

THE UNIVERSITY OF CALGARY

THE RELATIONSHIP OF THE SOCIAL SUPPORT SYSTEMS  
OF PEOPLE WITH MENTAL HANDICAPS TO THEIR LIVING  
CONDITIONS, THEIR LOCUS OF CONTROL,  
AND THEIR LIFE SATISFACTION

by

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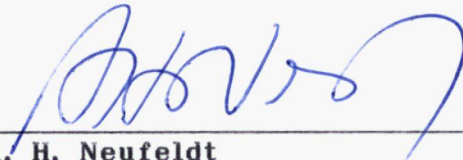
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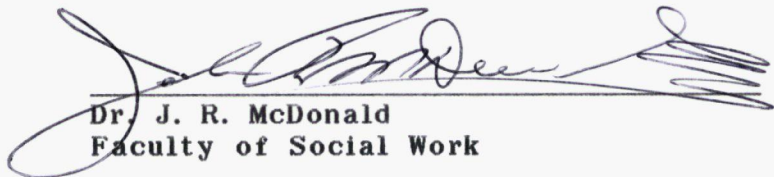
The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies for acceptance, a thesis entitled, "The Relationships of the Social Support Systems of People with Mental Handicaps to Their Living Conditions, Their Locus of Control, and Their Life Satisfaction" submitted by William D. Gunn in partial fulfillment of the requirements for the degree of Master of Science.



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## ABSTRACT

In this thesis the perceived social support systems of a group of people with mild to moderate mental handicaps who lived in three different living conditions are examined. Data was collected on (1) 22 subject who were living independently in the community (15 males, 7 females), (2) ten subjects (5 males, 5 females) living in group homes, and (3) nine subjects who lived at home with a relative (6 males, 3 females).

Standardized measures were used to gather data on the social support system on the subjects. The Norbeck Social Support Questionnaire-Total Network assessed the subjects' social support network, the Inventory of Socially Supportive Behaviors measured the amount of the actual support and the Social Support Behaviors scale assessed the amount of potential support available to the subjects. In addition, Levenson's Internal, Powerful Others, Chance Scale was used to determined the subjects' locus of control orientation, and the Life Satisfaction Scale for Persons with Developmental Disabilities assessed the subjects' life satisfaction. Bar-graphs of the potential multiple choice answers for each of the above measures were presented to the subjects to enhance responses. The Raven's Coloured Matrices provided intelligence scores.

Results show that the group which lived independently had the highest intelligence scores, highest life satisfaction scores and the highest level of internal locus of control. However, they had the smallest social networks and the lowest scores on the perceived potential and actual support scales. The group which lived at home had the second highest level of life satisfaction with the largest average networks and lowest intelligence scores. Their average perceived potential and actual social support scores were second highest. Their locus of control orientation was toward the perception that powerful people controlled their lives. Finally, the group which lived in group homes had the highest average level of perceived actual and potential support but the lowest average life satisfaction scores. Their locus of control orientation was toward a perception that events happened by chance.

When the more objective indicators of quality of life such as good food, housing, and health are relatively equal then more subjective indicators for a good quality of life take precedence. In this study, it appears that an internal locus of control and perceived potential support are the most important indicators of a satisfactory quality of life as measured by life satisfaction. Most of the recommendations dealt with care-givers being more sensitive to issues involving the client's control of his/her environment. Future research recommendations focused on larger studies to duplicate and expand on the present findings.

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## CHAPTER I

### INTRODUCTION

The "buzz words" in the area of people with mental handicaps in recent years are "quality of life" and "personal life satisfaction" (Landesman, 1986). It appears that the goals of services for individuals and families affected by mental handicaps are emphasizing the enhancement of the quality of the lives of people with mental disabilities (Landesman, 1986). Unfortunately, the concept of quality of life (QOL) is not an easy concept to define or measure.

In the general population, the concept of quality of life has been evaluated subjectively with such measures as psychological adjustment, satisfaction, and happiness (Zautra & Goodhart, 1986). It has also been measured in terms of objective criteria with such external measurements as those exemplified through social indicator research (Zautra & Goodhart, 1979).

The present study, involving people with mental handicaps, concentrates on the more subjective measurement of QOL. This follows the argument of Sarason (1974; cf: Mitchell & Trickett, 1980) which suggests that the most important

criterion for judging QOL is the individual's psychological experience of their QOL in the community. Unfortunately, a review of the past literature has identified very few studies in which the researchers have asked people with mental handicaps how they feel about their life styles. Most research in the seventies and early eighties assessed the living situations of people with mental handicaps through observation (e.g., Hill, Rotegard, & Brunininks, 1984; Landesman-Dwyer, 1981; Landesman-Dwyer, Berkson, & Romer, 1979; Melstrom, 1982; Romer and Berkson, 1980a, 1980b). Some studies, such as the ones conducted by McDevitt, Smith, Schmidt, and Rosen (1978) and Hanrahan and Lusthaus (1981) have included a section of research in which the subjects were asked questions about the people with whom they had contact on a daily bases. But, even these studies gathered the majority of their information from others who cared for the subjects rather than from the subjects themselves.

Since the mid-eighties there appears to be a change. For example, studies in Wales (Blunden, 1988) on the lifestyles of people with mental handicaps in the community included an evaluation of the services used by clients. Client competence was also measured by increases in skill level (Blunden, 1988).

In the western United States, Halpern, Nave, Close, and Nelson (1986) carried out an investigation into the ability

of people with mental handicaps to adjust to living in the community. They included the client's views as an important source of information. Other studies which have included the clients perceptions as an important part of the investigation include Jones' (1986) study of an Australian group home and Westwood and Mitchells' (1988) investigation in New Zealand of clients moving from school to living independently in the community.

Canadian contributors to this apparent new trend of investigating an individual's perception of his/her life includes research by Brown, Bayer, and MacFarlane ( 1987, 1988a, 1988b,1989) and Hughes and Segall (1988). Both of these research groups looked at the overall quality of life of people with mental handicaps by asking them directly about major aspects of their lives and comparing the responses with objective performance. Both Hughes and Segall (1988) and Brown, Bayer and Brown (1989) found that, when compared to the responses provided by significant others, the subjects of their studies were just as consistent at providing the relevant information as were the significant others. Rinck (1986) also found that subjects with mental handicaps were as able as other informants to reliably report on their life satisfaction.

The studies mentioned above provided information on the social networks of their subjects. However, in terms of the



current investigation, these studies did not undertake any detailed analysis of the kinds or types of social support provided by the individual's social support network. These previous investigations gathered information in terms of the people whom the subject came into contact with and how often. Thus, they attempted to define the size and density of the subject's social support network. Information regarding what the subjects perceived they received in terms of types of support (eg. material aid, physical assistance, intimate interaction, guidance, feedback, and positive social interaction) (Barrera, Sandler, & Ramsay, 1981) appears to be lacking systematic investigation, as is information on the actual types of support they receive. A current review of the literature finds that very little investigation on the above levels of social support has been done as they relate to life satisfaction of the subject as reported by him/her.

There is, in the general population, some evidence that objective indicators (e.g., neighborhood lived in, social economic status, crime rates, level of education, etc.) used in social indicator research are, for the most part, unrelated to life satisfaction (Gulek, Allen, Tyler, Lau, & Majchrzak, 1983). This may also be the case in the population of people with handicaps. Hutchison (1984) concluded that, in the field of mental handicaps, living in the community does not necessarily mean participation in the community. In many

cases, community programs are structured in such a way that they discourage independence, decision-making and participation in the community (Hutchison, 1984).

Definitions of QOL have included not only objective but also subjective points of view, including satisfaction with life. For example, Zautra and Goodhart (1979) contended that QOL pertained to the "goodness" of life and that this "goodness" resided in the quality of life experiences of the person. Milbrath (1979) defined "goodness" as the goodness of fit between the person and the environment. He concluded that the best environment is one in which the person is able to fulfill his/her needs, aspirations, values, and goals. Barrera and Ainley's (1983) definition of QOL also included the notion of goodness of fit, plus the concept of the maintenance of the person's physical and psychological well-being and, most importantly, the ability to cope with personal and social change. Brown's (1984) definition also followed these arguments. He has defined quality of life as the ability of the person to meet his/her perceived needs. This includes the ability to increase one's control over one's environment regardless of the original baseline. This definition was refined by Brown, Bayer, and MacFarlane (1989). They took into account that a person's QOL is a relative concept because a person's view of his/her QOL is constantly changing as needs are met and new needs take their

place. Therefore, they defined QOL as the discrepancy between a person's achieved needs and his/her unmet needs and desires. When a discrepancy is found, the larger the gap, the poorer the quality of life and the less satisfied the person will be with the situation (Brown et al., 1989). Brown's QOL referring to the global sense of psychological well-being rather than referring to happiness in a particular area of life (Murrell and Norris, 1983).

The different aspects of a person's QOL which may be explored can be represented in model form. Three recent models of QOL for people with disabilities are the Borthwick-Duffy (1986, cited from Schalock, 1988) model, the Parmenter (1988) model, and Brown et al. (1988b) model.

Borthwick-Duffy's (1986, cf. Schalock, 1988) model proposes four dimensions to the QOL. They are residential environment, interpersonal relationships, community involvement, and stability. The first dimension, residential environment, consists of four sub-dimensions. The first sub-dimension examines the person's affect in terms of his/her environment. It attempts to assess the levels of attachment and harmony the individual has with his/her environment. The next sub-dimension is cognitive and asks such questions as: To what extent does the residential environment reflect a true adult environment, to what extent does the individual share in the creating of the experience, what is the level of

skill training in this environment, and does the environment contain cognitively stimulating materials?

The third sub-dimension of residential environment assesses the physical aspects of the environment. Such aspects as the cleanliness and type of lighting are assessed as well as safety and security of the environment. Lastly, the forth sub-dimension evaluates aspects of normalization included in the program and setting. For example, does the program and the setting reflect as "normal" an environment as possible?

The second dimension assesses the interpersonal relations the individual has in the residential environment, in the natural family and with his/her friends. The next dimension, community involvement, explores the individual's involvement in clubs, community events and public recreation. The last dimension investigates the stability of the environment and the tenure of the people involved with the individual.

In Parmenter's (1988) model the domains of the quality of a person's life are divided into three basic areas. The first area, Societal Influences, assesses the effects on an individual with a disability as he/she comes to view his /her QOL in the context of the environment in which he/she lives. Such elements as the community's attitude towards persons with disabilities, the community's political values, the state of the economy, the types of services offered, the

incentives or disincentives to participate in the community , and access to the community all impact on the QOL of a person with a disability.

The second area is Functional Behaviors. This area is grouped into four categories, each of which can be directly observed. The first category is social interactions which include social opportunities, friendship and other relationship networks, as well as leisure/recreational activities and general communication with others. The second category is Occupational/Material Well-Being which incorporates such factors as employment, income and occupational relationships. The third category is Accommodation which includes the comfort and security of the accommodations as well as how the neighbourhood is utilized. The last category is Access to the Community. This category includes the knowledge and use of services, education, possession and use of skills, and mobility.

The last area is labeled Self. It is divided into three arbitrary classifications. The first is Cognitive which includes such aspects as the person's beliefs, goals, values, aspirations, knowledge of self and empowerment, and knowledge of how the world works. The second classification is Affective. The major elements of this category include the person's general life satisfaction, happiness, their level of self-esteem, their locus of control, and acceptance of their

disability. The last section is Personal Lifestyle. It consists of two elements: life events and the person's perceptions of their personal lifestyle (Parmenter, 1988).

Parmenter (1988) points out, that in studying the QOL of people with disabilities, any changes in any of the three major areas will probably result in a change in one of the other areas. This is due to the influence of interactions between each of the areas.

Brown et al. (1989) took a slightly different tack from Parmenter (1988). They describe a model for investigating the QOL of people with mental handicaps in terms of objective and subjective measures. There are four elements in the Objective area. The first is Quality of Environment which includes such sub-elements as the political and economic climate as well as social attitudes toward people with mental handicaps. Other sub-elements are the existence of support systems, both formal and informal. The final sub-element is the utilization of the person's neighbourhood, employment situation, and leisure environments and the person's perception of the security and comfort of these environments.

The second element is Growth and Mastery. This element can be measured in terms of growth in adaptive skills, cognitive skills, and social competencies.

The third, the Person's Health is measured by activity level, nutritional habits, types of medication and general

appearance. The fourth is Economic Stability and refers to elements that measure the individual's income; its source, amount, and stability as well as the possessions of the individual, future security (in the form of savings) and finally, immediate and long term expenses.

The Subjective area of the QOL of people with mental handicaps involves two elements. The first element is life satisfaction which consists of two sub-elements. The first sub-element is perceived normalcy of the environment, health, income, and interpersonal relationships as determined by the individual. The second sub-element is the perceived success of the individual in getting their needs met.

The second element of the Subjective area consists of four sub-elements. The first sub-element deals with the sociability of the individual. The second sub-element is the person's own self-esteem. The third sub-element is optimism for the future and overall morale and level of happiness. The last sub-element of this area consists of the person's ambition in life which includes the person's level of assertiveness and at what pace the person wants to live his/her life.

The QOL of people with mentally handicaps has been implicitly measured in terms of normalization (Wolfenberger, 1972). This enunciates the idea that persons with mental handicaps are enabled, as far as possible, to lead as

"normal" a life as possible. This concept, in the Seventies, was translated into deinstitutionalization and was measured quantitatively through the use of adaptive behavior scales (Emerson, 1985; Hanrahan & Lusthaus, 1978).

In the 80's, rehabilitation practitioners began to recognize that behavior adaptation was only part of the normalization concept. They advocated that, in addition to the creation of adaptive behaviors and becoming physically integrated into the community, emphasis should be placed on a complete as possible social integration with a maximum of personal control (Brown et al., 1989; Hughes & Segall, 1988; Kinkaide, 1975).

Parmenter (1988) pointed out that too often the superficial elements such as physical environment, residents' adaptive behaviour and daily activities are the focus of attention in evaluating success in community living. While these aspects are important, more critical aspects which relate to outcomes, such as client satisfaction, social and interpersonal relationships, degree of self-determination, socio-economic factors and access to the community, are also important. These aspects reflect a person's interaction with his/her environment and maybe a more valid index of success in community living.

Emerson (1985) has stated that alternative outcomes such as client satisfaction, social and interpersonal



relationships, and personal activity patterns appear infrequently in studies of people with mental handicaps. This is unfortunate because these outcomes may be better indicators of a disabled person's QOL than objective indicators. McDevitt, Smith, Schmidt, and Rosen (1978) concur, stating that in assessing the level of adjustment in the community, the subjective areas of satisfaction may be more important to measure than measuring overt behavior.

QOL has been defined subjectively as the personal experiences of an individual (Zautra & Goodhart, 1979). In addition, it includes the ability of the individual to meet his/her perceived needs (Brown et al., 1989) and the ability to improve and control one's environment. Therefore, it would seem logical to use subjective measures to evaluate a persons QOL .

The objective measures used in QOL investigations such as the social indicators mentioned by Zautra and Goodhart (1979) give a general description of the social forces which shape the behavior and provide the framework that shapes both values and lifestyle (Emerson, 1985). They are more readily available, valid, and reliable than most subjective measures (Rogers & Converse, 1975 cf: Brown et al., 1975). However, they are an indirect measurement of psychological well-being. When objective measures are used it is assumed that as the objective measures of the environment improve so will an

individual's satisfaction with life. This assumption may be incorrect (Ferron and Powers, 1985). Campbell, Converse and Rogers (1976, cf: Ferron & Powers, 1985) pointed out that, between 1957 and 1972, all objective socio-economic indicators increased while personal subjective levels of happiness with life steadily decreased.

Subjective measurement of QOL is a more directly personal examination of the psychological factors making up perceived QOL/life satisfaction. An example of this is provided by McKennell and Andrews (1983) who studied the components of perceived QOL. They found that perceived well-being is made up of two components: cognitive and affective. Cognition is defined as the process of relativism which enters into the judgement of satisfaction. Satisfaction is defined as a person's aspirations and standards of comparison in terms of current circumstances. Affect is defined as a current-feeling state which is not tied to a cognitive frame of reference to the extent that cognitive factors are tied. These researchers found that, depending on the measure used, the affective-cognitive ratio fluctuated between high and low. It was highest for affective measures of QOL as a whole (overall happiness and enjoyment of life). The Affect ratio is lowest when measures involve the terms "satisfaction " or require comparison of implicit or explicit material (e.g. comparing one's present neighborhood to a past one) (McKennell &

Andrews, 1983).

There appears to be both a cognitive and an affective aspect to making individual decisions about QOL. There also appears to be evidence that one's assessment of one's environment may be tapped more directly with subjective measures. Taking these points into consideration, this project investigates the self-reporting of life satisfaction of persons with mental handicaps. In addition, this study attempts to assess how this satisfaction is affected by different levels of social support and the individuals perceived control of their environment.

## CHAPTER II

### LITERATURE REVIEW

#### INTRODUCTION

Halpern (1985, 1989) presents a model of community adjustment which consists of three distinct components: (1) Residential Environment, (2) Employment, and (3) Social and Interpersonal Networks . Halpern (1985) contends that for a person with mental handicaps to adjust successfully to life in the community, the person must have some success in each area. If not, the person's ability to live in the community is threatened.

The Residential Environment component includes such factors as satisfaction with the actual living site, the quality and safety of the neighborhood, and the availability and proximity of community services and recreational services. The Employment component consists of such factors as job finding networks, job search skills, minimum wage levels, employer incentives, job discrimination and structural unemployment. The third component, Social and Interpersonal Networks consists of factors which deal with daily communications, self-esteem, support from family and

friends, emotional maturity, and intimate relationships (Halpern, 1985).

These three dimensions are also augmented by a "personal" dimension which includes personal satisfaction, self-esteem, and empowerment (Halpern, 1989). Halpern (1985) agrees with Landesman-Dwyer and Berkson (1984) and O'Connor (1983) that the Social and Interpersonal Relationships Network dimension may be the most important in terms of adjusting successfully in the community.

Landesman-Dwyer and Berkson (1984) note, in their review of the literature on community adjustment, that social factors appear to be critical determinants of an individual's success at living in the community. In a ten year follow up study of the success of people with mental handicaps in the community, it was found that social workers based their judgments regarding success mostly on the person's ability to relate to other people (Hill, Rotegard, & Bruininks, 1984). The trend of using social factors as an important determinant of measuring the success of living in the community has also been noted in vocational settings (Hall, Ford, Moss, & Dineen, 1986; Montague and Lund, 1987; O'Connor, 1983). It appears that the use of social factors provides relevant data as to why people with mental handicaps succeed or fail. This same trend was noted by Schalock, Harper, & Carver (1981) in a five year follow up study and again in a ten year follow-up

study of people with mental handicaps placed in the community (Schalock & Lilley, 1986). Romer and Heller (1983, 1984); McDevitt, Smith, Schmidt and Rosen (1978) and Landesman-Dwyer (1981) all found that the success or failure of persons with mental handicaps in the community was keyed to their ability to relate to other people and to their ability to access peer and family supports. Behavioural, social, and personal adjustment all seem to be impacted by the amount of support a person with mental handicaps receives (Walker & Calkins, 1986). For example, Reiss and Trenn (1984) reported, that as young adults with mental handicaps moved into the community and away from previous support systems, they were more frequently referred to outpatient mental health services for emotional and behavioural problems.

Kozlowski and his colleagues (1984) proposed that informal supports may be even more important to people with mental handicaps than non-disabled people. Kozlowski et al. (1984) reasoned that people with mental handicaps have more stress and fewer personal resources to cope with this stress in their everyday lives. Simply residing in the community (without adequate supports) did not guarantee a good quality of life (Hanrahan & Lusthaus, 1978). As with most "normal" people, relationships appear to be a very important factor in determining the overall QOL for people with mental handicaps (O'Connor, 1983).

