □ Latino/Hispanic □ Asian □ Pacific Islander □ Other (specify) ______________

Questions About Your Living Situation

How long have you received residential support? ___

How do you feel about your current living situation?

Given your current life circumstances, what would your ideal living situation be?

What, if anything, is preventing you from being able to live in a more ideal situation?

Mental Health Information

What is your psychiatric diagnosis(es)? ______________ ______________ ___________

What was your age when you first had psychiatric problems? ___

Have you had a mental health crisis in the past 6 months? □ no □ yes
In the past year? □ no □ yes

Have you been evaluated by Emergency Services in the past 6 months? □ no □ yes
In the past year? □ no □ yes

Have you stayed in Respite in the past year? □ no □ yes

Have you been admitted to a psychiatric hospital or unit in the 6 months? □ no □ yes
In the past year? □ no □ yes
Independent Living Skills Survey

The purpose of this questionnaire is to obtain your view of the daily living tasks that you perform in order to live a satisfying, independent life. The following questions will ask about many skills needed to live in the community. Some of the questions may seem irrelevant or even embarrassing, but we need to ask all in order to get a thorough picture of your strengths and needs. Remember this is anonymous. No one will know who has filled this out, so please be honest in your answers.

PLEASE READ EVERY QUESTION. These questions refer only to things you do in the place you normally live—not in a temporary situation such as respite or the hospital.

**RECOVERY SKILLS**

1. **Cooking/Food Preparation**
   - I prepare and cook meals from scratch
   - I cook a little: soups, frozen dinners, hamburgers
   - I prepare simple meals: such as sandwiches, cereal
   - I don’t cook or prepare meals (someone else does it)

2. **Food Shopping**
   (Buying nutritious foods)
   - I shop independently
   - I shop myself with some support/assistance (rides to the store, shopping lists)
   - Someone helps me shop most or all of the time
   - Someone else shops for food

3. **Housekeeping**
   (Wash dishes, sweep or vacuum floors, clean bathroom, make bed, take out trash)
   - I clean my home myself
   - I do a lot of housework but get some support/assistance
   - I do some cleaning but get a lot of help
   - Someone else cleans my home

4. **Personal Hygiene**
   (Bathe, brush teeth, comb or brush hair, wear clean clothes, shave)
   - I manage my personal hygiene independently
   - I take care of personal hygiene chores myself with only occasional support
   - I need reminders with personal hygiene chores
   - Without daily reminders/assistance from others I forget to take care of personal hygiene

5. **Laundry**
   - I do my own laundry independently (no help)
   - I do my own laundry with some support/assistance
   - Someone helps me with my laundry
   - Someone else does my laundry

6. **Social/Interpersonal Skills**
   (How I get along in social situations)
   - I have little/no difficulty in social situations
   - I’m O.K. in social situations but am working on getting better
   - Social situations are usually difficult for me but I get by
   - I have a lot of difficulty in social situations

7. **Personal Finances**
   - I manage my money and bills independently
   - I manage my money and bills with occasional support
   - I manage my money and bills with regular assistance
   - Someone else manages my money and bills
8. Use of Medications
- I have little or no trouble taking my medications on my own
- Someone assists me in preparing or packaging my medication once (or a few times) a week
- Someone helps me prepare or package my medications and reminds me to take them every day
- Someone assists me with my medications and makes sure I take them

9. Work
(Could be volunteer, part-time, or full-time work)
- I am working (check boxes below that apply)
  - □ volunteer job
  - □ part-time paid
  - □ full-time paid
- I’m not working but am looking for a job
- I’m interested in working some day but am not ready yet
- I’m not able to work (check one box below)
  - □ Retired
  - □ Disabled
  - □ Not interested
  - □ Other____________________

10. Use of Services that Promote my Recovery
(Such as outreach, Medication clinic, clubhouse, therapy)
- I schedule and go to my appointments independently
- I schedule and get to most of my appointments with minimal support and assistance
- I schedule and get to appointments with some support and assistance
- Someone schedules/takes me to my appointments

11. Pursuit of my goals and recovery
- I take charge of my recovery plan and express my preferences about the support I need
- I assume responsibility for my recovery, but benefit from encouragement, instructions and suggestions on how to pursue it
- I accept new responsibilities but don’t initiate them, and need frequent support and encouragement to do new things
- I have a lot of difficulty pursuing goals and new things unless someone is “pushing” me to do them

12. Ability to keep myself safe
- I generally recognize and avoid hazardous or dangerous situations
- Occasionally I’ve found myself in hazardous or dangerous situations and have asked for help when needed
- I have found myself in dangerous or hazardous situations and have needed help getting out of them
### PHYSICAL HEALTH STATUS

| 12. Current Health | □ I have no serious physical health problems  
|                    | □ I have health problems that need ongoing treatment but are not life-threatening  
|                    | □ I have serious health problems that need ongoing regular medical treatment |

| 13. Ability to Find and Use Health Care | □ I arrange for my medical care without assistance  
|                                        | □ I’m mostly able to arrange my medical care with some support  
|                                        | □ I need assistance in arranging health care  
|                                        | □ Someone else arranges my medical appointments and takes me to them |

### RISK

| 14. Risk to Self (Suicidal thoughts, plans, or attempts; self-harming or injurious behaviors) | □ In the last year I haven’t done anything which might cause harm to me  
|                                                                                           | □ I’ve considered harming myself or have been at risk of harming myself in the last year  
|                                                                                           | □ In the last year I have harmed myself, or have had emergency/crisis services to prevent me from harming myself |

| 15. Risk to Others | □ In the last year I haven’t done anything which might cause harm to someone else  
|                    | □ While I have had some difficulty during the last year in controlling my emotions, mood, or behavior, there has been minimal risk that someone else could be hurt  
|                    | □ I’ve had some problems over the past year in controlling my emotions, mood, or behavior and there has been risk of someone else getting hurt |

| 16. Substance Use/Abuse | □ In the past year I’ve had no problems with alcohol or other substance abuse  
|                         | □ In the past year I’ve had some problems with alcohol or other substance abuse but have worked on controlling it and in seeking help  
|                         | □ My alcohol/substance abuse has been a serious problem for me over the past year |

| 17. Leaving Services Prematurely | □ I have been able to stick with services without missing appointments or quitting in the past year  
|                                  | □ I’ve had some trouble sticking with services and keeping appointments in the last year  
|                                  | □ I’ve had serious problems with missing appointments and/or dropping out of services before I’ve reached my goals |

| 18. Impulse Control | □ I’ve had no problems with impulse control in the past year  
|                    | □ I sometimes have difficulty with impulse control  
|                    | □ I have a serious problem controlling my impulses |
Consumer Experiences Questionnaire

Below are some questions about how satisfied you are with various aspects of your life. For each question, CIRCLE the answer that best corresponds to how you feel. There are no right or wrong answers.

Concerning your living arrangements, how do you feel about:

1. The living arrangements where you live?
   - TERRIBLE
   - UNHAPPY
   - DISSATISFIED
   - UNSATISFIED
   - SATISFIED
   - PLEASED
   - DELIGHTED

2. The rules there?
   - TERRIBLE
   - UNHAPPY
   - DISSATISFIED
   - UNSATISFIED
   - SATISFIED
   - PLEASED
   - DELIGHTED

3. The privacy there?
   - TERRIBLE
   - UNHAPPY
   - DISSATISFIED
   - UNSATISFIED
   - SATISFIED
   - PLEASED
   - DELIGHTED

4. The amount of freedom you have there?
   - TERRIBLE
   - UNHAPPY
   - DISSATISFIED
   - UNSATISFIED
   - SATISFIED
   - PLEASED
   - DELIGHTED

5. The prospect of staying on where you currently live for a long period of time?
   - TERRIBLE
   - UNHAPPY
   - DISSATISFIED
   - UNSATISFIED
   - SATISFIED
   - PLEASED
   - DELIGHTED

Here are some questions about money. How do you feel about:

6. The amount of money you get?
   - TERRIBLE
   - UNHAPPY
   - DISSATISFIED
   - UNSATISFIED
   - SATISFIED
   - PLEASED
   - DELIGHTED

7. How comfortable and well-off you are financially?
   - TERRIBLE
   - UNHAPPY
   - DISSATISFIED
   - UNSATISFIED
   - SATISFIED
   - PLEASED
   - DELIGHTED

8. How much money you have to spend for fun?
   - TERRIBLE
   - UNHAPPY
   - DISSATISFIED
   - UNSATISFIED
   - SATISFIED
   - PLEASED
   - DELIGHTED
Here are some questions about how you spend your spare time. How do you feel about:

9. The way you spend your spare time?
   - PARTIALLY
   - UNHAPPY
   - DISSATISFIED
   - EQUALLY SATISFIED/
   - MOSTLY
   - UNSATISFIED
   - SATISFIED
   - PLEASED
   - DELIGHTED

10. The chance you have to enjoy pleasant or beautiful things?
   - PARTIALLY
   - UNHAPPY
   - DISSATISFIED
   - EQUALLY SATISFIED/
   - MOSTLY
   - UNSATISFIED
   - SATISFIED
   - PLEASED
   - DELIGHTED

11. The amount of relaxation in your life?
   - PARTIALLY
   - UNHAPPY
   - DISSATISFIED
   - EQUALLY SATISFIED/
   - MOSTLY
   - UNSATISFIED
   - SATISFIED
   - PLEASED
   - DELIGHTED

12. The pleasure you get from the TV or radio?
   - PARTIALLY
   - UNHAPPY
   - DISSATISFIED
   - EQUALLY SATISFIED/
   - MOSTLY
   - UNSATISFIED
   - SATISFIED
   - PLEASED
   - DELIGHTED

Here are some questions about your family. How do you feel about:

13. Your family in general?
   - PARTIALLY
   - UNHAPPY
   - DISSATISFIED
   - EQUALLY SATISFIED/
   - MOSTLY
   - UNSATISFIED
   - SATISFIED
   - PLEASED
   - DELIGHTED

14. The way you and your family act toward each other?
   - PARTIALLY
   - UNHAPPY
   - DISSATISFIED
   - EQUALLY SATISFIED/
   - MOSTLY
   - UNSATISFIED
   - SATISFIED
   - PLEASED
   - DELIGHTED

15. The way things are in general between you and your family?
   - PARTIALLY
   - UNHAPPY
   - DISSATISFIED
   - EQUALLY SATISFIED/
   - MOSTLY
   - UNSATISFIED
   - SATISFIED
   - PLEASED
   - DELIGHTED

Here are some questions about your social life. How do you feel about:

16. The things you do with other people?
   - PARTIALLY
   - UNHAPPY
   - DISSATISFIED
   - EQUALLY SATISFIED/
   - MOSTLY
   - UNSATISFIED
   - SATISFIED
   - PLEASED
   - DELIGHTED

17. The amount of time you spend with other people?
   - PARTIALLY
   - UNHAPPY
   - DISSATISFIED
   - EQUALLY SATISFIED/
   - MOSTLY
   - UNSATISFIED
   - SATISFIED
   - PLEASED
   - DELIGHTED
18. The people you see socially?

<table>
<thead>
<tr>
<th>Partially</th>
<th>Equally Satisfied</th>
<th>Mostly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Terrible</td>
<td>Unhappy</td>
<td>Dissatisfied</td>
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</table>

20. The chance you have to know people with whom you feel really comfortable?

<table>
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<tr>
<th>Partially</th>
<th>Equally Satisfied</th>
<th>Mostly</th>
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<tbody>
<tr>
<td>Terrible</td>
<td>Unhappy</td>
<td>Dissatisfied</td>
</tr>
</tbody>
</table>

20. The amount of friendship in your life?

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<thead>
<tr>
<th>Partially</th>
<th>Equally Satisfied</th>
<th>Mostly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Terrible</td>
<td>Unhappy</td>
<td>Dissatisfied</td>
</tr>
</tbody>
</table>

**Here are some questions about your health. How do you feel about:**

21. Your health in general?

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<thead>
<tr>
<th>Partially</th>
<th>Equally Satisfied</th>
<th>Mostly</th>
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<tbody>
<tr>
<td>Terrible</td>
<td>Unhappy</td>
<td>Dissatisfied</td>
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</table>

22. Your physical condition?

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<tr>
<th>Partially</th>
<th>Equally Satisfied</th>
<th>Mostly</th>
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<tbody>
<tr>
<td>Terrible</td>
<td>Unhappy</td>
<td>Dissatisfied</td>
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</table>

23. The medical care available to you if you need it?

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<tr>
<th>Partially</th>
<th>Equally Satisfied</th>
<th>Mostly</th>
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<tbody>
<tr>
<td>Terrible</td>
<td>Unhappy</td>
<td>Dissatisfied</td>
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24. How often you see a doctor?