## Social Support

### Definitions of social support

While supportive relationships are known to provide essential properties for coping effectively with the stress of everyday life, the exact nature of support provided through these relationships is still undetermined. In part, this is due to the ambiguity with which social support is defined (Denoff, 1982). There are almost as many definitions of social support as there are contributors to the field. In McColl and Skinner's (1988) review of social support they related the seven most common definitions. Social support is:

- 1) the degree to which the needs for affection, approval, belonging and security are met by others (Kaplan, Cassel, & Gore, 1977).
- 2) the experience of being cared for, loved, valued, esteemed and part of a network of mutual obligations (Cobb, 1976).
- 3) the experience of being cared for, loved, valued, esteemed, being part of a network of mutual obligations and able to count on others should the need arise (Turner, 1983).
- 4) the interpersonal transactions that express affect, affirmation and aid (Kahn, 1985).
- 5) any input provided by individuals or groups of

individuals which directs the receiver of that support closer to his/her goals (Caplan, 1976).

6) emotional, instrumental and/or informational assistance (House, 1981).

7) analogous to coping, the difference is that coping is initiated by individuals, whereas support is initiated by others (Thoits, 1986).

Although these definitions have subtle differences, the common thread between all of them is the idea that support is interpersonal input which has a beneficial impact on the recipient (McColl & Skinner, 1988).

#### Concepts of social support

"Support like beauty appears to reside in the eyes of the beholder" (Gesten & Jason, 1987). As a result there are, like the definitions, no unitary concepts of social support. The differing definitions of these concepts are used in an attempt to form a bridge between the related areas of support. The concepts include an attempt to define the differing purposes of support and how social support operates at different levels (Alloway & Bebbington, 1987).

Social support can be seen as a function of an individual's needs being met, both physical and mental, or as a way of maintaining relationships. In addition, it can be studied in terms of how others behave toward the subject



and/or the subject's behavior in terms of seeking support. Finally, investigations studying the effects of social support as a reinforcer have been conducted (Alloway & Bebbington, 1987).

Recently, Gottlieb (1985) and Barrera (1986) have proposed that social support can be formulated into three interrelated but distinct concepts. Each concept is looking at a different level of analysis of social support. The first is called "Social Embeddness" (Barrera, 1986) and is equivalent to a macro-level analysis of a person's social support. It is measured in terms of his/her social integration and participation in the system (Gottlieb, 1985). At this level of analysis, the researcher only identifies those individuals which have important relationships with the subject under study. It is related to Cassel's idea (Caplan, 1974) that social contact is capable of moderating stress. Therefore, only the structural properties of these networks need to be studied. Some examples include the number of people in the system and the amount of contact and accessibility of these people to the subject. Studies by Atkinson (1986), Romer and Heller (1984), and Berkson and Romer (1980) investigated this concept in the area of people with mental handicaps. They measured only the number of times and the type of person (e.g. staff, other client) with whom the subject interacted. This type of investigation discloses very little about the

interpersonal processes of the subject's relationships (Barrera, 1986; Gottlieb, 1985).

The second interrelated concept is called "Perceived Social Support" (Barrera, 1986). It is what Gottlieb (1985) called the mezzo-level of social network analysis. At this level, the structured and supportive functions of the support system are investigated. When investigating this concept, an attempt is made to measure support in terms of how the individual perceives the availability and adequacy of the supportive ties (Barrera, 1986). This concept approximates Caplan's (1974) hypothesis of a social system. Under Caplan's hypothesis an effort is made to determine the people who routinely provide individuals with material, emotional, and esteem assistance. The mezzo-level concept is also very similar in orientation to Cobb's idea that support is more than just information (Barrera, 1986).

The third interrelated concept is that of "Enacted Support" (Barrera, 1986). Enacted support is the micro-level analysis of people's most intimate relationships (Gottlieb, 1985) and it looks at the quality, not necessarily the quantity, of support a person receives. Enacted support is what people in the support system actually do, when they provide support to an individual (Barrera, 1986; Gottlieb, 1985). This support can be divided into four categories: (1) emotional support, (2) task oriented assistance or

instrumental support, (3) the communication of expectations, evaluations and shared world view or appraisal support, and (4) assessing new and diverse informational and social contacts (Cohen & Wills, 1985; Vaux, Riedel, & Stewart, 1987).

These three interrelated concepts, used to analyze social support, appear to take into consideration all the aspects of the major definitions covered in the previous section. The next section will cover models of social support which attempt to predict the "at risk" group as a function of these three concepts.

#### Models of social support

The overall hypothesis of social support, that adequate positive support will enable a person to cope in their environment, fits well into the ecological interaction models of psychopathology. The ecological interaction models stress person-environment fit (Bronfenbrenner, 1979; Mitchell, 1986; and Moos, 1984). However, like the definitions and concepts referred to earlier, there are many different models which can represent the functions of social support (Barrera, 1986). Only the three most common ones will be mentioned here. None of the models fit into any one neat conceptual category. All of the models presented overlap into two or more of the concepts mentioned earlier.

The first model basically fits into the meta-analysis (Gottlieb, 1985) or "Social Embeddness" (Barrera, 1986) concept of social support introduced in the last section. This model looks at social support systems at a purely quantitative level, but, also overlaps into the mezzo-level concept. This model has been formulated in different ways. Three common examples are those by Bronfenbrenner (1979), Mitchell (1986) and by Pattison and Hurd (1984).

Bronfenbrenner's (1977) model consists of four systems. The first system, in which all the other systems are nested, is the "macro system". The macro-system consists of the "blue prints" which make up the society. It consists of the rules and institutional patterns which govern the culture and its sub-cultures, such as the economic, social, educational, and political, of which the other three systems are concrete manifestations.

The second system, which is nested in the first system, is the exosystem. The exosystem is like the skeleton of the individual's world. It consists of the specific social structures, both formal and informal, that do not contain the person but impact upon the immediate settings in which that person resides. These include the world of work, the neighbourhood, mass media, agencies of the government, the distribution of goods and services, and communication and transportation networks (Bronfenbrenner, 1977).

The third system, which is nested in the second system, is the mesosystem. It consists of interrelationships among the major settings containing the individual at a certain point in that individual's life. Components of this system could, for example, encompass the interactions between family, school, and peer groups. The fourth system which is nested in the third system is the micro-system. The micro-system is the complexity of relationships between the individual and the immediate environment in which the person finds him/herself. The environment is defined, at this level, as a particular physical place in which a person engages in particular activities as defined by particular roles, for particular periods of time (Bronfenbrenner,1977).

Mitchell's (1986) model is similar to Bronfenbrenner's (1977) model. Mitchell's (1986) model of the interactions of the social support system of the families of persons with handicaps is broken down into four subsystems. The first sub-system is the Macrosystem and consists of the broad values and beliefs that characterize the society in which the person lives. The second sub-system is the Exosystem and consists of all the external systems in which the mesosystem is embedded. These external systems include: the education system, health systems, voluntary agencies, and social welfare. The third sub-system is the Mesosystem. It is comprised of the settings with which the family has day-to-day contact. Such settings

as the extended family, friends, specific health services, the school, work setting, and could be included in the family's Mesosystem. The last sub-system is the Microsystem which consists of the various interactions within the setting in which the family is presently presiding.

Pattison and Hurd's (1984) model more closely revolves around the person and their social network. It divides a person's social interactions into levels depending upon the degree of intimacy of the interactions. These levels are called zones and there are five of them in this model.

The first zone contains what are judged to be the person's closest contacts. These usually are the nuclear family. It is proposed that this zone of contacts is the most intimate with the highest potential for emotional and actual impact on the person.

The second zone contains close friends, neighbors, co-workers and relatives who are highly significant to the person. In this zone, there is an expectation of a high degree of structural and mutual exchange of emotional and actual resources.

The third zone consists of people with whom the subject has less frequent contact. This is a network of potential relationships. These people are in a position to be recruited into the second zone if and when they are required. The fourth zone is called the effective zone. It is comprised of

people with whom the individual determines are important resources in the present and future. People such as the family doctor, business contacts and neighborhood relationships are included in this zone. The last zone is called the nominal zone and consists of people only known casually (Pattison & Hurd, 1984).

Even though this model looks at the demographics of a person's social environment and includes the person's perception of these contacts, these types of models have not been effective predictors of psychological well-being (Israel & Antonucci, 1987). The reason may be the lack of information on other more internal factors related to maintaining a support system. For example, research carried out on social support and locus of control have indicated that internally controlled people receive and may require less support than externally controlled people who feel they are controlled by the environment (Starker, 1986; Hibbard, 1985). Some studies, found in the review of the literature, have also indicated that if a person perceives him/herself as not being part of a mutual-obligation network, he/she could be at greater risk for the manifestation of psychological symptoms, even if he/she has a large social network (Pattison and Hurd, 1984). The perception of being part of a stable social support system is the most important factor (Bronfenbrenner, 1979).

The two most widely investigated models of social support

encompass the mezzo and micro levels of social support. They are the buffering model and the main effect model (Cohen & Wills, 1985).

There is evidence that suggests a lack of social support may weaken the mental health of an individual even in the absence of stressful events (Starker, 1986). This supports the main effect model hypothesis that states that social support has a direct effect on health and well-being on an on-going basis. This is regardless of whether or not the person is under stress (Robertson, 1987). The main effect model proposes that this direct positive effect occurs because large support systems provide a person with regular positive experiences and help the person avoid negative situations. In addition, positive affect is provided in a stable environment. This is an environment in which the socially rewarding roles of the person are defined. It, thereby, provides an environment in which there is a sense of predictability and stability in the individual's life situation. This situation results in positive physical and mental outcomes for the person (Cohen & Wills, 1985; Robertson, 1987).

Barrera's (1986) review article presents a model by Dignam, Barrera, and West (1986; cf.: Barrera, 1986) which is a slight variation of the main effect model. This model demonstrates how stress can be mediated in one of two ways.



First, the occurrence of stressful events can be reduced as a function of the embeddedness of the person in his social network (meta-level analysis) or the stress can be reduced in terms of the amount of enacted support (micro-level) received by the individual. Second, as the amount of perceived support rises, the amount of perceived stress decreases. Both these systems work to reduce the amount of distress the individual is experiencing. First, by preventing the initial occurrence of distress and second, by reducing the perceived threat (Barrera, 1986).

The buffering model of social support stresses the basic idea that a person will determine that a situation is threatening (or over-demanding) when this person does not feel he/she has the adequate coping resources to handle the situation. At this point, the support system will intervene to provide resources to enable the person to cope. Intervention occurs by: (1) supplying the necessary coping resources, (2) reducing the person's appraisal of the potential harm of the situation, or (3) increasing the person's perceived ability to cope (Robertson, 1987).

The buffering model incorporates the two concepts of perceived (mezzo) and engaged (micro) support (Barrera, 1986; Gottlieb, 1985). At the perceived level, the support may intervene between the stressful event (or its expected occurrence) and the stress response by reducing the negative

appraisal of the stress response. At the engaged level, the support intervenes between the stress experience and the onset of any pathological outcomes by reducing or eliminating the stress response (Cohen & Wills, 1985; Wilcox, 1981).

Cohen and Wills (1985) completed an extensive literature review of the social support research on the buffering and main effect models. They conclude that there is considerable evidence to support both models depending upon the type of measures used to investigate the phenomenon. Evidence for the direct model stems from measures of the social structure of the person's environment. These measures of social structure indicate the degree of integration both from an objective and subjective point of view. Evidence for the buffering model comes from research instruments that observe the perceived levels of support available from interpersonal sources that would be responsive to the needs of the person during a stressful event (Cohen & Wills, 1985). More importantly, the quality of a person's supportive network rather than the number of people providing the support seems to be the most important factor with respect to the protective effect of a social support system (Denoff, 1982; Greenblatt, Becerra, & Serafetinides, 1982; Wilcox, 1981).

Evidence for the importance of the quality of social support comes from such studies as the one conducted by House and Wells (unpublished study, 1979 cf.: Greenblatt et al.,

1982). They found that a single close and caring source of support was as effective as the sum of a number of dispersed social supports from a number of different, but less intimate sources. A study of elderly people by Lowenthal and Haven (1968) also showed that these older individuals were better able to survive the gradual loss of social standing and loss of social interaction (e.g., the loss of a spouse) when the person had at least one close confidant. Wilcox's (1981) study of 320 people in a community showed, using regression analysis, that it was the quality of the person's supportive network rather than the size of the person's network which determined the buffering effect of the social support on their psychological stress. Ward, Parmenter, Riches, and Hauritz's (1981) study of a work preparation program for people with mental handicaps showed that an atypically high number of people who failed to graduate from the program came from homes which had little or no parental support. This was due to either one or both parents being absent from the home.

Unfortunately, many of the studies which look at social support have methodological problems. These include the confounding of variables between the measures of stress, support, and psychopathology. Social support measures have been criticized for being confounded with the concepts of both stress and distress (Barrera, 1986; Cohen & Hoberman,

1983; Dohrenwend, Dodson, Dohrenwend, & Shrout, 1984; Thoits, 1982). In these discussions, the confound appears to refer to two different conditions. First, the studies are confounded due to the problem of conceptual overlap when social support items on a questionnaire are highly similar to those in a stress or distress measure. Dohrenwend et al.'s (1984) study categorized items from several different measures of social support as to whether or not they also were signs of psychological distress. There was, in some cases, considerable agreement that the particular items of the social support measures were also items identifying psychological distress.

Secondly, the confound could be due to "the third variable" problem. This refers to the possibility that the relationship between two variables may be explained by a separate third variable which links them both (Barrera, 1986). Cohen and Wills (1985) demonstrated that a social exit (e.g., loss of spouse or good friend) has an effect on life stress, both in terms of coping with the loss and coping with the loss of social support at a time when support is needed. Another problem in the social support field is that many studies cannot be compared to others of their kind due to the fact that the data were analyzed differently from study to study. However, even with these problems Cohen and Wells (1985) and Barrera (1986), in their extensive reviews of

social support, conclude that there is apparently evidence to support the value of social support.

#### Social support research with people with mental handicaps

Social support research in the area of people with mental handicaps can be broken down into two main aspects: qualitative and quantitative social support. Qualitative social support is generally process oriented and refers to how the person perceives the receiving of their support from their social network. It encompasses Gottlieb's (1985) concepts of mezzo and micro level social system analysis. Quantitative constructs of social support tend to focus on the specific number of people linked with the person, also known as the social network of the person (Pearson, 1986; Schaefer, Coyne & Lazararus, 1981). Gottlieb's (1985) macro - level of analysis of a social system focuses on these quantitative constructs. The quantitative and qualitative aspects of social support taken together will be called the social support system.

Most of the investigations of the social support systems of individuals with mental handicaps have concentrated on the social networks of this population. This is done either implicitly, by observing whom the subject has contact with and how often, with the researcher determining the type of contact, (e.g., Mest, 1988; Romer & Heller, 1983) or

explicitly, by asking the subjects to talk about the people with whom they have contact (e.g., Berkson and Romer, 1980; Brown et al., 1987, 1988, 1988b; Donegan & Potts, 1988; Edgerson & Bercovici, 1976; Hill, Rotegard, & Bruininks, 1984; Hughes & Segall, 1988; Kaufman, 1984; Landesman-Dwyer, Berson, & Romer, 1979; Romer & Heller, 1984). These studies have included children with mental handicaps (Dunst, Trivette, & Cross, 1986) through young adults living in group homes (Landesman-Dwyer, Berson, & Romer, 1979; Malin, 1982; McWhorten, 1983) or independently in the community (Atkinson, 1986; Donegan & Potts, 1988; Edgerton & Bercovici, 1976; Koller, Richardson & Katz, 1988) to older adults with mental handicaps living with family or independently (Krauss & Erickson, 1988; Seltzer, 1985). All of these studies recognize the importance of social networks in maintaining people in their present environments. This also appears to be true of vocational settings.

Brickley, Campbell, and Browning (1985) demonstrated in a five year follow up of sheltered employees placed in competitive jobs, that those employees with more effective support systems tended to remain employed and were happier. Hall, Ford, Moss, and Dineen (1986) in a follow up study of 79 people with mental disabilities in competitive employment showed that 44 percent of job losses were of non-vocational origin. The non-vocational problems were lack of adequate

social and interpersonal support, lack of social opportunities and lack of resources from the service system. Hall et al. (1986) recommended that persons with mental handicaps should have a personal advocate and be monitored to ensure success in the community.

However, the social support networks differ depending on environment. Hill et al. (1984) compared social relationships between individuals with handicaps in state institutions with those in community residential facilities (group homes). They discovered that residents in the state institutions had less contact with non-handicapped peers, less contact from relatives and fewer relationships with fellow residents than their counterparts living in residential facilities. In other words, the residents of the state institutions had smaller or non-existent social networks compared to residents of group homes.

Seltzer (1981) carried out a study which looked specifically at group homes. He noted that satisfaction with social relationships was independent of the type of residential environment. Other studies have shown that the social network size was independent of intelligence but dependent on group home size (Landesman-Dwyer, Berkson & Romer, 1979; Romer & Heller, 1983). The larger the group home, the larger the social network. These networks consisted essentially of peers (Berkson & Romer, 1980; Landesman-dwyer

et al.,1979). Romer and Heller (1983) also noted, in their review of the literature, that maintaining stable friendships was associated with the successful transfer of people with mental handicaps from one living environment to another. In contrast, Malin's (1982) study indicated that, although residents of a group home associated with each other, these residents depended mainly upon official networks (e.g., staff) when they required help. This indicates that the mere presence of a relationship does not mean it is supportive (Denoff, 1982). Interconnected with this problem is the discovery by Brown and his colleagues (1987) that probably the greatest handicaps the subjects experienced were in the area of socialization, emotional support, and communication.

This association between the stability of social networks and the support they provide has also been noted in the area of vocational work. Melstrom's (1982) observational study of six sheltered workshops demonstrated that clients who were highly sociable were likely to make more money and to leave the sheltered workshop for more positive reasons than those who were less sociable. Another study showed that sheltered workshop employees placed in the community in competitive jobs were much more likely to keep their placement if they had a stable support network (e.g., living at home) (Brickley, Campbell, & Browning, 1985). Hall et al. (1986) commented that improved support from professionals, in this



case social workers, was needed to alleviate the problem of job loss among people with mental handicaps. However, success in employment was not related to success in independent living (Birenbaum & Cohen, 1985; Reiter & Levi, 1980).

It appears that people with mental handicaps living at home have networks, which in terms of size, tend to fall in the middle between residents of institutional settings and group home residents. Their support networks are primarily composed of family members. This is in contrast to persons living in group homes and institutional settings where support groups can consist of family, friends, and professionals (Krauss & Erickson, 1988). Even after this group had moved from home to independent living in the community, the family still made up the greatest portion of these individuals' social networks (Cattermole, Jahoda, & Markova, 1988; Zetlin, Turner, & Winik, 1985).

In terms of people with mental handicaps living independently in the community, the Hanrahan and Lusthaus (1978) review of the research found that many lived lives of boredom, isolation and rejection. Other authors have not been as negative in their findings. Edgerton and Bercovici (1976) and McWhorten (1983) both noted that although this population, in general, lacked a network of reliable friends and relatives, the more successful ones usually had at least one "benefactor". This benefactor was more often than not,

just a concerned competent non-handicapped person in the community who gave support to the person with the mental handicap when necessary.

Atkinson's (1986) study of fifty people with mental handicaps living in the community found that, in terms of engaging competent others, the overall group average was 4.4 competent others. The largest part of the competent others average consisted of professionals (average 3.3) engaged specifically to care for these people. Other studies have shown that amongst people with mental handicaps over half had no peer friendships at all (Koller, Richardson, & Katz, 1988). In fact, Hughes and Segall (1988) noted that many of the subjects in their sample liked to work in a sheltered workshop, not for the work or the training, but because of the social environment provided. Therefore, in a real sense, it appears that QOL is affected by where one lives and works (Hutchison, 1984; Neufeld, 1984; and Wight-Felske, 1984).

As can be seen from the preceding discussion of the literature, which relates to the social networks of people with mental handicaps, there is little discussion as to the types and kinds of support or the quality of support provided by these networks. There was also little discussion of this group's satisfaction with the support given by others.

Romer & Heller (1984) have suggested that the peer networks of persons with mental handicaps might have some of

the same support functions for coping with stress and life problems as those of peer networks observed in the non-handicapped population. However, while investigations have focused on the quantitative aspects of the social support systems of people with mental handicaps, it appears that little is known about the qualitative aspects of the social support systems in this population (Seltzer, 1985). Hensel (1972, cf.: Mest, 1988) concluded that family and community supports provide buffers against the psychological assaults of the social stigma of having a mental handicap. People with mental handicaps living in the community are more likely to receive personal and emotional support from their friends than people living at home (Krauss & Erickson, 1988). Overall, it appears that people with mental handicaps usually have few friends (Donegan & Potts, 1988).

It seems that very few studies have addressed directly the question of what types of qualitative support are given to people with mental handicaps by their social networks. However, there is growing evidence that social support systems function as powerful determinants of a person's ability to access information, assistance, and other types of support as well as, opportunities to gain competence and influence decisions affecting life satisfaction (McIntyre, 1986).

### LOCUS OF CONTROL

The feeling that one has the ability to effect outcomes of actions in one's environment is considered a measure of a person's ability to live an independent life (Parmenter, 1988). This concept along with one's satisfaction with his/hers life-style are two important aspects of measuring QOL (Brown et al., 1988). Social supports can provide people with a sense of control and enhanced self-esteem (Ganster & Victor, 1988). The concept of locus of control which came from the social learning perspective (Rotter, 1966) will be used in this study to assess this sense of control.

This concept divides subjects into people who attribute success and failure to internal factors such as ability and effort at one end of the spectrum and at the other end, success is attributed to external factors such as luck, chance, fate, or powerful others (Rotter, 1975). This perceived self-control of one's environment measured by Rotter's (1966) Locus of Control Scale has been discovered to be a multidimensional scale, not the unidimensional scale first envisioned by Rotter. Levenson (1972) divides the external dimension into two dimensions: powerful others and chance. She argues that, statistically, internal beliefs are a single dimension, orthogonal to external beliefs. However, external beliefs could be divided into these two dimensions. These two external dimensions probably existing independently

of each other (Palenzuela, 1984).

The division of the expectancy of control into internal and external is not seen in terms of good or bad, but in terms of what is adaptive and desirable for the situation in which the individual finds him/herself (Palenzuela, 1984; Rotter, 1975). The expectation of results in a situation will either be contingent or non-contingent on one's action or attributes (Palenzuela, 1984). Social learning theory (Rotter, 1975) sees these expectancies of control as outcomes which are determined not only by specific experiences in a particular situation, but also, by other past experiences that the individual perceives as similar to the present one. These perceptions will, in turn, influence the person's response to the present situation (Rotter, 1975).

The idea of person-environment fit stressed in the social support section also supports the argument presented above. The Congruence model of person-environment fit suggests that there is a two behavior process involved in perceived control of an environment. One is Primary and the other is Secondary control. Primary control behaviors are adaptive in environments in which the person's actions are more likely to effect the outcome. However, in environments that are highly controlled by other factors the person will exert Secondary control. Having Secondary control in a situation is an indication that the person is giving up part of their

perceived control of the situation to other factors in that situation and has lowered expectations of control in the situation. This, it is suggested, leads to an avoidance of disappointments and reduced stress (Rothbaum, Weisz, Synder, 1982).

However, these two types of situational control can become maladaptive. If an individual strives to exert control (uses Primary control expectancies) over an environment which is controlled by other factors, then this can result in high stress and disappointment for the individual. Conversely, if an individual uses Secondary control expectancies (does not exert control) in a situation in which the person is able to exert primary control and may be expected to do so, this situation can also lead to failure and stress. This result occurs in spite of the fact that the use of the person's abilities would have led to success (Rothbaum, et al., 1982).

There is some evidence that locus of control orientation will determine how effectively the individual will use social support resources (Sandler & Lakey, 1982). Sandler and Lakey's (1982) study of college students demonstrated that the perception of control did not reduce the stressful impact of negative events. However, the amount of support available and locus of control orientation did have an effect. Although externally oriented people (people who feel they are

controlled by forces outside themselves) had, overall, larger perceived social support networks, they did not make effective use of them regardless of size of the support network. On the other hand, as the size of the perceived social support network increased, the internally oriented person's level of psychological disorder decreased, as measured by depression and anxiety.

Lefcourt, Martin, and Saleh (1984) carried out three studies which looked at the interactive effects of locus of control and social support as moderators of stress. The results were similar to Sandler and Lakey (1982). Their findings suggested that externally oriented persons did not make effective use of their social support networks. In addition, results indicated that the internally oriented people with larger social networks were at less risk for mood disturbance than those internally oriented people with smaller networks (Lefcourt et al., 1984). Evidence from the normal population suggests that a correlation exists between locus of control and socialization. It appears that undersocialization and development of an external locus of control are related (Raine, Roger, & Venables, 1982).

There have been few studies involving people with cognitive difficulties. The ones found in the review of the available literature compared individuals with cognitive difficulties and people with "normal" intelligence. These

studies indicated that people with cognitive difficulties usually had a more externally oriented locus of control possibly caused by undersocialization (reviews by; DeVellis & McCauley, 1979; Dudley-Marling, Snider, & Tarver, 1982).

The comparison, between groups with mental handicaps and "normal" groups has produced conflicting results in terms of mental age and locus of control. Children with mental handicaps apparently not only lag behind "normal" children in mental age as measured by intelligence, but, also in the accompanying development of a strong internal locus control orientation. However, other studies with older age groups have not shown conclusive evidence of this difference (DeVellis & McCauley, 1979).

There is not a large amount of experimental evidence, but, it appears from observations of environments in which people with mental handicaps live that these environments are relatively low in contingency (ability to control). In other words, institutional settings and the situation of living in the parental home, result in the person with mental handicaps being exposed to events, both positive and negative, over which they have little control. This results in the development of an external locus of control orientation (DeVellis & McCauley, 1979). The lack of contingency in the learning environments of learning disabled children has been demonstrated to contribute to an external locus of control



orientation in this population (Dudley-Marling et al., 1982).

There appears to be an absence of studies comparing the different living conditions of people with mental handicaps and how these different living circumstances may effect their locus of control orientation. However, Hughes and Segall (1988) commented that people with mental handicaps who were given freedom of choice and independence in their living environment appeared happy with their present life style.

#### LIFE SATISFACTION

There appears to be some evidence linking an external locus of control to depression in the general population (Benassi, Sweeney, & Dufour, 1988; Peterson, Sushinsky, & Demask, 1978). In addition, those people with external orientations, who tend to regard stressful events as a matter of chance, are the most depressed (Ganellen & Blaney, 1984). This relationship between depression and external locus of control is also noted in a study of adults with mental handicaps (O'Neil, 1982). The symptoms of depression among people with mental handicaps are the same as those for the normal population (Pawlarczyk & Beckwith, 1987). Pawlarczyk and Beckwith (1987) note that there may be an under reporting of depression in the handicapped population. This under reporting is probably caused by a diagnostic overshadowing of certain depression symptoms that are regarded as

characteristic of individuals with mental handicaps as a group.

Kazdin, Matson, Senatore (1983) and Helsel and Matson (1988) found that adults with mental handicaps are able to reliably report on their level of depression. Furthermore, there appears to be evidence that depression and lack of a social support system are correlated in this population (Benson, Reiss, Smith, & Laman, 1985; Matson, 1982; O'Neil, 1982; Reiss & Benson, 1985). The higher the level of social support the lower the level of depression (Reiss & Benson, 1985; Reynolds & Miller, 1985).

Schaefer, Coyne and Lazarus (1981) looked at depression, life events, and social support. Schaefer et al. (1981) defined the social support system as consisting of three categories: social network, perceived support and actual support. They found that social network and perceived social support were separate but related variables. The connection between perceived social support and the symptomatology of depression appeared to be the strongest.

As in the case of depression, satisfaction with life appears to be mediated by the social support system. The greater one's ability to cope with psychological distress the greater one's perceived satisfaction with life. This effect seems to be mediated by the amount of social support received in terms of both quantity and quality (Schultz & Saklofske,

1983). As with depression, there may be a strong association between perceived social support and life satisfaction (Cohen & Hoberman, 1983). The qualitative aspects of social support (e.g., perceived support) appear to be more important than the quantitative aspects of social support (e.g., size of social network) in relation to satisfaction with life (Israel & Antonucci, 1987).

In addition, there is some evidence that locus of control plays a part in determining a person's level of life satisfaction. Gutek, et al. (1983) note that locus of control is an important internal referent in determining a person's satisfaction with his/her community. Hutchison (1984) makes a similar argument in discussing the leisure pursuits of people with mental handicaps. Furthermore, the feeling of personal control over events, especially negative events, decreases one's feeling of victimization and is shown to increase one's life satisfaction (Zautra & Reich, 1983). If one's social support system assists in coping with life events and encourages personal control, the tendency should be toward a higher level of life satisfaction (Schultz & Saklofske, 1983). This perceived life satisfaction is an important indicator of QOL. Parmenter (1988) points out, that functional, rewarding, and enriching life experiences are necessary in order for a person to report a high level of preceived life satisfaction.

It appears that most people with mental handicaps prefer to live in the community rather than in institutions (Heal & Chadsey-Rusch, 1985; O'Connor, 1983). However, satisfaction with their lives in the community appears to have received little attention in the research on community placement of people with mental handicaps (Heal & Chadsey-Rusch, 1985; Jackson, 1984). Chang's (1987) review of follow-up studies on adults with mental handicaps after graduating from a high school program typifies the way in which success in the community is measured. These studies measure success in terms of having employment and being financially stable.

Landesman-Dwyer and Berkson (1984) argue that friendship is the most important and valued component of community adjustment. However, the lack of friends is the most cited problem among members of this population (Edgerton and Bercovici 1976; Halpern, Nave, Close, Nelson, 1986; Heal & Chadsey-Rusch, 1985; O'Neil, 1984). Jackson (1984) comments that if success in the community continues to be measured in terms of competence and independence, when people with mental handicaps themselves stress personal satisfaction with life, then very little progress will be made in discovering why people with mental handicaps succeed or fail when placed in the community.

In terms of locus of control, adults with mental handicaps were found to be more satisfied with life when they lived

independently in apartments than their contemporaries who lived in group homes. The group homes had very regimented schedules for sleeping, eating and other activities not under the client's control. This inability of the clients to control their schedules apparently reduced their satisfaction with living in the group homes (Heal & Chadsey-Rusch, 1985).

#### PURPOSE OF THE STUDY

Hutchison's (1984) review of the quality of life of individuals with mental handicaps includes such issues as quality of social relationships, the opportunity to contribute to the community in a valued way and the degree to which a person has control of his/her life. However, there does not appear to be any study on this population which directly addresses the interactions of social support, life satisfaction and locus of control.

Zola (1983) suggests that it is not the quantity of tasks we can perform without assistance but the quality of life we can achieve with help from others, which is important. This present study attempted to look at this supposition by examining the interrelationships between social support, locus of control, and life satisfaction by investigation of three different living situations in which people with mental handicaps live. These three living conditions were: living at home with a relative, living in a group home, and living

independently. Conceptually, it appeared that each of these living situations represented different conditions in terms of types of social support and locus of control. Therefore, these living situations may have represented differences in life satisfaction, as determined by the types of social support and the individual's perceived control over this support.

The supposition that the three living situations represented different conditions of support, locus of control, and life satisfaction was based on the quantitative differences between social support networks in the different living conditions of people with mental handicaps as reported by Hill et al. (1984), Malin (1982), Romer and Heller (1983), Seltzer (1981) and others discussed earlier. It was also proposed that different levels of control would be exerted by the subjects in these living conditions. Each of these living conditions appeared to have different levels at which the subjects were allowed to control their environment (contingency) (Devellis & McCauley, 1979; Dudley-Marling et al., 1982).

Although the three levels of support were investigated, it was believed that "perceived support" would be the critical element in determining the level of life satisfaction felt by the subject. The other two levels were included in an attempt to examine whether size of the social support network and the

amount of actual support perceived to be given were less important than the amount and type of perceived support recognized by the subject. In addition, it was anticipated that this perceived support would be mediated by the subject's locus of control orientation.

In this study variables were examined which tended to be more qualitative than quantitative in nature. Examining these variables and their possible interrelationships were a further attempt to define and refine the concept of quality of life, at least in terms of the contribution made by the social support system.

## CHAPTER III

### METHODOLOGY

#### INTRODUCTION

This chapter consists of four sections. The first section describes the subjects. The second is a general discussion on the administration of testing instruments on subjects who have mental handicaps. The third section deals with (1) the procedures involved in administration of the instruments used, (2) the instruments used to collect the data, and (3) the problem of validity with social support instruments. The last section is a short description of how the data was analyzed.

#### Subjects

The original proposal for subjects consisted of three groups of 16 subjects. Each group was to contain eight male and eight female adults with mental handicaps in the mild to moderate range of handicap. However, such samples were not achieved because of a shortage of eligible participants in certain categories and difficulty in obtaining informed consent from parents and guardians. The study involved 41 subjects of whom 26 were male and 15 were female. This 2:1



ratio of males to females in the subject pool reflects the general population from which the subjects were obtained. The subjects were between the ages of 20 and 55 with the average age of 35 years of age. (Refer to Table 3.1 for details).

The subject's intelligence quotients ranged from mildly to moderately mentally handicapped as measured by a combination of the Raven's Coloured Progressive Matrices (Raven, Court, & Raven, 1977) and the Crichton Vocabulary Scale (Raven, Court, & Raven, 1983).

The subjects came from two urban centers in Alberta. They were selected for the study based on three criteria. First, they were over eighteen years of age. Second, they fell within the range of mildly to moderately handicapped. Thirdly, they were willing to volunteer for the study.

The subjects were further divided according to the three living arrangements. The first group lived in the parental home or home of a relative (i.e., sister). This group consisted of 6 males and 3 females. Average age was 38.6 years. The second group lived in group homes and consisted of 5 males and 5 females. The average age was 31.1 years. The criteria for being placed in this second group was the presence of at least one paid staff person on the living site.

The third group lived independently in the community and consisted of 15 males and 7 females. Criteria for being

Table 3.1

The Range, Mean, and Number of Subjects as Per Living Arrangements of Subjects

Group	Number of Males	Number of Females	Range of Ages (in Yrs)	Mean of Age (in Yrs)	Range of I.Q. I.Q.	Mean of
Living at Home	6	3	26-57	38.6	50-80	63.1
Living in Group Home	5	5	20-52	31.1	45-86	72.3
Living Independent	16	6	20-55	35.6	53-88	70.8
Total	27	14	20-57	35.1	45-88	68.7

placed in this group was that no staff lived on site.

Testing people with mental handicaps

"The literature on survey research suggests that obtaining valid information from anyone can be troublesome" (Sigelman, Budd, Spanhel, & Schoenrock, 1981, p.53). The problem of getting valid information from people with mental handicaps may be even more difficult because, by definition, they have difficulty with receptive and expressive forms of communication (Linski & Leggett, 1960; Sigelman, Schoenrock, Spanhel, Hromas, Winer, Budd, Martin, 1980; Sigelman et al., 1981).

Rosen, Floor, and Zisfein (1974) noted that the response-evoking properties of a particular question form may

contribute significantly to the response variance, above and beyond the content of the question. Sigelman, et al. (1980, 1981) showed that among persons with mental handicaps, the easiest questions to answer were of the "yes-no" type. However, Flynn (1986) in her review of the previous literature found that the "yes-no" type questions tended to receive an acquiescent type response (e.g., the tendency to respond affirmatively regardless of the question's content), thereby, invalidating the responses of these types of questions. Flynn (1986) and Sigelman et al. (1980, 1981) both noted that open-ended questions were likely to promote the most appropriate responses. However, these type of questions were the hardest type of questions for people with mental handicaps to answer.

Sigelman, Winer, and Schenrock (1982) as part of a larger study on interviewing people with mental handicaps investigated the response validity of their subjects to different types of questions. Their subject pool included people with severe, moderate and mild handicaps. The results of this investigation showed that questions which had a pictorial multiple choice format elicited the highest number of appropriate responses. Verbal "yes-no" type questions came next, followed by verbal either-or questions. The types which elicited the fewest appropriate responses were first, verbal multiple choice and then verbal open-ended questions in that

order (Sigelman et al., 1982).

Many of the investigators (Flynn, 1986; Rosen et al., 1974; Sigelman et al., 1980, 1981, 1982) noted that as the IQ of the subject increased, both the number of appropriate responses increased and the tendency to acquiesce decreased.

The present study, in an effort to maximize the possibility of receiving appropriate responses, used subjects in the mild to moderate range of IQ handicap. In addition, two of the instruments which measured social support (Inventory of Socially Supportive Behaviors (ISSB) and Social Support Behaviors (SS-B) Scale) as well as the Locus of Control Scale and the Life Satisfaction Scale all used a multiple choice format. Lastly, the present study used visual cues in a histogram form to further improve the possibility of receiving an appropriate response (Flynn, 1986; Helsel & Matson, 1988; Kazdin et al., 1983; Sigelman et al., 1982) (Refer to Fig.3.2 - 3.5). Each figure will be presented as each measure is discussed.

An interview format was used. The interviewer asked the questions on the instruments and gave clarification, when necessary. The subject was required to respond verbally or by pointing to the answer on the graph or both, depending upon how the subject wished to respond. This interview format followed Sigelman et al.'s (1981) advice that verbal interviewing is generally applicable to adults who are mildly

or moderately mentally handicapped. In addition, they stated that pictures tended to increase responsiveness.

In the present study, the open-ended questioning of the Norbeck Social Support Questionnaire (Norbeck, Lindsay, & Carrieri, 1981) would likely produce appropriate responses due to the factual nature of the responses being elicited. Throughout the questioning, the author also prompted the subject concerning the nature of the response required by pointing to and repeating the responses listed on each of the histograms a number of times during the use of that particular histogram.

Most previous studies did not ask the person with mental handicaps how he or she felt. The assumption was that this population was incapable of providing accurate and reliable information on how they felt. However, even in cases where they did provide information, the reliability and validity of the information was rarely tested (Sigelman, Schoenrock, Winer, Spandrel, Homas, Martin, Budd, & Bensberg, 1979).

Some studies have investigated the ability of people with mental handicaps to reliably report information on how they feel. For example, Kazdin, Matson and Senatore (1983) using a modified version of the Zung Self-Rating Depression Scale and Beck Depression Inventory found that the people with mental handicaps were able to reliably report on their depression. These two measures had a significant correlation with each

other ( $r = .59$ ,  $p < .001$ ) (Kazdin et al., 1983). The questions on the measures were modified by simplifying the language. The self-report ratings of the people with mental handicaps were then compared to the depression ratings reported by staff. The results indicated that the reports of depression by people with mental handicaps were relatively consistent with the reports of depression on the same people given by staff. This seemed to indicate they were getting valid responses from the subjects with mental handicaps.

Kazdin et al. (1983) did not report on the validity of the modified Zung Self-Rating Depression Scale. However, when the Psychopathology Instrument for Mentally Retarded Adults was used to classify subjects as depressed or not depressed, the depressed group scored significantly higher on the Zung scale than the non-depressed group ( $F(1,104) = 4.07$ ,  $p < .05$ ).