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<tr>
<th>Partially</th>
<th>Equally Satisfied</th>
<th>Mostly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Terrible</td>
<td>Unhappy</td>
<td>Dissatisfied</td>
</tr>
</tbody>
</table>

**Thank you very much for your participation in this survey.**
Residential Placement and Well-Being Among Persons

Recovering From Serious Mental Illness

Dear potential participant:

I am a case manager at the Department of Mental Health, and also a doctoral candidate at Boston College School of Social Work. I am conducting a research project with people who are receiving DMH residential or outreach support in Berkshire, Franklin, and Hampshire Counties. I plan to survey participants to find out how you view the quality of your life, how you are functioning, and your mental health needs. I want to understand how people who live in their own homes and receive residential support compare to people who live in staffed group homes. I am conducting this research study for DMH and as part of my Ph.D. degree requirements, and hope to some day be able to publish the results. I will be responsible for the costs for this research.

YOUR OPINION IS IMPORTANT! Since you receive support from residential or outreach program staff I would very much appreciate your participation. By completing this survey, you will help us in DMH to understand better how residential and outreach support may help to improve the quality of people’s lives. With this information we hope to improve the quality of the residential support services we provide.

The attached survey has questions about various aspects of your life, including the supports you receive and your living situation. If you would like to participate, please complete the attached survey, following the instructions on the first page. The survey will take only a few minutes to complete. When you are done, place the survey in the sealed box I’ve provided. You should keep this letter.

Your participation is voluntary and independent of care and treatment. Services you receive now or in the future will not be affected by your decision to participate or not to participate. You may withdraw from the study at any time by not returning the survey. Your confidentiality will be protected to the extent allowed by law, and no one except the research assistant will know whether you have participated. To make sure your answers remain anonymous, I will not use your name anywhere in the study. I will keep all returned surveys in a locked container in my office and separate from your client or program files for a period of six years or until the study is concluded, as required by state and federal research regulations. At that time the research information will be destroyed. There will never be information identifying you in the study results, and no identifying information will be used in my final report. Research records may be looked at for regulatory purposes by:

- Agencies of the U.S. Department of Health and Human Services
- The Chairman of my Boston College Dissertation Committee.
- The Central Office Research Review Committee (CORRC) or its designees. The CORRC is a group of people appointed by the Commissioner of the Department of Mental Health to perform independent reviews of research.
I will pay you $5.00 for your participation, either in cash or a gift certificate. Your opinion is important, and will potentially improve the residential services that you and others receive. Although this survey has been designed to minimize risk or discomfort to participants, you may possibly find that answering the questions in the survey may be unpleasant or upsetting. If so, please talk with your residential or outreach staff, or contact your case manager. Your participation in the survey will not disrupt your services or treatment.

When the study is complete, I will provide copies of the study summary to all participants. If you have any questions about the study, please call me at the phone number or write to me at the address below. Please keep this form for your records.

_Do not complete and return the survey until you have had a chance to ask questions and have received satisfactory answers to all your questions._

If you have questions or want to discuss the research study, you may contact:

Michael Murphy  
DMH Case Management  
One Prince Street, P.O. Box 389  
Northampton, MA  01061  
(413) 587-5312 Toll-free - (888) 967-6622, ext. 75312

If you have questions or want to discuss your rights as a research subject, you may contact:

Michael Nagy, Human Rights Officer  
DMH Western Massachusetts Area Office  
One Prince Street, P.O. Box 389  
Northampton, MA  01061  
(413) 587-5312 Toll-free - (888) 967-6622, ext. 75312

Thank you very much for your Participation!

__________________________  
Michael Murphy  
Principal Investigator
Appendix D: Instructions for Research Assistants

Michael Murphy  
Massachusetts Department of Mental Health  
Boston College Graduate School of Social Work

Residential Placement and Well-Being Among Persons  
Recovering From Serious Mental Illness

Instructions for Research Assistants:

I am a case manager with the Department of Mental Health, and a doctoral candidate at Boston College School of Social Work. I am conducting a research survey of DMH clients who are currently receiving intensive residential services in Berkshire, Franklin, and Hampshire Counties. I am interested in finding out how people who live in their own homes and receive residential support compare to people who live in staffed group homes, especially in how they function as well as how they view the quality of their lives. I am conducting this study for the Department of Mental Health and as part of my Ph.D. degree requirements, and hope to some day publish the results.

I am seeking your assistance in surveying consumers. The attached survey has questions about various aspects of participants’ lives. Participation in this survey will take only a few minutes to complete. I will provide $5.00 payment to participants who return surveys to me.

The study is entirely voluntary. Clients’ current and future services will not affected in any way whether or not they participate in this study. Therefore, completion (or non-completion) of this survey should not be linked to any other activity. For instance, you should not say to a potential participant: “Why don’t you fill out this survey, and when you’re done we’ll go for coffee.”. It is essential that participants fill out surveys anonymously and that we protect their confidentiality. To make sure answers remain anonymous, names are not used anywhere on the survey. If someone doesn’t want to participate, they should not fill out the survey.

Guidelines for Research Assistants

- Approach each potential participant individually and not in front of others so that no one else (clients or staff) will know whether that person has participated. Throughout the process of explaining the survey process to the participant, then having the participant fill out and return the survey, and then paying them for their participation, insure each person’s privacy and confidentiality by making sure no one else is aware they have participated—or have declined to participate.
• Clipped to each survey is a Participant Instruction Letter. Participants need to read this letter and understand the purpose of the research study. Please assist them if they have difficulty reading or understanding the consent letter.

• Participants will complete the survey by following the instructions on the first page. You can, if participants ask, support them around completing the survey and help them understand the meaning of questions, but you should not answer survey questions for them. Remember, participants should have privacy when completing surveys.

• If a participant does not understand a question or doesn’t wish to answer it, they should leave it blank.

• When a participant is done completing the survey, he or she should place it in the sealed box I’ve provided. You can then pay the participant $5 from the money I’ve provided you. Once again, the process of returning the survey and being paid should occur in private so that others are unaware of the person’s participation.

• Participants may withdraw from the study at any time, up until the point they place the survey in the sealed box (once it’s in the box I won’t be able to tell which survey is theirs).

• Since you will be paying participants, you will know who has returned surveys, but no one else should know (even me), unless the participant chooses to tell them. It is up to individual participants to decide whether they want others to know they have (or have not) participated. We must do everything we can to protect their privacy.

• Keep the sealed box safe so that no one will be tempted to open it or remove completed surveys. Don’t leave it unattended.

• All surveys are to be kept separate from client or program files, and returned to me.

Again, we must protect people’s confidentiality and anonymity. This is especially critical when participants return completed surveys.

Although this survey has been designed to minimize risk or discomfort to participants, individuals may possibly find that answering the questions in the survey may be unpleasant or upsetting. If so, I encourage them to talk with their residential or outreach staff, or contact their case manager. I will be informing Case managers of this study.

All participants and residential staff will receive copies of the study summary when I have completed it. If they (or you) have any questions about the study, I can be reached at the phone number or address below.

Thank you very much for your help in this study!

__________________________
Michael Murphy
DMH Case Management
One Prince Street, P.O. Box 389
Northampton, MA 01061
(413) 587-5312
Toll-free - (888) 967-6622, ext. 75312
APPENDIX E:

LETTER OF PERMISSION TO USE QLQ INSTRUMENT
June 24, 1997

Michael Murphy, MSW, LICSW
21 Howes Street
Florence, MA 01062

Dear Mr. Murphy:

Per your request, you will find an instruction manual, scoring form, and a printed version of the Quality of Life Questionnaire (titled "Life Satisfaction") enclosed.

The Client Experiences Questionnaire (CEQ) Manual provides information on two instruments that Dr. Greenley and I developed. One is the Quality of Life Questionnaire (also referred to as the Life Satisfaction Questionnaire) that was reported in Social Work. The second is a Satisfaction with Services Questionnaire which consists of two sections. Section A contains 13 questions in which clients are asked to evaluate their satisfaction with services and Section B consists of 5 questions in which clients are asked to evaluate their satisfaction with the specific program from which they receive services. I have included a page insert providing information on the reliability and the validity of the Satisfaction with Services scales.

To aid in the use of our measures, Dr. Greenley and I developed two versions of our questionnaires. The first, titled "Client Experiences Questionnaire: Satisfaction with Services & Life Satisfaction" (green booklet), contains both the Satisfaction with Services and the Quality of Life (or Life Satisfaction) scales.

The second, titled "Client Experiences Questionnaire: Life Satisfaction" (tan booklet) contains only the 24-item quality of life questionnaire as published in Social Work.

Please feel free to contact me if you have any questions about the use of any or all of the Client Experience Questionnaire (608-263-4574).

Sincerely,

Jan Steven Greenberg, Ph.D.
Associate Professor

enclosure