Reiss and Benson (1985) also found that persons with mental handicaps could reliably report on their depression. In addition, they were able to reliably report on their social support network (Reiss & Benson, 1985) and their interpersonal problem-solving skills (Benson, Reiss, Smith, Laman, 1985). Sigelman et al. (1980) reported that their subjects, when answering "yes-no" type questions, agreed with the responses of care-givers on the average of 75% of the time. Sigelman et al. (1980) also found that the correlation on a one week test-retest of appropriate responses was 0.96.

Finally, the studies by Brown and his colleagues (1988) and Hughes and Segall (1988) on the QOL of mentally handicapped adults in the community found that the answers given by subjects correlated around 0.75 with those of parents and caregivers (Brown, Bayer, Brown, 1988; Hughes & Segall, 1988). These surveys consisted of many open-ended types of questions such as "How many friends do you have?" as well as lists relating to leisure activities, chores done around the home and possessions owned by the subjects. These questionnaires were presented to the subjects orally.

The above evidence suggests that "yes-no" type questions, although the easiest for this population to answer, should be avoided because of the problem of acquiescence. Therefore, the present study employed verbal interviewing with multiple-choice answers. The multiple choice answers were presented both orally and in histogram form using a system similar to Helsel and Matson (1988).

#### ASSESSMENT PROCEDURE

All data for this study were collected during a four month period. A single interview session was held with each subject and typically lasted between an hour and an hour and a half. All interviews were conducted by the author. They were conducted in a private location familiar to the subject occupied by only the author and the subject. A consent form

Table 3.2

Order of Administration For Test Instruments

1. Norbeck Social Support Questionnaire- Total Network Variable.
  2. Inventory of Socially Supportive Behaviors (ISSB)
  3. The Internal, Powerful Others, Chance (IPC) Scale
  4. The Social Support Behaviors (SS-B) Scale
  5. Life Satisfaction Scale for Persons with Developmental Disabilities
  6. The Raven's Coloured Progressive Matrices and The Crichton Vocabulary Scales.
- 

was read to each subject before the interview commenced, which was done in the presence of a witness whenever possible. Following the reading of the consent form and the providing of clarification where necessary, the subject was asked to give consent to participate by signing the consent form. Consent was obtained from the parent or guardian where required, prior to the interview with the subject.

The subjects responded to several standardized measures each of which is briefly described below. Table 3.2 lists all the instruments in the order in which they were presented to the subject.



### INSTRUMENTS

#### Norbeck Social Support Questionnaire- Total Network Variable

The first instrument to be administered was the Norbeck Social Support Questionnaire (Norbeck, Lindsey, & Carrieri, 1981). Only the questions relating to the Total Network Variable were employed. This instrument examined the structure of the subject's support system in terms of number of people and amount of contact with these people (Cohen & Willis, 1985).

This variable consists of three questions. First, the subject is asked to list the important people in his/her life. The score is determined by counting the number of people listed (network size). The Second question asks about the length of time the subject has known the person. Scoring ranges from 1= less than 6 months to 5 = more than five years (duration of relationship). The last question asks the subject to estimate how often he/she and the person named have contact. Scoring ranges from 1= once a year or less to 5 = daily (frequency of contact) (Norbeck et al., 1981). The total score for the Total Network Variable is determined by adding the scores of the questions together. The one week test-retest reliability for the Total Network variable in a population of university students was 0.92 (Norbeck et al, 1981). In terms of validity, the Total Network Variable indicated a modest correlation of 0.47 with the Social Support Questionnaire of Cohen and Lazarus (Schaefer, Coyne, &

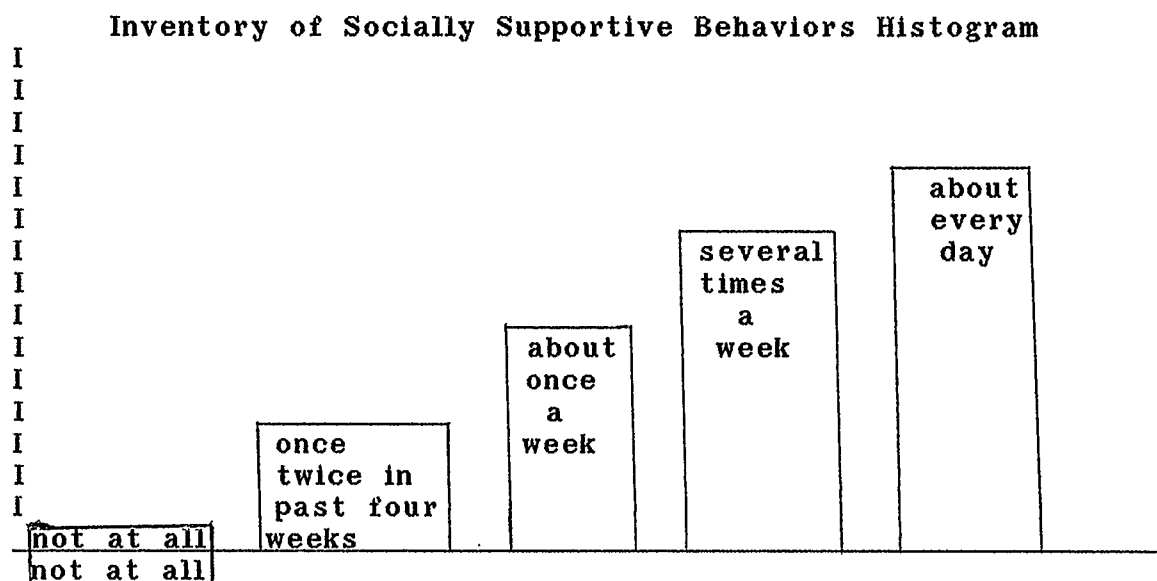
Lazarus, 1981). The Social Support Questionnaire of Cohen and Lazarus measures social network and the tangible support provided by the network. The Norbeck Social Support Questionnaire, Total Network Variable was used in this study to measure the size and density of the subject's social support network.

#### Inventory of Socially Supportive Behaviors (ISSB)

The Inventory of Socially Supportive Behaviors (ISSB) (Barrera, Sandler, & Ramsay, 1981) was the second instrument to be administered. The purpose of this measure was to assess the type and amount of the six modes of support that the individuals might be receiving. The six modes investigated by this measure were: material aid, behavioral assistance, intimate interaction, guidance, feedback, and positive social interaction (Barrera & Ainlay, 1983) (Appendix B). The ISSB appears to measure the amount of "actual support" the subject believes he/she receives. M. Barrera, Jr. (personal communication, Dec, 1989) states that the ISSB clearly measures a concept which is different from that of either support satisfaction or perceived availability of social support.

The measure consists of 40 items of helping behavior. The subject is asked to rate each of the items on how often each of the items of help was given to them in the past four

Figure 3.1



weeks. Each item is scored on a five point scale; 1 = not at all, 2 = once or twice, 3 = about once a week, 4 = several times a week, and 5 = about every day. A visual prompt in the form of a histogram was used in this study (See Fig.3.1). The histogram was created and provided to the subjects by the author. In addition, questions were restated in simpler language if it appeared that the subject did not understand the initial question. The Total Score is calculated by adding the frequency ratings on each item together.

A two day test-retest reliability correlation of 0.88 and a one month test-retest reliability of 0.80 was reported by Barrera & Ainlay (1984) on a population of college students. Valdenegro & Barrera (1983) cited a one month test-retest reliability of 0.63. The internal consistency of the

instrument was measured by coefficient alpha. Alpha coefficients of 0.93 and 0.94 were obtained on the first and second administration respectively in a population of college students (Barrera, Sandler, & Ramsey, 1981).

The ISSB was compared to the Arizona Social Support Interview Schedule (ASSIS). The ASSIS measures both available network size and actual social support network size in terms of the same six modes of support as the ISSB. Results showed that the two measures were measuring a similar concept. The measure of available support on the ASSIS had an  $r = 0.422$ ,  $p < 0.01$  and social network size had a  $r = 0.322$ ,  $p < 0.05$  with the ISSB (Barrera et al., 1981).

The ISSB has also been compared to the Moos (1975) Family Environment Scale (FES). The FES measure assesses an individual's subjective appraisals of his/her social environments on nine subscales. The Cohesion subscale measures the frequency of supportive interactions among family members. This subscale, when administered to the same sample as the ISSB, obtained a positive correlation with the ISSB [ $r(41) = 0.359$ ,  $p < .01$ ] (Barrera et al., 1981). These correlations with the ISSB are probably appropriate considering that the measures used in the comparison are measuring similar, but not the same concepts as the ISSB.

### Social Support Behaviors (SS-B) Scale

The Social Support Behaviors (SS-B) Scale (Vaux, Riedel, & Stewart, 1987) was the fourth instrument to be administered. It is a measure of "perceived potential support" of the subjects social support system (Vaux et al., 1987). Perceived support is the third part of the social support system. The first part is the social support network and the second part is the actual support received (Barrera, 1986; Barrera & Ainlay, 1983; Vaux et al., 1987).

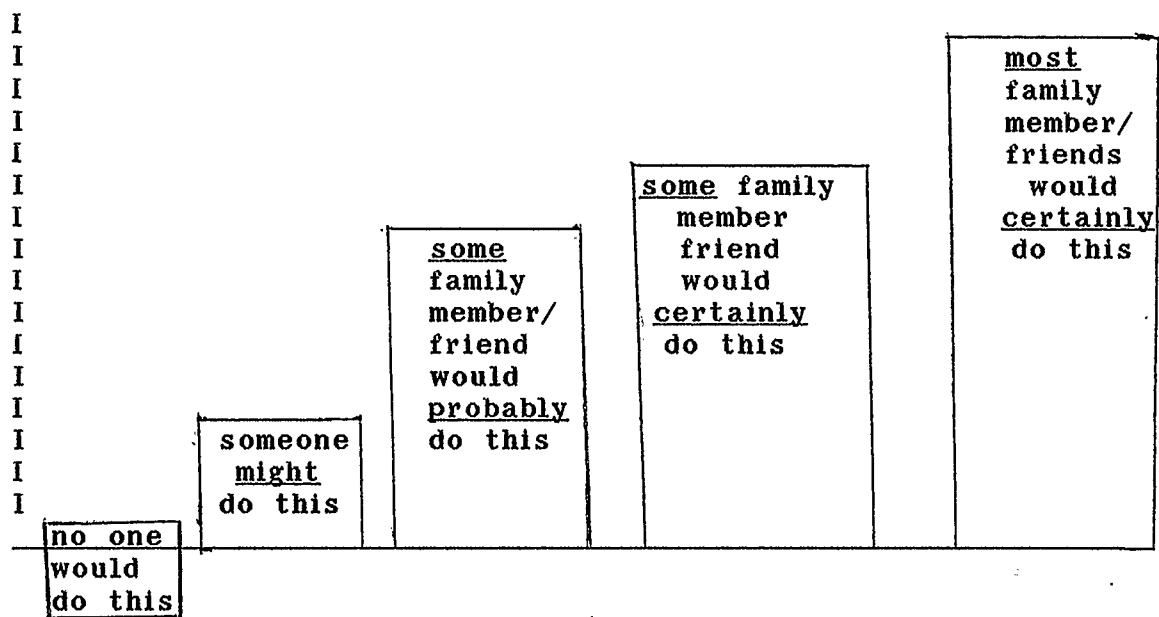
The SS-B scale, although developed independently, is very similar to Barrera's et al. (1981) ISSB. The SS-B Scale looks at five different modes of support which closely correspond to the ISSB's modes. Specifically, they are: financial assistance, practical assistance, emotional support, advice/guidance, and socialization (Vaux et al., 1987) (Refer to Appendix C).

Each item is answered on a Likert type scale with answers ranging from 1 = no one would do this to 5 = most family members/ friends would certainly do this. A histogram type of visual prompt was also used with this measure to help the subject remember the form of answer required (See Fig. 3.2). In addition the important prompt words in the histogram were underlined.

On the original questionnaire the subject is required to respond to each of the questions twice, once for family and

Figure 3.2

## Social Support Behaviors Scale Histogram



once for friends. In an effort to try to reduce the complexity of the task in this study, the subjects were only asked to reply once to each question. The subject was asked "whether anyone, family or friends" would do the task named in the question. In addition, the question was restated in simpler language, as required, if the subject asked or appeared to not understand the initial question.

The SS-B Scale shows good internal consistency with Cronbach's alphas exceeding 0.85 (Vaux, Burda, & Stewart, 1986). In addition, Vaux and Wood (1987) reported that the scale showed excellent reliability ( $\alpha = 0.95$ ). These studies were mostly carried out on college students.

The content validity of the SS-B was tested by having

three different groups of people (faculty, graduate students and undergraduate student judges) classify the items as to their proper mode categories. These judges correctly classified 92% of the emotional support items, 89% of the socializing items, 91% of the practical assistance items, 82% of the financial assistance items, and 90% of the advice/guidance items. A factor analysis also confirmed the placement of the items in each of the modes of support (Vaux et al., 1987).

The SS-B and the ISSB were tested for their convergent validity in each of the modes of support. The two measures showed significant convergence on each of the modes ranging from  $r = 0.04$  to  $0.42$ . Although most comparisons were significant they were not very strong. This was expected because the ISSB is intended to measure perceived enacted support and SS-B is intended to measure available support. In addition, the modes of support for each measure differ somewhat and the subscales of the ISSB are somewhat mixed in content (Vaux et al., 1987).

Finally, the levels of mode specific support were tested across six vignettes. The subjects, 120 college undergraduates, were asked to complete the SS-B as though they were the person in the vignette. The students had previously filled out the SS-B for their own lives. When the five mode specific support variable problems were compared to

the students own previously filled out SS-Bs, there was a significant difference for each specific problem area described by the vignette. Each mode condition targeted as deficient by the vignette was correctly identified as deficient by the student subjects on the SS-B (Vaux et al., 1987).

#### The Problem of Validity in Measuring Social Support

Unlike many other psychosocial constructs, social support may be fully understood only from a purely personal standpoint (McColl & Skinner, 1988). Therefore, qualitative measures as in some social support instruments are limited by their subjectivity. When asking someone else to assess a person's social support their perception may represent a totally different perception of that support from that of the subject under study (Starker, 1986).

There is also the problem of social desirability. A subject may be unwilling to admit openly to a socially undesirable state, depression or social isolation (Starker, 1986).

There is also the problem of comparing one social support measure with another. This is because of the many different definitions and models prevalent in the area of social support (Pearson, 1986). Different measurements designed to comply with the researcher's definition of social support



make comparisons between instruments difficult (Barrera, 1986). Comparison is also difficult because of the variety of emphasizes applied to social support concepts in different measures. The mixing of social support concepts can also seriously lower the internal consistency of a measure (Barrera, 1986).

The measures of social support in this study were chosen for the apparent purity with which they each measured the concepts of network size, perceived support, and actual support as perceived by the subject. In addition, the perceived support measure (SS-B) and the actual support measure (ISSB) were chosen because of their similarity in item construction which enabled comparison between the two measures (See Appendix B & C).

#### Internal, Powerful Others, Chance, (IPC) Scale.

The Internal, Powerful Others, Chance (IPC) Scale (Levenson, 1972) measures the internal-external locus of control of the subject. The external dimension is divided into two segments. It places those subjects who feel that their lives are controlled by powerful others in one category and those subjects who believe their lives are controlled by chance or fate in the other (Levenson, 1972).

The IPC Scale uses a 6-point Likert type scale to ensure that the three sub-scales are statistically independent of

one another. A subject receives a score on each scale. Theoretically, a subject could get a high score on all three dimensions. The items are divided equally among the three personality orientations (I, P and C). In this study, the responses to the scale were presented in histogram form as a visual cue to each subject to assist him/her in responding appropriately to the questions (Refer to Fig. 3.3). In addition, questions were explained or restated in simpler terms if the subject indicated he/she did not understand the question.

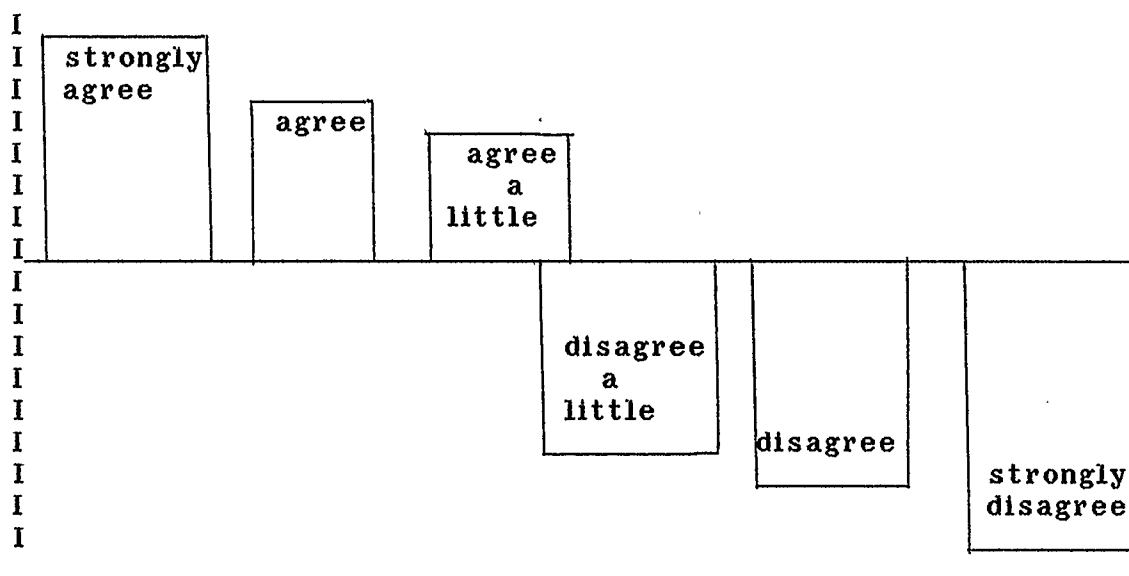
Levenson (1974) conducted two studies on college students to assess the validity of the IPC Scale. She reported that each sub-scale had adequate internal consistency ( $r = 0.64$  for the I scale,  $r = 0.77$  for the P scale, and  $r = 0.78$  for the C scale). The I scale scores were significantly different from the P and C scale scores ( $t = 12.42$ ,  $p < 0.001$ :  $t = 13.28$ ,  $p < 0.001$ ) This high significant difference is consistent with past findings using Rotter's I-E Scale (Levenson, 1974).

Correlations among the three scales indicated a moderate correlation between P and C scales ( $r = 0.59$ ) and both were negatively correlated to the I scale ( $r = -.14$  and  $-.17$ ).

It was also reported that the subjects who scored high on the C scale were the least likely to be involved in social issues. This is conceptually correct as the high Chance

Figure 3.3

## The Internal, Powerful Others, Chance Scale Histogram



believer would see no hope to control events (Levenson, 1974).

In the second study, Levenson (1974) tested 329 college students. A principle component analysis was carried out on the data. The Varimax rotation yielded seven factors. The first factor was called P and consisted entirely of original P items. The second factor was called I and consisted entirely of original I items and the third factor called C consisted entirely of the original C scale items. There was almost no overlap of items on the P, I, and C factors.

Levenson (1972) also reported the scale was not correlated to a measure of social desirability ( $r$  = between 0.00 and 0.20). One week test-retest reliabilities of  $r_s$  = 0.64,

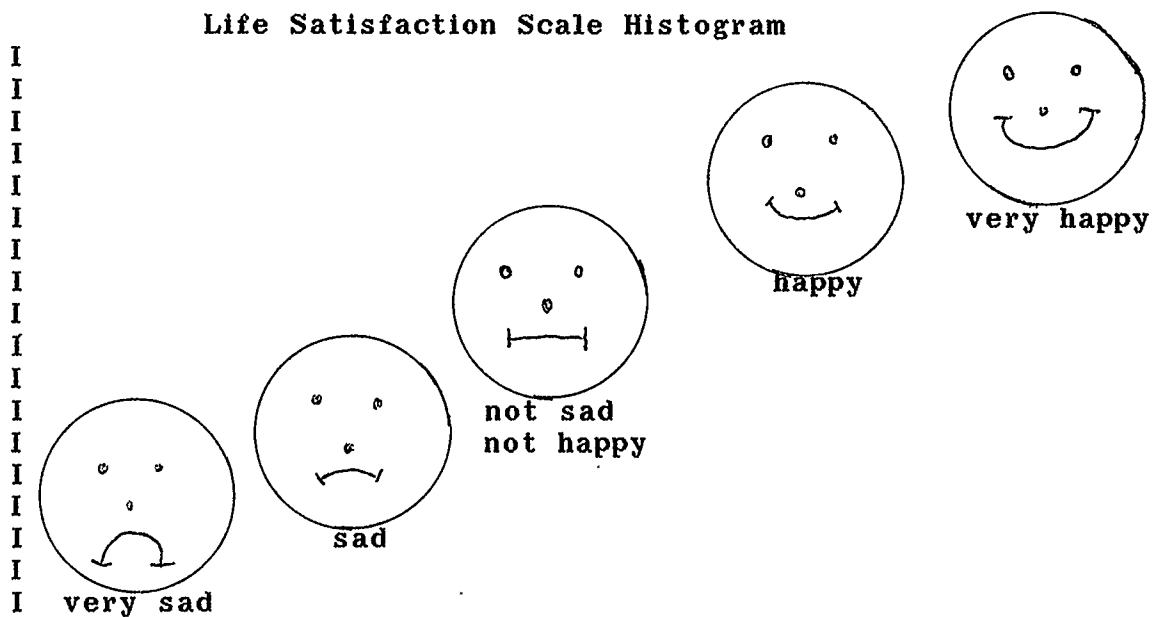
0.74, and 0.78 for Scale I,P,C, respectively were also recorded (Levenson, 1972, 1974).

#### Life Satisfaction Scale for Persons with Developmental Disabilities

The Life Satisfaction Scale for Persons with Developmental Disabilities was developed by Rinck (1986) and her colleagues. They were dissatisfied with the way life satisfaction had been measured in the population of people with mental handicaps (Rinck, 1986). Taking into consideration the findings by Kazdin et al. (1983), Reiss and Benson (1985), and Benson et al. (1985) on the ability of people with mental handicaps to reliably report on their feelings, Rinck and her colleagues developed a self-report scale to measure the life satisfaction of people with mental handicaps.

The instrument consists of two parts. The first part consists of 5 pre-test questions to determine if the subject can differentiate between happy and sad. These questions are similar to the ones used by Kazdin et al. (1983) in their pre-testing of subjects with mental handicaps. Each subject must correctly comprehend 3 of the 5 questions in order to "pass" the pre-test. The second part of the instrument consists of nine questions ranging from "How happy are you about the friends you have?" and "How happy are you about what you do during the day?" to "When you think about

Figure 3.4



yourself over the past few weeks, how do you feel?" The results are measured on a five point scale ranging from very sad to very happy. In this study, each subject was provided with a visual cue made up of a five point scale in the form of happy faces (See Fig. 3.4) to help him/her to respond. This visual cue was similar to the one described and used by Rinck (1986) with her subjects.

Rinck (1986) when testing for the reliability and validity of this measure gave it to each of her 120 subjects and to informants who knew the subjects well. The total scale scores of the subjects and the informants were significantly correlated. However, the subjects consistently perceived their satisfaction as being higher than reported by the informants. The internal consistency of the subjects form was

good (Cronback's Alpha = 0.83).

Raven's Coloured Progressive Matrices and the Crichton  
Vocabulary Scales

The Raven's Coloured Progressive Matrices (CPM) (Raven et al., 1977) and the Crichton Vocabulary Scale (CVS) (Raven et al., 1983) were used to estimate the "general Intelligence" of the subjects in this study. The CPM is recommended for use with people who have mental disabilities. It is designed to assess the degree to which a person can think clearly: forming comparisons, reasoning by analogy and organizing spatial perceptions into systematic related wholes. Although the CPM can differentiate clearly between different degrees of intellectual impairment, Raven, Court, and Raven (1977) argued that it is not a test of general intelligence. A complimentary test, in this case the CVS, was needed to access the subject's general level of acquired knowledge. Although the two are only moderately inter-correlated with one another ( $r = 0.65$ ), Raven et al. (1977) state that the CPM, a visual test, together with the CVS, a verbal test, provides all the necessary information that would be obtained from a single test of "general intelligence".

The CPM consists of three sets of problems (A, Ab, B). Each set consists of 12 problems which increase in difficulty as one progresses from 1 to 12 and from Set A to Set B. The

problems are printed on a brightly coloured background. This makes the nature of the problem being solved more obvious without contributing to the solution (Raven et al., 1977).

The complementary instrument used to measure general knowledge is the Crichton Vocabulary Scales (CVS) (1983). The CVS is designed to be used with the CPM. The CVS consists of two parallel lists of approximate difficulty. The first list consists of the first 40 words of the Miller Vocabulary Scales (Raven et al., 1977). The second list was derived from a list of 160 words. The second list was then constructed in such a way that the subject would explain the meaning of the word in a particular position just as frequently as the word in the same position of the first list (Raven et al., 1983).

The reliability and validity of the CPM was tested in 1956 by Raven, Court and Raven. They tested 56 children aged  $6\frac{1}{2} \pm$  one year and 61 children aged  $9\frac{1}{2} \pm$  one year. The six week test-retest reliability was 0.6 for the  $6\frac{1}{2}$  year old group and 0.8 for the  $9\frac{1}{2}$  year old group. The difference was attributed to sensitivity of the measure to fluctuations in the output of intellectual activity in early childhood.

Hill (Raven et al., 1977) tested 35 normal children and 29 emotionally disturbed children between the ages of  $6\frac{1}{2}$  and  $12\frac{1}{2}$ , three times, at intervals of three months with both the CPM and the CVS. The internal consistency of the CPM was measured by calculating the correlations between the sets A,

Ab, and B. They showed a consistent correlation with each other ranging from a high of 0.83 to a low of 0.64, for both groups. The test-retest reliability ranged from 0.89 to 0.98 for the normal group and 0.85 to 0.92 for the emotionally disturbed group over the nine months.

Raven et al. (1977) tested the CPM's validity by comparing it to the Terman-Merrill Scale (Form L) and Crichton Vocabulary Scale for children 9 years of age. The Terman-Merrill (Form L) had a correlation coefficient of 0.66 with the CPM and a correlation of 0.65 with the CVS. Hill's (Raven et al., 1977) inter-test correlation between CVS and CPM ranged from 0.88 to 0.90 for the normal group and from 0.63 to 0.66 for the group of disturbed children.

The test-retest reliability of the CVS as tested by Raven et al. (1977) over six weeks was 0.95. The test's validity was measured by comparing it to the CPM and the Terman-Merrill (Form L). The CVS was moderately correlated to the CPM ( $r=0.65$ ) and more strongly with the Terman-Merrill (Form L) ( $r=0.83$ ). The CVS showed an internal consistency of 0.97 in the normal group and ranged from 0.63 to 0.66 for the group of disturbed group of children, tested over nine months by Hill (Raven et al, 1974).



### ANALYSIS OF THE DATA

Each subject was given an identification code which was attached to their personal scores for each of the measures. The master sheet which contained the name of the subject was the consent form. This form was removed once all the data sheets for each of the subjects had been coded. The author then transferred all the responses to data sheets. No subject data was lost and all measurements were fully completed except one. One male subject in the group which lived at home was non-verbal, therefore he was unable to complete the CVS. As a result, the missing data for this male subject was replaced by the group mean of the group which lived at home. Although the mean is the best estimate of the missing score, replacing missing data with a mean results in some reduction of the variability scores and thus lowers correlations. However, this is only one case and according to Tabachnick and Fidell (1983) small amounts of randomly missing data rarely pose serious problems.

There were several changes in the scoring of the measures. First, the Life Satisfaction for Persons with Mental Handicaps (Rinck, 1986) scores were converted, for convenience into percentage scores. Second, the total Score of the SSB (Vaux et al., 1987) was reduced by five points due to the deletion of the question " Would loan you a car if I needed one". This question was deleted from the scoring of the questionnaire because the subjects lacked experience with

driving cars. Third, in the IPC Scale (Levenson, 1972) the amount added to eliminate negative numbers from each of the scales (I,P, and C) was reduced from 24 to 21 because one question from each scale dealing with the driving of a car was eliminated. Finally, the percentile scores of the CPM and the CVS (Raven et al., 1983) were converted into I.Q. scores using the conversion table from Raven et al. (1977), Orme (1970) and Peck (1967).

Changes were also made to the modes of the ISSB scale which made these modes more equivalent to the modes of the SS-B scale (Refer to Appendix B & C). In other words, the questions concerning actual support of a particular mode of the ISSB scale was then approximately equivalent to the questions asked concerning perceived potential support, for the same mode on the SS-B scale. The impact of these changes was to allow for a more accurate comparison between the modes of the two scales.

The first change was to combine the questions which made up the modes, guidance and feedback of the ISSB scale. This combination of modes was then approximately equivalent to the questions which made up the mode "advice/guidance" on the SS-B scale. Second, two of eight questions which made up the behavioural assistance were taken from this mode and added to the questions which made up the mode material aid. This resulted in material aid (ISSB) being approximately

equivalent to financial support on the SS-B scale and behavioural assistance (ISSB) being approximately equivalent to its perceive mode counterpart of practical aid on the SS-B (Details in Appendix B).

The members of the three living condition groups (living at home, living in a group home, and living independently) were selected by their availability. A statistical analysis of the differences between the groups, in total and in their gender groupings, was done using the non-parametric statistic; Mann-Whitney U. This statistic was used because the fewest assumptions about the population had to be made. The two samples being compared had to be independent from one another. It was also assumed that there was an underlying continuous scale of measurement and the measurement was at least ordinal in character (McCall, 1975). The Mann-Whitney U Test tests the difference between the relative independent frequency distributions of two sample populations (Mendenhall, 1979). This test was used because of the small sample sizes and the fact that nothing was known about the population distribution of these variables when measurements were taken from a population of people with mental handicaps.

Using the Mann-Whitney U test, the analysis of the comparison of the three Categories of the Locus of Control scale on the variables, in total and in their gender groupings, was performed. The reasons for using this

statistic in this case are the same as above.

Finally, the associations between the variables was assessed using the Pearson Product Moment Coefficient of Correlation. All 41 observations on each variable were used in determining the correlation. It was assumed that the joint distribution between any two variables for which a correlation was determined had a bivariate normal distribution.

## CHAPTER IV

### RESULTS

#### INTRODUCTION

The investigation involved the participation of 41 subjects showing mild to moderate mental handicaps living in two urban areas of Alberta. The subjects were divided by living situation into three groups. The subjects of Group 1 lived on their own in the community and consisted of 16 males and 6 females. The subjects of Group 2 lived in agency group homes in the community and consisted of five males and five females. The subjects of Group 3 lived at home with a relative and consisted of six males and three females.

Demographic data were collected on each subject in areas of age, intelligence and number of years they had lived in their present setting. Subjective measures were used to obtain the subject's opinion on the size and density of his/her social network, on the amount of "actual perceived support" he/she believed he/she was receiving, on the amount of "perceived potential support" the subject believed he/she was available to tap into (if needed), his/her perceived locus of control orientation, and his/her present life satisfaction.

The aim of this investigation was to explore how these

subjective measures might be related to one another. The project was designed to be an exploratory study although control procedures were incorporated wherever possible.

The findings of the investigation were derived from the following sources:

- Demographic data: age and number of years lived in present setting from the Data Sheet (Appendix A)
- Intelligence scores from the combined scores of the Raven's Coloured Progressive Matrices (Raven et al., 1977) and Crichton Vocabulary Scales (Raven et al., 1983)
- Size and density of social support networks from the Norbeck Social Support Questionnaire - Total Network Variable (Norbeck et al., 1981).
- Actual amount of support the subjects believed they were receiving from the Inventory of Socially Supportive Behaviors (ISSB) (Barrera et al., 1981) (Appendix B)
- perceived potential amount of support from the Social Support Behaviors (SS-B) Scale (Vaux et al., 1987) (Appendix C)
- the locus of control orientation of the subjects from the Internal, Powerful Others, Chance (IPC) Scale (Levenson, 1972)
- the life satisfaction of subjects from the Life Satisfaction Scale for Persons with Developmental

Disabilities (Rinck, 1986).

#### THE DIFFERENT MODES OF THE ISSB AND SS-B SCALES

The instruments of actual perceived support (ISSB) and perceived potential support (SS-B) measure different modes of support. For the purposes of the investigation, the instrument of actual perceived support (ISSB) measured five modes of support: material aid, behavioural aid, social interaction, emotional support, and guidance/feedback. The perceived potential support instrument also measured five modes of support: financial assistance, practical assistance, socialization, emotional support, and advice/guidance. The questions which were asked in a particular mode in the measure of actual perceived support were approximately equivalent to the questions asked in the measure of perceived potential support for that same mode. In other words, the questions that asked about actual perceived material aid on the measure of actual perceived support (ISSB) were approximately equivalent to the questions asking about perceived potential material aid on the potential perceived social support measure (SS-B).

Actual Perceived Material Aid (Actual MA) on the ISSB scale was equivalent to Perceived Potential Financial Assistance (psFI) on the SS-B scale. Therefore, the counterpart to actual perceived behavioral assistance on the

actual perceived measure of social support was perceived potential practical assistance on the perceived potential measure of social support. Similarly, the equivalent to actual perceived social interaction was perceived potential socialization, actual perceived emotional support was perceived potential emotional support, and actual perceived guidance/feedback was potential perceived advice/guidance.

### DESCRIPTIVE STATISTICS

#### Means and Standard Deviations of the Variables

Table 4.1 introduces the variables and their abbreviations used in the rest of the chapter. Table 4.2 summarizes the means and standard deviations of the variables for the three living conditions.

The scores on the variable Network maybe deflated due to a primacy effect. If the subjects had been asked about their social support networks again at the end of the interview the scores may have been higher. The subjects having had the time to think about their networks. However, all the subjects were asked the same questions in the same order, therefore this primacy effect would probably effect all groups equally. Any comparative differences between the groups should be caused by something other than the primacy effect.

It is also noted that on the Network variable 14 of the 22 subjects living independently in the community lived



Table 4.1

The Description of the Variables and Abbreviations, What They Represent, and From Which Measure Each was Derived

Variable Abbreviation	Description	Measure
Age	Age of the Subject	data sheet
IQ	Intelligence Quotient	Coloured Progressive Matrices & CVS
Yrsinset	Number of years subject has lived in present setting	data sheet
Actual T	Total of the five modes of actual perceived support	ISSB
Actual MA	Amount of Actual Perceived Material and financial aid received by each subject	ISSB
Actual BA	Amount of Actual Perceived Behavioural Aid received	ISSB
Actual SI	Amount of Perceived Social contact received by subject	ISSB
Actual ES	Amount of Actual Perceived Emotional Support received	ISSB
Actual G	Amount of Actual Perceived Guidance each subject received	ISSB
ps Tot	Total of the five modes of perceived potential support	SS-B
psFI	Amount of Perceived Potential Financial Assistance	SS-B
psPA	Amount of Perceived Potential Practical Assistance	SS-B
psSI	Amount of Perceived Potential Social Contact	SS-B
psES	Amount of Perceived Potential Emotional Support	SS-B

Table 4.1 (continued)

Variable Abbreviation	Description	Measure
psG	Amount of Perceived Potential Guidance	SS-B
Network	Number of contacts Times the number of times contacted	Norbeck
LocI	Locus of Control (Internal)	I,P,C. Scale
LocP	Locus of Control (Powerful Others)	I,P,C. Scale
LocC	Locus of Control (Chance)	I,P,C. Scale
Lifesat	Amount of Satisfaction subject has with present life circumstances	Life Satisfaction Scale

Table 4.2  
Means and Standard Deviations for the Three Groups:  
1) Lived Independently, 2) Lived in Group Homes, And  
3) Lived at Home

Variables	Independent Group 1 (n= 22)		Group Home Group 2 (n= 10)		At Home Group 3 (n= 9)	
	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.
Age	35.34	9.34	33.60	12.49	38.56	12.02
IQ	70.77	8.13	69.55	12.76	63.00	12.01
Yrsinset	7.05	6.22	5.90	5.93	38.56	12.02
Actual T	77.27	22.47	90.80	21.07	83.67	35.88
Actual MA	4.18	0.50	4.10	0.32	4.56	1.67
Actual BA	11.55	3.38	15.50	3.57	13.00	6.12
Actual SI	7.78	2.99	8.30	2.91	7.00	3.08
Actual ES	26.82	9.68	32.00	9.34	28.22	12.51
Actual G	26.96	9.40	31.80	8.51	30.89	16.15
ps Tot	138.09	31.64	153.80	24.51	144.89	12.73
psFI	20.36	6.54	24.30	6.62	22.56	4.50
psPA	22.18	6.28	23.80	4.94	22.00	3.57
psSI	23.77	6.10	27.10	5.07	26.00	3.43
psES	32.82	8.15	36.90	6.06	35.22	4.71
psG	38.77	9.28	41.70	6.41	38.67	6.52
Network	81.05	44.50	84.20	26.79	101.22	51.71
LocI	27.77	7.49	25.20	6.66	20.89	7.94
LocP	23.55	9.76	23.50	8.59	24.22	7.23
LocC	23.27	9.01	23.70	7.04	22.22	9.63
Lifesat	82.16	9.88	75.96	9.54	78.52	12.33

Table 4.3  
Pearson Correlations Between Study Variables  
(n = 41)

	Age	IQ	Lifesat	LocP	LocC	LocI	Actual T	ActG+	ActES+	ActSI+	ActMA+	ActBA+	psTot	psG	psES	psSI	psFI	psPA	Network
Age	----																		
IQ	0.30*	----																	
Lifesat	-0.33	-0.21**	----																
LocP	0.21**	-0.12	-0.18	----															
LocC	0.08	-0.005	-0.16	0.59*	----														
LocI	-0.09	0.34*	0.18	0.03	-0.08	----													
Actual T	-0.03	-0.15	0.001	-0.43*	-0.19	-0.08	----												
Actual G	-0.05	-0.16	0.08	-0.38*	-0.12	-0.14	0.96*	----											
Actual ES	-0.04	-0.14	-0.005	-0.39*	-0.18	-0.01	0.94*	0.86*	----										
Actual SI	0.12	0.02	0.22**	-0.33*	-0.23**	0.13	0.65*	0.48*	0.61*	----									
Actual MA	-0.14	-0.17	-0.03	-0.31*	-0.32*	-0.15	0.45*	0.45*	0.22**	0.31*	----								
Actual BA	-0.04	-0.19	0.09	-0.35*	-0.21**	-0.22**	0.76*	0.70*	0.55*	0.48*	0.59*	----							
ps Tot	-0.02	-0.03	0.17	-0.26**	-0.07	0.21**	0.43*	0.32*	0.44*	0.47*	0.16	0.31*	----						
psG	-0.10	0.06	0.17	-0.25**	-0.05	0.24**	0.40*	0.31*	0.43*	0.39*	0.18	0.24*	0.89	----					
psES	-0.01	-0.07	0.11	-0.24**	-0.09	0.20**	0.50*	0.38*	0.52*	0.51*	0.18	0.31*	0.91*	0.78*	----				
psSI	0.20**	-0.13	0.23**	-0.23**	-0.12	0.19	0.43*	0.28*	0.46*	0.55*	0.12	0.26*	0.78*	0.65*	0.78*	----			
psFI	-0.08	-0.14	0.04	-0.08	0.06	-0.05	0.24**	0.21**	0.19	0.27*	0.07	0.28*	0.75*	0.52*	0.56*	0.37*	----		
psPA	0.01	0.14	0.16	-0.27*	-0.07	0.27*	0.19	0.21	0.19	0.25**	0.10	0.18	0.84*	0.71*	0.64*	0.52*	0.71*	----	
Network	0.02	-0.20	0.10	-0.23**	-0.16	-0.02	0.46*	0.41*	0.44*	0.24**	0.19	0.46*	0.14	0.05	0.24	0.30*	-0.04	0.02	----
Yrsinset	0.45*	-0.09	-0.15	0.18	-0.08	-0.25**	-0.05	-0.03	-0.08	-0.08	0.13	-0.06	-0.02	-0.10	0.01	0.12	-0.03	-0.05	0.15

\*  $p \leq 0.05$

\*\*  $p \leq 0.10$

+ "act" short form of "actual"

alone. Of the other eight, the subjects mentioned their roommates either first or second on the network lists. The group living in group homes most often mentioned a staff person first on their list. Subjects living at home mentioned their relatives first usually their mothers and fathers.

#### Pearson Correlation Coefficients

The results of the compilation of correlations for all 41 subjects are presented in Table 4.3. Age and IQ were significantly positively correlated ( $r = 0.30$ ,  $p < 0.05$ ) and IQ was significantly positively correlated to Internal Locus of Control ( $r = 0.34$ ,  $p < 0.05$ ). However, Internal Locus of Control was not significantly correlated with either external locus of control (chance) or external locus of control (powerful others). External locus of control (chance) and external locus of control (powerful others) were significantly positively correlated ( $r = 0.59$ ,  $p < 0.05$ ). The life satisfaction variable was not significantly correlated to any of the other variables.

The Actual Perceived Total (Actual T) was significantly correlated to the Total Perceived Potential Social Support (ps Tot) as well as to all the perceived sub-scales except Perceived Potential Financial Assistance (psFI) and Perceived Potential Practical Assistance (psPA). Actual Perceived Total (Actual T) was also significantly positively correlated to

the Total Network Score (Network) ( $r = 0.46$ ,  $p < 0.05$ ) and negatively correlated to the Locus of Control External (Powerful Others) scale (LocP) ( $r = -0.43$ ). The only subscales that were part of the Actual Perceived Total and not significantly positively correlated to each other were: Actual Perceived Material Aid (Actual MA) and Actual Perceived Emotional Support (Actual ES). No scales were significantly negatively correlated to each other.

The Perceived Potential Social Support Scale total scores (ps Tot) were significantly positively correlated to all of the Actual Perceived Support Total subscales scores except Actual Perceived Material Aid (Actual MA). Perceived Potential Social Support Total (ps Tot) was not significantly correlated to Network.

The sub-scales which made up Perceived Potential Social Support (ps Tot) were all significantly correlated to each other and to their equivalent Actual Perceived Social Support sub-scales, except for Actual Perceived Behavioral Aid (Actual BA) to Perceived Potential Practical Aid (psPA) and Actual Perceived Material Aid (Actual MA) to Perceived Potential Financial Aid (psFI).

Network, as stated previously, was positively correlated to Actual Perceived Social Support Total. However, only three of the five subscales of Actual Perceived Total were significantly positively correlated to Network. They were

Actual Perceived Guidance (Actual G) ( $r = 0.41$ ,  $p < 0.05$ ), Actual Perceived Emotional Support (Actual ES) ( $r = 0.44$ ,  $p < 0.05$ ), and Actual Perceived Behavioural Aid (Actual BA) ( $r = 0.46$ ,  $p < 0.05$ ). Actual Perceived Social Interaction (Actual SI) was approaching significance in a positive correlation to this variable. Perceived Potential Social Interaction (psSI) was the only Perceived Potential Social Support sub-measure which was significantly positively correlated to Network ( $r = 0.30$ ,  $p < 0.05$ ).

In summary, positive significant correlational results were found between Actual T and its sub-variables and between ps Tot and its sub-variables. Other positively significant correlational results were discovered between most of these variables and their counterparts in the two measures evaluating social support. Other significantly positive associations were found between IQ and Age, IQ and Internal Locus of Control, Network and Actual T, plus Network and three of the five actual social support sub-scales.

#### NON-PARAMETRIC ANALYSIS

##### Analysis of All Subjects in the Three Living Conditions

This investigation is exploratory in nature. In an effort to analyze all possible basic associations between the subjects in their three living conditions, a series of non-parametric analyses were carried out on all the variables.

Table 4.4

Differences Between The Three Living Conditions

Variable Means	Independent vs Group1 Group1 (n=22)	Group Home vs Group2 Group2 (n=10)	Independent vs Home Group1 (n=22)	Group3 (n=9)
IQ mean			70.77	63.00
U score				61.0
p≤				0.10
LocI mean			27.78	20.89
U score				50.5
p≤				0.03*
Actual BA mean	11.55	15.50		
U score		43.0		
p≤		0.01		
Yrsinset			7.04	38.56
U score				3.0
p≤				0.001*

Variable Means	Group Home vs Group2 Group2 (n=10)	Home vs Group3 Group3 (N=9)
Actual BA mean	15.50	13.00
U score	25.0	
p≤	0.10	
Yrsinset mean	5.90	38.56
U score	0.00	
p≤	0.001*	

\* significantly different at  $p \leq 0.05$ .

This analysis was achieved using the two-tailed Mann-Whitney U test which examines the differences in the relative frequency distribution between two independent groups in



relation to one another. In the interests of brevity and clarity, the tables in this section report only significant differences to  $p \leq 0.10$ . However, only significant differences up to  $p \leq 0.05$  are noted in the text.

The investigation included all the subjects, both males and females, in their respective groups. The significant results using the Man-Whitney U tests are shown in Table 4.4. The comparisons were between the three living conditions, on the study's variables.

The investigation shows that there was a significant difference between the group which lived in group homes (Group2) and the group which lived independently (Group1), when compared on the measurement for Actual Perceived Behavioral Aid (Actual BA). The group who lived in group homes appeared to have perceived that they received a greater amount of Actual Perceived Behavioral Aid than the group which lived independently. There was also a significant difference between the group which lived at home (Group3) and the group which lived independently (Group1) on the Locus of Control Internal scale. The group which lived at home (Group3) appeared to feel they had, on average, significantly less internal control than the group which lived independently in the community (Group1).

There was one significant difference between the three groups involving the number of years a subject had currently

Table 4.5

Comparison of Female Subjects in the Three Living Conditions

Variable Means	Independent Group1 (n=6)	vs Group Home Group2 (n=5)	Independent Group1 (n=6)	vs Home Group3 (n=3)
Age mean	29.00	38.67	29.00	38.67
U score		0.5		5.0
p≤		0.03*		0.07
Lifesat mean	85.03	73.30	85.03	68.13
U score		5.5		2.0
p≤		0.08		0.07
Yrsinset mean			4.17	38.67
U score				0.0
p≤				0.02*
Variable mean	Group Home Group2 (n=6)	vs Home Group3 (n=3)		
Yrsinset mean	6.20	38.67		
U score		0.0		
p≤		0.03		

\*significantly different at p≤ 0.05

lived in his/her particular setting. The group which lived at home with a relative (Group3) had lived significantly longer in their setting than either the group which lived in group homes (Group2) or the group which lived independently in the community (Group1).

### Gender Differences Within Their Living Condition Groups

In this part of the investigation the groups were divided into, male and female subjects, within their respective living conditions. There was only one significant difference when all the variables in the study were compared. This significant difference was between the males and females from the group which lived independently in the community (Group1). The males ( $\bar{x} = 38.13$  yrs) appeared to be significantly older than the females ( $\bar{x} = 29$  yrs) in this group ( $U = 21, p < 0.05$ ).

### Female Differences Between the Three Living Conditions

There were significant differences between females, in their respective living conditions, on the variables Age and the number of years a subject had lived in their present setting (See Table 4.5). The females in the group which lived at home (Group3) appeared to be significantly older than the females in the group which lived independently in the community (Group1).

There were significant differences in the number of years female subjects had lived in their respective settings (Yrsinset). The group which lived at home (Group3) appeared to have lived in their particular setting significantly longer than the group which lived independently. There was also a significant difference between the group which lived

at home (Group3) and the group which lived in group homes. Again, the group which lived at home (Group3) appeared to have lived significantly longer in their particular setting than the group that lived in group homes (Group2).

Table 4.6

Comparison of Males Subjects in The Three Living Conditions

Variable Means	Independent vs Group Home		Independent vs Home	
	Group1 (n=16)	Group2 (n= 5)	Group1 (n=16)	Group3 (n= 6)
Age mean	38.12	29.00		
U score		4.0		
p≤		0.04*		
Actual BA mean	11.50	16.20		
U score		13.0		
p≤		0.02*		
Yrsinset mean	8.13	5.60	8.13	38.50
U score		20.0		3.0
p≤		0.10		0.001*
Variable Means	Group Home vs Home			
	Group2 (n= 5)	Group3 (n= 6)		
Age mean	29.00	38.50		
U score		4.0		
p≤		0.04*		
Yrsinset mean	5.60	38.50		
U score		0.0		
p≤		0.006*		

\* Significantly different at  $p \leq 0.05$

### Male Differences Between the Three Living Conditions

There were significant differences in the male grouping in their respective living conditions on the variables Age, Actual Perceived Behavioral Aid (Actual BA) and the number of years subjects had lived in their particular settings (Yrsinset). (Refer to Table 4.6).

The males in the group which lived at home (Group3) appeared to be significantly older than the males which lived in group homes (Group2). However, it appeared that the group of males which lived in group homes (Group2) were significantly younger than the group of males who lived independently (Group1).

In the case of Actual Perceived Behavioral Aid (ActualBA), there was a significant difference between the males that lived in agency group homes and males who lived independently in the community. It appeared that males living in the group homes (Group2) received a greater amount of Actual Perceived Behavioral Aid than the group of males which lived independently (Group1).

A significant difference was found between the group which lived at home with a relative (Group3) and the group which lived in agency group homes (Group2) based on the variable indicating the number of years in which a subject had lived in a setting (Yrsinset). This was also true for the comparison between the group which lived at home (Group3) and

Table 4.7

Mean Scores of the Three Living Conditions on the  
Locus of Control Scales

Scale Means	Independent Group1 (n=22)	Group Home Group2 (n=10)	At Home Group3 (n= 9)
Internal Locus of Control	27.8*	25.2	24.2
External Locus of Control (Powerful Others)	23.5	23.5	24.3*
External Locus of Control (Chance)	23.3	23.7*	22.0

\* Highest mean score in that category

Table 4.8

Source of Membership for the Three Living Conditions in Each  
of the Three Categories, High, Medium, Low for the Internal,  
Powerful Others, and Chance Scales of Levenson's  
Locus of Control Scales  
(percentages)

Scale	Independent Group 1 (n=22)	Group Home Group 2 (n=10)	At Home Group 3 (n= 9)
Internal Control			
High	13 (59%)	5 (50%)	4 (44%)
Medium	7 (32%)	5 (50%)	4 (44%)
Low	2 ( 9%)	0 ( 0%)	1 (12%)
External Control Powerful Others			
High	10 (45%)	3 (30%)	7 (78%)
Medium	8 (36%)	6 (60%)	1 (11%)
Low	4 (19%)	1 (10%)	1 (11%)
External Control Chance			
High	7 (31%)	4 (40%)	5 (55%)
Medium	11 (50%)	6 (60%)	2 (22%)
Low	4 (19%)	0 ( 0%)	2 (23%)

the group which lived independently (Group1). In both cases the group which lived at home (Group3) appeared to have lived in their particular setting significantly longer than either the group which lived in group homes (Group2) or the group which lived independently (Group1). However, there was no significant difference between the group which lived in group homes (Group2) and the group which lived independently (Group1).

#### Analysis of the High, Medium, and Low Categories of Levenson's Locus of Control Scales on The Study's Variables

As shown in Table 4.2, the independent living group (Group1) had the highest average internal locus of control score. The group living at home (Group3) had the lowest average score which was significantly lower than the independently group (Group1) (See Table 4.4). The group which lived in group homes (Group2) occupied the intermediate position between the other two groups.

The group living at home (Group3) had the highest Locus of Control External (Powerful Others) average score. The other two groups tied. On the other hand, the Locus of Control External (Chance) average score was highest for the group which lived in group homes (Group2), followed by the independent living group (Group1). The group which was living at home (Group3) had the lowest average score (Refer to Table

4.7).

Following the practice of Levenson (1972), the three independent scales which measured locus of control were divided into High, Medium, and Low categories based on the obtained scores. The High group had scores ranging from 42 to 29, medium scores from 14 to 28, and low scores were in the 13 to 0 range. The higher a subject scores on a scale, the greater probability the subject would exhibit the characteristics of the locus of control orientation as measured by that particular scale.

Recategorized in this manner, 59 percent of the members of independent living group (Group1) had scores in the high category on the Locus of Control Internal Scale. This was followed by the group which lived in group homes (Group2) which had 50 percent. The group which was living at home (Group3) had 44% of its members in the High category (See Table 4.8). The reverse was true on the Chance scale. The group which was living at home (Group3) had fifty-five percent of the Chance scale scores falling into the High category, followed by the group who lived in group homes (Group2) with 44 percent. The group which lived independently (Group1) had the lowest number of members in the High Category on the Chance scale with 31 percent.

When the external Locus of Control Scale (Powerful Others) was divided into its three groups, the group which lived at



home (Group3), again, had the highest percentage of its members in the High category (78%). However, the other two groups are reversed. The group which lived independently (Group1) had 45% of its members in the High category and the group who lived in group homes (Group2) having only 30% of its members in the High category on the independent locus of control scale (See Table 4.8).

Using these three categories, a series of non-parametric Mann-Whitney U tests were conducted on the three independent scales of locus of control. These tests were done to determine, if being in the high, medium, or low category, had any significant effect on any of the other study variables in this investigation. As in the previous section the tables only report significance up to  $p \leq 0.10$ . The study's locus of control variables were not included in this investigation.

The comparison of subject's scores on the study variables using the three categories of Locus of Control Internal as the independent variable, indicated that only four of the study variables had significant differences (Refer to Table 4.9). On the variable which measures IQ, the High Group was significantly different from The Low group. The High Group had a mean IQ of 70.06 and the Low group had a mean IQ of 59.0.

There were also significant differences between the High and Low groups on the Total Perceived Potential Social

Table 4.9

Comparison of the High Versus Medium and High Versus Low  
Categories on the Locus of Control Internal Scales

Variable Means	Locus of Control Internal			
	High versus (n=22)	Medium (n=16)	High versus (n=22)	Low (n=3)
Age mean	33.72	39.63		
U score		120.5		
p≤		0.10		
IQ mean	70.81	59.00		
U score		7.5		
p≤		0.03*		
Actual G mean	26.41	32.88		
U score		9.5		
p≤		0.05*		
ps Tot mean			148.00	122.00
U score				9.5
p≤				0.05*
psES mean			35.50	28.33
U score				7.5
p≤				0.03*
psSI mean			25.64	20.67
U score				11.5
p≤				0.07
psPA			23.91	18.33
U score				10.5
p≤				0.06

\* significantly different at  $p \leq 0.05$

Table 4.10

Comparison of the High Versus Low And Medium Versus Low  
Categories of the Locus of Control External  
(Powerful Others) Scale

Variable Means	Locus of Control Powerful Others			
	High versus (n=20)	Low (n=6)	Medium versus (n=15)	Low (n=6)
Actual T mean	74.60	116.33	78.07	116.33
U score		7.5		8.0
p≤		0.01*		0.01*
Actual G mean	26.40	42.50	27.07	42.50
U score		15.0		10.0
p≤		0.01*		0.01*
Actual ES mean	25.60	41.17	27.00	41.17
U score		9.5		5.0
p≤		0.01*		0.01*
Actual SI mean	7.15	10.50	7.40	10.50
U score		19.5		18.5
p≤		0.01*		0.04*
Actual MA mean			4.07	5.17
U score				32.0
p≤				0.09
Actual BA mean	11.35	17.00		
U score		22.5		
p≤		0.02*		
ps Tot mean	136.30	161.83		
U score		21.5		
p≤		0.02*		
psG mean	37.45	44.50		
U score		27.5		
p≤		0.05*		
psES mean	32.25	39.33		
U score		25.5		
p≤		0.04*		

Table 4.10 (continued)

Variable Means	High	versus	Low	Medium	versus	Low
psSI mean	23.65		28.83			
U score		25.0				
p $\leq$		0.03*				
psPA mean	21.45		26.67	22.33		26.67
U score		21.5			20.5	
p $\leq$		0.02*			0.06	
Network mean	83.15		118.00	77.67		118.00
U score		32.5			23.0	
p $\leq$		0.10			0.09	

\* Significantly different at  $p \leq 0.05$

Support (ps Tot) and two of the Ps tot's subscales: Perceived Potential Emotional Support (psES) and Perceived Potential Practical Aid (psPA). The mean of the Perceived Potential Support Total (ps Tot) variable in the High category appeared to be significantly higher than in the Low Category. The High category means for the variables Perceived Potential Emotional Support (psES) and Perceived Potential Practical Aid (PsPA) also appeared to be significantly higher than their counterparts in the Low category.

The comparison of the categories from the two external measures show that there were no significant differences between the High, Medium, and Low categories on the Locus of Control (Chance) Scale. However, when the three categories were used as the independent variable on the Locus of Control

(Powerful Others) Scale, there were several significant differences (See Table 4.10). Between the High Group and the Low group, there were significant differences between the Total of Actual Perceived Social Support (Actual T) and the Total Perceived Potential Social Support (ps Tot). In addition, all of the Actual Perceived Total's sub-scales except Actual Perceived Material Aid (Actual MA) were significantly different between the High and Low categories. Among the Perceived Potential Social Support Sub-scales, all were significantly different between the High and Low categories except Perceived Potential Financial Aid (psFI). In all cases, the High category had lower scores on the study's variables than the Low Category.

There were no significant differences between the High Category and the Medium category on the Locus of Control (Powerful Others) Scale.

There were significant differences between the Medium and Low categories on the Locus of Control (Powerful Others) Scale. The significant differences were found on the Actual Perceived Social Support Total (Actual T) and three of its sub-scales: Actual Perceived Guidance (Actual G), Actual Perceived Emotional Support (Actual ES) and Actual Perceived Social Interaction (Actual SI). In all cases, the Medium category scores on the study's variables appeared lower than the Low category scores (Refer to Table 4.10)

Differences Between the High, Medium and Low Categories of the Female Grouping

To investigate gender differences on the Locus of Control Scales, the categories were further divided into male and female groupings. Table 4.11 shows the number of females per category of each scale in each group. The numbers in each category were also expressed as a percentage of that category's members which make up the total for that group on that scale.

In the female grouping, there were no significant differences found between the High ,Medium and Low categories for the Locus of Control Internal Scale or the Locus of Control External (Chance) Scale. On the Locus of Control External (Powerful Others) scale there were several significant differences. There was one significant difference between the High and Medium categories on the variable which measured the number of years a subject lived in a setting (Yrsinset  $U = 2.5$ ,  $p \leq 0.05$  ). The High group appeared to have higher scores (Yrsinset mean = 20.86) than those of the Medium group (Yrsinset mean = 4.00).

All the other significant differences were between the Medium and Low categories on this scale. The variables which measured the Actual Perceived Total of Social Support (Actual T) and two of its sub-scales, Actual Perceived Emotional Support (Actual ES) and Actual Perceived Social Interaction

Table 4.11

Group Membership for the Female Subjects in the Three Living Conditions Categorized into the Three Categories, High, Medium, and Low of Levenson's Locus of Control Scales.

Scale	Independent Group 1 (n= 6)	Group Home Group 2 (n= 5)	At Home Group 3 (n= 3)
Internal Control			
High	4 (66%)	3 (60%)	1 ( 33%)
Medium	1 (17%)	2 (40%)	2 ( 67%)
Low	1 (17%)	0 ( 0%)	0 ( 0%)
External Control			
Powerful Others			
High	2 (33%)	2 (40%)	3 (100%)
Medium	2 (33%)	2 (40%)	0 ( 0%)
Low	2 (33%)	1 (20%)	0 ( 0%)
External Control			
Chance			
High	2 (33%)	3 (60%)	3 (100%)
Medium	2 (33%)	2 (40%)	0 ( 0%)
Low	2 (33%)	0 ( 0%)	0 ( 0%)

(Actual SI) were significantly different when divided into these categories. In addition, three of the sub-scales which measured the perceived potential social support, Perceived Potential Guidance (psG), Perceived Potential Social Interaction (psSI) and Perceived Potential Practical Aid (psPA) were significantly different between the Medium and Low categories. For all these significant findings between the Medium and Low categories, the Low category always had a higher score on the variable than the Medium category. The results of the comparisons between the Medium and Low categories of the Locus of Control External (Powerful Others)

Scales showing mean, U score, and probability of significance are in Table 4.12.

Differences Between the High, Medium and Low Categories on the Male Grouping

Table 4.13 shows the number of males per category for each scale in each group. In the male grouping, there were no significant differences between the three categories on the Locus of Control Internal Scale. On the Locus of control External (Chance) Scale, there were three significant differences between the Medium and Low categories (Refer to Table 4.14). The sub-scale of the Actual Perceived Support Scale which measured Actual Perceived Emotional Support (Actual ES) was significantly different. The Low category appeared to have had higher scores than the Medium category.

The second significant difference was on the sub-scale which measured Perceived Potential Guidance (psG). The Low category's scores were higher than the Medium group's scores. Lastly, on the variable which measured the number of years a subject had lived in a setting (yrsinset), there was a significant difference. Again, the Low category had a higher score on this variable than the Medium category.

There were several significant differences between the categories on the Locus of Control External (Powerful Others) Scale. There were three significant differences between the



Table 4.12

Locus of Control External (Powerful Others) Scale:  
Comparison of the Medium Versus Low Categories on  
the Female Group

Variable Means	Medium versus (n=4)	Low (n=3)
IQ mean	64.75	76.17
U score	1.0	
p ≤	0.07*	
Actual T mean	79.50	115.67
U score	0.0	
p ≤	0.03*	
Actual G mean	27.75	42.33
U score	1.0	
p ≤	0.08	
Actual ES mean	28.50	42.67
U score	0.0	
p ≤	0.03*	
Actual SI mean	7.25	10.67
U score	0.5	
p ≤	0.05*	
ps Tot mean	127.75	172.33
U score	1.0	
p ≤	0.08	
psG mean	35.50	47.33
U score	0.0	
p ≤	0.03*	
psES mean	33.00	42.00
U score	1.0	
p ≤	0.07	
psSI mean	23.25	30.33
U score	0.5	
p ≤	0.05*	
psPA mean	17.25	28.67
U score	0.0	
p ≤	0.03*	
Yrsinset mean	4.00	3.33
U score	2.5	
p ≤	0.03*	

\* Significantly different at  $p \leq 0.05$

Table 4.13

Group Membership for the Male Subjects in the Three Living  
Conditions Categorized into the Three Categories, High,  
Medium and Low of Levenson's Locus of Control Scales

Scale	Independent Group 1 (n=16)	Group Home Group 2 (n=5)	At Home Group 3 (n=6)
Internal Control			
High	9 (56%)	2 (40%)	3 (50%)
Medium	6 (38%)	3 (60%)	2 (33%)
Low	1 ( 6%)	0 ( 0%)	1 (17%)
External Control Powerful Others			
High	8 (50%)	1 (20%)	4 (66%)
Medium	6 (38%)	4 (80%)	1 (17%)
Low	2 (12%)	0 ( 0%)	1 (17%)
External Control Chance			
High	5 (32%)	1 (20%)	2 (34%)
Medium	9 (56%)	4 (80%)	2 (33%)
Low	2 (12%)	0 ( 0%)	2 (33%)

Table 4.14

Differences Between Males on Medium Versus Low Categories of  
the Locus of Control External (Chance) Scale

Variable	High	versus	Medium	Medium versus	Low
Means	(n=8)		(n=15)	(n=15)	(n=4)
Age mean	33.38		31.27		
U score		32.0			
p≤		0.07			
Actual ES mean				23.00	34.00
U score				10.0	
p≤				0.05*	
Ps Tot mean				135.87	150.00
U score				12.5	
p≤				0.08	
PsG mean	40.25		36.33	36.33	43.25
U score		33.0		9.0	
p≤		0.08		0.04*	

Table 4.14 (continued)

Variable Means	Medium versus (n=15)	Low (n=4)
PsES mean	31.27	36.75
U score		13.5
p≤		0.10
Yrsinset mean	10.67	27.75
U score		8.0
p≤		0.03*

\* Significantly different at  $p < 0.05$

High Category and the Medium Category (Refer to Table 4.15). On the demographic variable, Age, the mean age of the High Category was higher than the mean age of the Medium category. This was also true for the demographic variable which measured the number of years a subject had lived in his/her present setting (Yrsinset). The High category's mean score appeared to be significantly higher than the Medium category's mean score. Thirdly, on the variable which measured Perceived Potential Emotional Support (psES), the High category appeared to be significantly different from the Medium category. However, in this case, the High scores were lower than the Medium scores on this variable.

The results of comparing the High and Low categories of the Locus of Control (Powerful Others) scale are displayed in Table 4.16. The difference between the scores of the High and Low category on the Actual Perceived Total and the subscales: Actual Perceived Guidance (Actual G), Actual Perceived

Table 4.15

Differences Between Males on the High Versus Medium  
Categories of the Locus of Control  
(Powerful Others) Scale

Variable Means	MALES	
	High (n=13)	versus Medium (n=11)
Age mean	35.07	39.73
U score		32.5
p≤		0.02*
psES mean	34.07	31.46
U score		31.5
p≤		0.02*
Yrsinset mean	14.71	13.64
U score		16.0
p≤		0.001*

\* Significantly different at  $p \leq 0.05$

Emotional support (Actual ES), and Actual Perceived Social Interaction (Actual SI) were all statistically significant. The differences were also statistically different between the High and Low categories on the variable Perceived Potential Social Support Total (ps Tot) and the subscale Perceived Potential Emotional Support (psES). In addition, the difference between the High and Low categories on the Network scale (Network) was statistically significant. In all cases, the High group had lower scores than the Low Category. Significant differences were found when comparing the Medium and Low categories (Refer to Table 4.16). The significant differences were on Actual Perceived Total

Table 4.16

Locus of Control External (Powerful Others) Scale: Comparison  
of the High Versus Low Categories and the Medium Versus  
Low Categories of the Male Group

Variables	MALES			
	High versus Low (n=13)	Low (n=3)	Medium versus Low (n=11)	Low (n=3)
Age mean			39.73	29.00
U score				5.5
p ≤				0.09
ActualT mean	68.23	117.00	82.73	81.00
U score		2.0		4.0
p ≤		0.02*		0.05*
ActualG mean	24.85	42.67	30.82	31.00
U score		4.0		4.0
p ≤		0.04*		0.05*
ActualES mean	22.00	39.67	27.36	26.00
U score		2.0		2.5
p ≤		0.02*		0.03*
ActualSI mean	6.38	10.33		
U score		4.5		
p ≤		0.04*		
ActualBA mean	10.92	18.67		
U score		6.5		
p ≤		0.07		
ps Tot mean	128.69	151.33		
U score		3.5		
p ≤		0.03*		
psES mean	28.85	36.67		
U score		3.5		
p ≤		0.03*		
psPA mean	20.77	24.67		
U score		7.0		
p ≤		0.09		
Network mean	73.46	127.00	81.27	55.50
U score		5.0		5.0
p ≤		0.05*		0.07

\* Significantly different at p ≤ 0.05

(Actualt) and the subscales, Actual Perceived Emotional Support (Actual ES) and Actual Perceived Guidance (Actual G). For all three differences, the mean score for the Medium category was higher than the mean score for the low category.

In summary, most of the significant differences were found between the High, Medium and Low categories of the Locus of Control (Powerful Others) scale. Most of these differences were between the High and Low categories and involve all the Actual Perceived Social Support sub-scales except Actual Perceived Material Aid and all of the Perceived Potential Social Support Sub-scales except for Perceived Potential Financial Aid (psFI). In all cases, the High category had a lower mean score on these variables than the Low category. Between the Medium and Low categories, the significant differences were found only on the Actual Perceived Social Support Scales. These were Actual Perceived Social Support Total, Actual Perceived Guidance, Actual Perceived Emotional Support and Actual Perceived Social Interaction. In these cases, the Medium category had lower scores than the Low category.

When the groups were divided by gender, the male group showed significant differences between the High and Low categories. Between female groupings, there were significant differences between the Medium and Low categories of the Locus of Control (Powerful Others) scale.

In addition, in the male grouping on the variable Network, the High category was significantly lower than the Low category. Between the Medium and Low categories, there were significant differences on the Actual Perceived Total, Actual Perceived Emotional Support and Actual Perceived Guidance.

## CHAPTER V

### DISCUSSION

#### INTRODUCTION

The function of social support can be seen as the fulfilling of an individual's needs, both physical and mental, and as a way of maintaining relationships (Alloway & Bebbington, 1987). It was the intent of the present investigation to follow Emerson's (1985) advice. He suggested that in order to determine a person's QOL, the researcher should measure the subject's life satisfaction and social and interpersonal relationships. This present project attempted to examine the possible differences between three different groups: (1) living independently in the community, (2) living in group homes and (3) living at home. Social and interpersonal relationships were investigated using measures which gauged the size and density of social support networks, the amount of actual social support perceived as being received by the subjects from this network, and the amount of potential perceived support available in the subject's network.

Brown (1989) defined QOL in two parts: (1) as the discrepancy between the person's achieved and unmet needs and



desires and (2) the extent to which an individual increasingly controls aspects of his/her life regardless of original baseline. This study attempted to measure unmet needs and desires through measuring the subjects' satisfaction with their present lives. Control of their lives was measured by their perceived locus of control.

Standard subjective measures found in the literature were used to gather information from 41 subjects who had mental disabilities. These subjective measures were used because QOL is, in part, a subjective personal experience (Zautra & Goodhart, 1979) and involves the evaluation of a person's perceived needs and wants (Brown et al., 1985).

In discussing results, it is important to keep in mind several possible limitations. Although there is no obvious reason to doubt the genuine nature of responses given by the subjects, caution in interpreting the results is required. Sigelman and his colleagues have indicated that there are several problems with interviewing people with mental handicaps. The two most important are the problem of acquiescence and the problem of the subject misunderstanding the intent of the questions (Sigelman et al., 1980, 1981). There may also be problems with the sensitivity of some of the instruments due to their verbal presentation to the subjects. Verbal presentation may present some restrictions in responses because the subject is known to the researcher.

As a result, the subject may give responses which he/she feels are what the researcher wants. The other problem is that the subject may not have expressed as radical a view as he/she would if he/she were responding to a paper and pencil questionnaire in a group where anonymity was basically assured.

It was argued in this study that even with these limitations it was important to assess directly the presented beliefs of subjects with mental handicaps. In this project, it was the perception of both actual and potential social support by the subjects which was important. It also involved how these perceptions impacted QOL as measured by locus of control and life satisfaction.

This present project was limited in scope. It used small numbers from two urban settings in Alberta. In addition, the causal relationships between the variables chosen were complex and not directly determined. Causal relationships can only be suggested or inferred since correlations only provide numerical associations at a specific point in time. In addition, only some of the possible variables affecting QOL were included in this investigation. Finally, as discussed above, there were problems with directly assessing the responses from people with mental handicaps. Therefore, any findings noted in this investigation should be viewed as preliminary with indications of trends that could be

investigated in future projects.

### THE GENERAL CHARACTERISTICS OF THE GROUPS

Table 5.1 summarizes the trends found from the results of the present study. Using this table in conjunction with Tables 4.2, 4.3, 4.7, 4.8, and other results from the study, a very general description of each group is given based on the variables of the study.

#### Group 1: Group Which Lived Independently in the Community

This group was the second oldest in average age, but had the highest mean intelligence scores of the three groups. It had the smallest social support network in terms of size and density of the three groups. Fourteen of 22 subjects lived alone with the rest having one roommate. Interestingly, the roommate is the first person named on all the Network lists of subjects who had roommates. Even with the smallest social support networks this group had the highest life satisfaction scores relative to the other two groups. This was despite the fact that IQ and Life satisfaction scores were significantly negatively correlated to one another.

This group also had the lowest scores for all the Actual Perceived Social Support scales except Actual Perceived Material Aid and Actual Perceived Social Interaction. Actual Perceived Material Aid was second only to the group which

Table 5.1

Trends Found in the General Study Sample

1. Age was significantly positively correlated to Intelligence.
2. Internal Locus of Control was significantly positively correlated with Intelligence.
3. External Locus of Control (Powerful Others) was significantly negatively correlated to all five modes of the Actual Perceived Support Scale.
4. External Locus of Control (Powerful Others) was also negatively correlated to all five modes of the Perceived Potential Social Support scale.
5. Actual Perceived Support Totals were significantly positively correlated with Perceived Potential Social Support Totals.
6. Actual Perceived Social Support Totals were positively correlated with the Perceived Potential sub-scales. The exceptions were Perceived Potential Financial Aid and Perceived Potential Practical Aid.
7. Actual Perceived Social Support Total and the sub-scales Actual Perceived Guidance and Actual Perceived Emotional Support were significantly positively correlated with Network.
8. Perceived Potential Social Support Totals were positively correlated to the Actual Perceived Social Support sub-scales. The exception was Actual Perceived Material Aid.
9. All Actual Perceived Social Support sub-scales were Positively Correlated with their counterpart in the Perceived Potential sub-scales except for Actual Perceived Behavioral Aid to Perceived Potential Practical Aid and Actual Perceived Material Aid to Perceived Potential Financial Aid.
10. Perceived Potential Social Interaction was significantly positively correlated with Network.
11. All the Perceived Potential Social Support sub-scales were positively correlated with Life satisfaction.

lived at home with a relative (Group3). Actual Perceived Social Interaction was second only to the group which lived in group homes (Group2). This group also had the lowest overall scores on the Perceived Potential Social Support scales. However, this group had the highest average Locus of Control Internal score and the largest number of its members in the High category of the Locus of Control Internal scale. This seemed to be the most important factor in terms of life satisfaction. Despite all the negative results indicated by the low scores on the other variables and Life Satisfaction and IQ scores being negatively correlated, this group still had the highest average scores on life satisfaction.

Group 2: Group Which Lived in Group Homes.

On average, this group had the youngest members and had the second highest intelligence scores. They had the second largest networks, in terms of size and density, as well as the highest overall average scores for both Actual Perceived Social Support scales and Perceived Potential Social Support scales. However, they had the lowest score on Actual Perceived Material Aid sub-scale. This group had the highest scores on Actual Perceived Social Interaction.

They had the highest scores on the Locus of Control (Chance) scale, while having the second highest scores on the other two locus of control scales. In terms of membership in

Table 5.2

A Summary of the Trends Emerging From the Three  
Groups From the Tests Administered

Group 1: The group which lived Independently in the community had:

- a) the second oldest members.
- b) the highest intelligence scores.
- c) the lowest Actual Perceived Support scores except on Actual Perceived Social Interaction.
- d) the lowest Perceived Social Support scores.
- e) the smallest networks in terms of size and density.
- f) the highest internal locus of control scores and the most subjects in the High category of the Locus of Control Internal Scale.
- g) the highest life satisfaction score.

Group 2: The group which lived in group homes had:

- a) the youngest members.
- b) the second highest intelligence scores.
- c) the highest Actual Perceived Social Support Scores except for Actual Perceived Material Aid which was lowest.
- d) the highest Perceived Potential Social Support Scores.
- e) the second largest networks in terms of size and density.
- f) the highest external locus of control (Chance) scores and the majority of the group members were in the High category of either Locus of Control External (Chance) or Locus of Control Internal.
- g) the lowest life satisfaction scores.

Group 3: The group which lived at home with a relative.

- a) the oldest members.
- b) the lowest intelligence scores.
- c) the second highest scores on Actual Perceived Social Support Scores except for Actual Perceived Social Interaction which was lowest.
- d) the second highest Perceived Potential Social Support Scores.
- e) the largest networks in terms of size and density.
- f) the highest external locus of control scores (Powerful Others) and 78% of its members falling in the High category of the Locus of Control External (Powerful Others) Scale.
- g) the Second highest life satisfaction scores.

the categories of the locus of control scales, this group had all its members in the High or Medium Categories for both the Locus of Control Internal Scale and the Locus of Control (Chance) Scale. This group also had the lowest average scores on the Life Satisfaction Scale.

Group 3 : Group Which Lived at Home with A Relative

The members of this group had, on average, the oldest members and the lowest intelligence scores. These subjects also had the largest average Network scores. But, average Life Satisfaction scores of these members lay between the other two groups. In addition, the average scores of this group on the Actual Perceived Social Support scales fell between the other two groups. The exceptions were Actual Perceived Material Aid and Actual Perceived Social Interaction. The average scores of Actual Perceived Material Aid were highest for this group, indicating that this group, on average, received the most actual help in terms of physically helping the individual. On the other hand, the mean score on Actual Perceived Social Interaction was lowest for this group, indicating that the subjects, on average, did not receive as many opportunities to closely interact with people as compared to the other two groups (See Appendix D for a description of the scales).

In terms of the Perceived Potential Social Support all the

scales except Perceived Potential Aid fell in the middle range between the other two groups (See Appendix E for a description of the scales). Interestingly, in contrast to Actual Perceived Material Aid which was, on the average, highest for the three groups, Perceived Potential Aid was lowest for this group. This may indicate that help was given without consideration as to whether the person with the handicap really needed or wanted the help given. An indication, which supported this result, was the fact that this group had the highest average score on the Locus of Control (Powerful Others) scale. In addition, when the Locus of Control (Powerful Others) scale was divided into its three Categories, 78% of its members fell in the High Category with 100% of the females falling in the High Category.

The descriptions of the groups are summarized in Table 5.2.

#### DEMOGRAPHIC VARIABLES

Correlations of Age with the other variables produced only one significant result. Age was significantly correlated with intelligence scores. This result was in line with past investigations. Clark and Clark (1974) found that as adolescents and adults with mental handicaps aged their intelligence scores improved. Brown (1972) also showed that major changes in intelligence scores happened during



adolescence amongst people with developmental handicaps.

In the present study, the intelligence scores were also significantly and positively correlated with the Locus of Control Internal scores. This result is consistent with that of DeVellis and McCauley (1979). They suggested that the development of a greater internal locus of control was associated with intellectual development.

The indications that intelligence increases with age and that internal locus of control increases with an increase in intelligence promote Brown and Hughson's (1987) supposition that improved self-image is strengthened by greater control of one's environment. This improved self-image can manifest itself in a more effective performance. On the other hand, reduced control of one's environment is associated with a poorer self-image and poorer performance (Brown & Hughson, 1987).

However, this ability to control can only occur if an individual has learned and internalized certain aspects and principles of cognitive structure, thereby being relieved of more externalized structures. Perceiving this internalization as a growth in cognitive power, self-image can be seen as being linked to development of intelligence. Further, as external structures and control is reduced there should be a corresponding increase in internalized knowledge and positive self-image (Brown & Hughson, 1987).

There were no significant group differences between the three living conditions on the Age variable in the overall analysis. However, when gender was taken into account, there were sex differences in terms of Age. The males, in the group that lived independently, were significantly older ( $\bar{X} = 38.5$  years) than the females ( $\bar{X} = 29$  years). A possible explanation for this result is that the males may have been more cognitively handicapped than females. In addition there was a higher proportion of handicapped males in the community than females. Other studies relating to the size of the population of people with mental handicaps, in terms of gender, concur that males make up the larger proportion (Clarke & Clarke, 1974). Therefore, it is not unreasonable to expect that it would take males longer to move through the system. The females move out sooner because they are better able to take care of themselves.

However, Brown et al. (1989) have pointed out that females maybe are more protected than males and may be identified as having a mental handicap earlier than males. Therefore, they have been placed in care earlier. This earlier placement in care could then result in earlier placement in independent living once the females start moving through the system and are identified as being able to take care of themselves. These explanations may account for the result in this study that males were significantly older than females in the group

living independently in the community.

The males that lived in the group homes were, on average, significantly younger than the males who lived independently. This result was expected if the system is moving its clients through a training program with independent living as its final goal. This is assuming that living on one's own in the community is seen as the most "advanced" form of living for people with mental handicaps.

There were several significant differences between the three living conditions in terms of the number of years a subject had lived in a particular setting. The group which lived in a relative's home (Group3) had lived significantly longer in their setting compared with both the group which lived in group homes (Group2) and the group which lived independently in the community (Group1). However, these differences were possibly a function of the way the information was gathered. Due to the great difficulty in obtaining comprehensive records of past living situations for the subjects, the group which lived at home (Group3) was assumed, by the author, to have lived at home all their lives. This method of information gathering gave results which indicated that the subjects of the group which lived in a relative's home had a very high average of 38.56 years for living in that setting.

However, the other two groups had moved from some other

situation to their present living conditions. Therefore, these other two groups had not had the opportunity to live in their present situation as long as the group which lived at home. This was indicated by the very small number of average years spent in their present settings. The results showed an average of 7.05 years for the group which had been living independently in the community and 5.9 years for the group which lived in group homes.

DIFFERENCES BETWEEN THE THREE GROUPS ON THE SOCIAL SUPPORT,  
LOCUS OF CONTROL AND LIFE SATISFACTION VARIABLES

Living on one's own in the community may be seen as the most "advanced" form of living for people with mental handicaps, but it is not without its problems. This group had the smallest average network in terms of both the number of people in the network and the number of contacts the person had with his/her network (See Table 5.2). These results were similar in magnitude to some previous research which showed that groups which lived independently tended to have smaller networks compared to those in other living conditions (Edgerton & Bercovici, 1976; Mcwhorten, 1983). Because this group has these small networks, the loss of a single contact person could have a devastating effect on the individual. Therefore, they may be seen as more vulnerable to such losses of support.

Atkinson (1986) demonstrated that people with a mental handicap who live in the community have the majority of their contacts with professional people. A cursory look at the data indicates that this was also the case in the present study. Professionals who have contact with these clients must consider that, although they are providing a paid service to the person with a handicap, they are also perceived as a friend by that person (Atkinson, 1986). As a perceived friend, these professionals may have to consider their long term commitment to their clients. In addition, agencies and government should also consider the possible devastating effects caused by a high turn over of professionals who deal with people with mental handicaps.

Hanrahan and Lusthaus's (1978) review of literature found, from the significant others point of view, that many individuals who live independently in the community live lives of boredom, isolation, and lacking a network of friends. On the other hand, Edgerton and Bercovici (1976) and McWhorter (1983) both noted that the most successful individuals with a mental handicap living independently in the community had a least one benefactor. If success is measured by life satisfaction (Brown et al., 1988; Emerson, 1985), then this group which lived independently in this study was the most successful, despite having small networks. Part of this success may be due to the fact that the

independent living group had the highest internal locus of control orientation. Parmenter (1988) commented that an internal locus of control orientation has, in "normal" populations, been considered a measure of a person's ability to live independently.

In this study the locus of control scales were divided into their respective High, Medium, and Low categories. The subjects who scored in the highest third on a scale were considered to be in the High Category. Subjects who scored in the medium third of the scores were in the Medium Category. The subjects who scored in the bottom third of a scale were deemed to be in the Low category of a particular locus of control scale. A number of significant results emerged between these categories when subjects were categorized by their relationship to the locus of control scores and compared on the other variables.

Between the High and Low categories of the Locus of Control Internal scale, there were significant differences on three of the Perceived Potential subscales; Perceived Potential Emotional Support, Perceived Potential Social Interaction and Perceived Potential Practical Aid (See Appendix E for description of sub-scales). In all cases, the High Category (those with the highest scores on the Locus of Control Internal Scale) which represented an orientation toward an internal locus of control, had significantly higher

average scores on these variables compared to the subjects in the Low Category. This result may indicate that people with mental handicaps who tend toward a strong internal locus of control orientation believe they have control of their social support network which provides necessary support when needed. Thus, they were making more effective use of their network (Sandler & Lakey, 1982; Lefcourt, Martin, & Saleh, 1984). The majority of subjects who made up the group which lived independently in the community fell in the High category of the Locus of Control Internal Scale. This result also suggests that it is not the size of the network which is important, but the quality of the contacts and how effectively these contacts are used by the person with a mental handicap that is important.

Gutez et al. (1983), Zautra and Reich (1983), and Schultz and Saklofske (1983) all commented that people with an internal locus of control (in which the person perceives he/she is in control) tended toward a higher level of life satisfaction. This is especially true if their social support system encourages personal control and helps them cope with life events. This appears to be the case in this study, at least for the members of the group which lived independently. They tended to have the most members in the High Category of the Locus of Control Internal Scale even though they had the lowest scores on the Perceived Potential Social Support

scales. Lefcourt et al. (1984) found that people with an internal locus of control orientation, in the "normal" population, expressed less need for social relationships but showed better use of the ones they had as compared to people who had an external locus of control orientation. But, even Lefcourt conceded that a person with an internal locus of control orientation is less at risk if they have a large network as opposed to a smaller one.

Although the majority of subjects who lived independently indicated an internal locus of control orientation, some did not. These people with an external locus of control orientation, who were living independently, might be expected to be at more risk. They are more dependent upon other people because they tend to turn decision making and control over to external forces. Therefore, they would be more likely to get into problems if a member of the network left. Generally, these people would also have less ability to handle a crisis.

Assessing a person's ability to control one's environment may be very important in determining whether the person can live independently. This includes how intensive initial support needs to be. Ability to control one's environment could also be an important criterion for assessing the need for "follow up" support. Of course, teaching the person to control his/her environment to the best of his/her ability should be the goal of any independent living program.



This study showed that Actual Perceived Social support was positively correlated to the size and density of the network. Therefore, while professionals and others should be encouraging people with handicaps to take control of their life circumstances, it is also important to ensure that they are adequately supported. This may mean ensuring that the person with a mental handicap perceives that there is at least one person who can provide support when necessary. House and Wells (1979) found in their investigation of social support in the "normal" population that a single close and caring source of support was as effective as a large number of dispersed social supports.

Perceiving that there is a social network available to provide large amounts of support does not necessarily mean that life satisfaction for the individual is high. In the present study, the group which lived in the group homes had the second largest social support networks, next to the group which lived at home. This group which lived in group homes had the highest average perceived actual and potential social support scores. However, this group had the lowest average life satisfaction scores. As Sandler and Lakey (1982) noted, more support is not necessarily equivalent to better support.

Many group homes have at least one staff on duty whenever clients are present. Therefore, the potential for contact is considerable and may be the reason for the group that lived

in groups having the second largest Network and the highest scores on the Actual Perceived Social Support scales and Perceived Potential Social Support. One could further speculate that all of this support would lead to high levels of satisfaction. It appears from the variables used in this study, that locus of control orientation was the key factor in limiting life satisfaction scores in this group. The members of this group appeared to perceive either that they had some amount of control or that things happened by chance or fate. It is speculated that these perceptions may have caused confusion and unhappiness in the minds of this group as indicated by the low life satisfaction scores.

Members of this group may have felt confused because they perceived they had control over some aspects of their lives at some times but not others. Many of the rules in a group home can be for the convenience of the staff or necessary because of the operating structure of the group home (i.e., when the clients eat, sleep, do laundry.) Outings are another example of when control can be lost by the clients. If there is an outing planned, the clients may not be fully aware of when the outing is going to happen. Then, when it comes time to go on the outing, it may be a surprise to the person. However, if the person does not want to go, they still have to go with the rest of the group home clients because of staffing numbers. This situation can be aggravated

when the outings are initiated by the staff without prior notice. In these cases the control of the situation is taken away from the client and given to the staff.

Probably the most important reason why the clients appear confused on this issue of control may be the inconsistencies with which clients let staff control their lives. One staff may let a client do a task when the client wants to do it, while another staff will demand the task be done when the staff wants it done. Such situations are not uncommon in group homes. One of the subjects of the study who had just recently moved back into a group home from living independently commented that she wished the group home did not have so many stupid rules. She wished the staff would make up their minds about what they were going to do. She wanted to move back out on her own so that she could be left alone.

The group which lived at home had the oldest members, the lowest intelligence scores and the highest average network scores. However, a cursory look at the data indicates that the high scores were due, not to a large number of people in these networks (size), but to the large number of contacts (density) the subjects had within their networks. Other research has shown that in terms of size, a group which lives at home has small networks which are mainly made up of relatives (Krass & Erickson, 1988). This group, in this

study, also had the lowest average scores on Actual Perceived Social Interaction. This scale attempted to measure the number and types of activities done with friends (See Appendix D for description of scale items). The members of this group apparently felt that they did not have the opportunity to interact with people outside their families.

For the group living at home, in terms of the Perceived Potential Social Support, all the scales except Perceived Potential Aid fell in the middle range between the other two groups (See Appendix E for a description of scale items). Interestingly, in contrast to Actual Perceived Material Aid which was, on the average, highest for this group, Perceived Potential Aid was lowest for this group. This may indicate that help was given without consideration for the person with the handicap. Help was given regardless of whether they really needed or wanted the help. An indication to corroborate this result was that this group had the highest average score on the Locus of Control (Powerful Others) scale. In addition, when the Locus of Control (Powerful Others) scale was divided into its three Categories, 78% of the group which lived at home fell in the High Category with 100% of the females from this group falling in the High Category. This result was in line with other studies that have found that parents of adults with mental handicaps tend to be over-protective (Cattermole et al., 1988).

### IMPACT OF LOCUS OF CONTROL AT PRESENT AND IN THE FUTURE

There are indications in the general population that life satisfaction is affected by locus of control (Benassi et al., 1988; Peterson, et al, 1978; Zautra & Reich, 1983). Gutek et al. (1983) stated that the degree to which an individual controlled his/her life determined satisfaction level. This was also the case in this study. Analysis of the present data showed external locus of control scores had a tendency to be negatively correlated to life satisfaction scores. Bennassi et al. (1988) also showed that an external locus of control was related to depression. On the other hand, an internal locus of control tended to be positively correlated to the Life Satisfaction variable.

While there were mixed correlations between Life Satisfaction and the Actual Perceived Social Support measures, all of the Perceived Potential Social Support measures had a positive association with Life satisfaction. This result was in agreement with previous results obtained by Cohen and Hoberman (1983) and Israel and Antonucci (1987).

These results indicate that there may have been a complex interactive process going on. Intelligence can be connected to the development of a internal locus of control and positive self-image (Brown & Hughson, 1987). An internal locus of control provides the opportunity for the individual

to perceive that events are in his/her control. To have control over one's life events increases one's life satisfaction (Benassi et al., 1988; Peterson et al., 1978; Zautra & Reich, 1983).

Dunst et al. (1986) showed that an individual's satisfaction with his/her support system positively affected one's personal well-being. In this study, the control of Perceived Potential Social Support was important in increasing satisfaction with life. Apparently, knowing support was available and knowing receipt of that support was under the individuals control was important in determining their life satisfaction.

The members of the group which lived independently in the community, even with their small networks, had the highest average life satisfaction. This was probably due to an internal locus of control orientation. In contrast, the group which lived in group homes, in spite of having the largest average amounts of perceived actual and potential support had the lowest average amount of life satisfaction. This was possibly due to the external locus of control of the subjects in the group which lived in group homes. This group seemed to focus on the fact that the events seemed to happen by chance or fate.

The Life Satisfaction scores of the group which lived at home, on average, fell between the other two groups.

Indications reveal that members of this group may not have had as much control of their environment as the group which lived independently in the community. On the other hand, they may have been more satisfied with life than the group which lived in group homes because at least they knew who was in charge. In terms of the main effect model, this group was protected from adversity before the events had an impact on them, thereby, improving their life satisfaction. Overall, locus of control orientation seemed to play an important part in determining life satisfaction in the three groups.

A question raised by this one time snapshot of these groups in the study is how did members of the group which lived in group homes and at home develop their internal locus of control when they moved out into the community? Alternatively, were the individuals who were living in the community chosen to live there because they had already developed an effective internal locus of control orientation? In either case, how this locus of control orientation was developed is a question for future research.

It has been proposed that the group which lived in group homes had the lowest life satisfaction scores because they were unsure as to who was in charge; themselves, someone else or no one. Rothbaum et al.'s (1982) two process model of perceived control may explain this difficulty. The subjects may have had a problem distinguishing between Primary and

Secondary situations as defined by Rothbaum. The majority of the subjects which lived independently in the community, exhibited Primary control by gaining control of their environment. This was shown by the tendency toward an internal locus of control orientation for this group.

The group which lived at home with a relative exhibited Secondary control by bringing themselves into line with environmental forces. This was indicated by this group giving up control to powerful others. Giving control to powerful others permits vicarious control of situations by the person identifying with the powerful person (Rothbaum et al., 1982).

In the case of the group which lived in group homes, there appeared to be confusion. It appeared they may have been trying to promote Primary control in a situation where Secondary control was more appropriate. Half the subjects scored high on the internal locus of control scale. The entire group indicated high or medium level of external control due to chance. People who leave things to chance exhibit illusory control (Rothbaum, et al., 1982). This results in the person being passive and withdrawing from situations he/she could otherwise succeed in. They were counting on "luck" to see them through. This confusion affected the group's life satisfaction scores.

This situation raises a number of questions. Can the group home be seen as transitional situation in which subjects try



to exert Primary control? If successful, would these be the most appropriate to move into independent living? Are the subjects who try to exert control seen by the staff as the most disruptive instead of the most capable? If this is the case, how should staff in the homes change their management style to promote independent decision making? Is more time needed to be spent by staff as providers of information/guidance, instead of directing the individual, so that the individual can make decisions? Further research with this group is needed to answer these questions and to determine if group home living is a help or a hindrance to promoting independent living.

People with mental handicaps who live at home may be the most vulnerable of the three groups. Their orientation toward letting others control their lives may make them the least able to adapt when their supports are taken away from them (e.g., when their relatives are unwilling or unable to care for the individual). This group had the lowest average intelligence scores and may be unable to develop a strong internal locus of control orientation. Level of intelligence was positively associated with an internal locus of control.

On the other hand, there is the possibility that intelligence scores have been suppressed in this group by environmental factors (Clarke & Clarke, 1974). Some individuals from this group may be able to develop both their

cognitive ability and their internal locus of control orientation in a more free environment. Only a longitudinal study following such individuals from a home environment to other living situations will test this proposition. However, on a more practical note, parents and other relatives should be made aware of the possible position they are putting their relative into when they consider control and future support issues. The result of this awareness should be to try to encourage relatives to promote independent decision making by the person with the handicap while still at home.

#### THE EFFECTS OF LOCUS OF CONTROL EXTERNAL (POWERFUL OTHERS)

As summarized below, the largest number of significant differences on the other variables were found between the categories of the Locus of Control (Powerful Others) Scale. This is because many people with mental handicaps include powerful people as members of their networks. Malin (1982), Krauss and Erikson (1988), Atkinson (1986) and Koller et al. (1988) indicate that a large percentage of the people who make up the social support network for a person with a mental handicap consists of people who could hold power over them. These people include family members, professionals from health and social welfare fields and staff which work directly with the person.

When the subjects were classified into the High, Medium

and Low categories of the Locus of Control (Powerful Others) scale and then compared on the other variables, most of the significant differences were between the High and Low categories with the Medium categories falling in between. There were also some significant differences between the Medium and Low categories. Between the High and Low category subjects, there were significant differences between all of the Actual Perceived Social Support sub-scales except Actual Perceived Material Aid. This was also true for all of the Perceived Potential Social Support sub-scales except Perceived Potential Financial Assistance. In all cases, the Low category (those subject who believed that they tended not to be controlled by powerful others) had higher average scores on the actual and perceived support variables than the High category (those subjects who had a strong belief that they were controlled by powerful others).

These results tend to indicate that people with mental handicaps, when they perceive they are controlled by others, perceive that they have lower levels of support, both actual and potential. This may shed some light on the findings of Sandler and Lakey (1982) and Lefcourt and his colleagues (1984). They discovered that externally oriented persons did not make effective use of their social support networks. These people may be passively receiving more assistance, but the assistance they receive may not meet their needs

(Barrera, 1986).

These results are most important for the group which lived at home because the majority of its members perceived that they were controlled by powerful others. However, the results of this study also indicated that a number of subjects which lived independently in the community felt they also were controlled by powerful others. These individuals may be at the most risk because, as already discussed, this group had the smallest networks and fewer opportunities to perceive they had actual or potential support. In terms of the buffering model they would have the fewest resources when there is a crisis.

#### THE QUALITY OF LIFE OF THE THREE GROUPS

QOL is multi-dimensional and although QOL includes, but is not equivalent to, a person's life satisfaction and sense of control, these are important factors in determining it (Brown et al., 1988). This project showed that having the ability to meet one's perceived needs, which included control over one's environment, had a positive impact on one's QOL (Barrera & Ainley, 1983; Brown, 1984; and Milbrath, 1979).

In considering the three models of QOL presented in the literature review, it appears that the subjective factors were a more powerful determination of an individual's QOL than the more objective indicators. Many of the objective

indicators cover aspects of the physical environment. These basics needs such as food, shelter, health care, and physical security of the environment as described in Maslow's hierarchy of needs were taken care of on an equal basis by government assistance. Therefore, the more subjective indicators such as the need for love, esteem and self-actualization were more evident in determining differences in QOL in this study's population.

In Bothwich-Duffy's (1986, cf.:Schalock, 1988) model of QOL, the multidimensional differences in QOL are defined along four dimensions: residential environment, interpersonal relationships, community involvement and stability. It is speculated that the group which lived independently would seem to have scored highest in the residential environment dimension on the first two sub-dimensions. The group which lived independently, had the highest percentage of scores on internal locus of control. Therefore, they should have had a more harmonious attachment to their environment and cognitively, a greater share in the creating of their living experience. It is further speculated that the group which lived in the group homes would probably have had the higher scores on the sub-dimensions concerning the level of skill training and a cognitively stimulating environment. This was due to this group having the highest average scores of the perceived actual and potential social support scales. On the

third sub-dimension of residential environment, the physical aspects of the environment are assumed to be relatively equal because all subjects at least received government assistance.

On the second dimension, which assesses interpersonal relationships, it is speculated that the group which lived independently was in the best position for having the best QOL even though they had the smallest networks. This is because they perceive they control the dispensing of their support. In contrast, the other two groups generally perceived support as being controlled by factors other than themselves.

The third dimension was not investigated in this project directly. This project did not look at the community involvement of the individual. However, it could be speculated that those individuals with an internal locus of control may be more willing and better able to access community events.

The last dimension is the stability of the environment and the tenure of the people involved with the individual. It is speculated that the group which lived at home would have scored the highest on both counts. However, the fact that the group which lived at home perceived they were controlled by powerful others would reduce their QOL on the other dimensions.

Parmenter's (1988) model separates QOL into three basic

areas: Social Influences, Functional Behaviours and Self. In the case of Social Influences it is assumed that community attitudes toward people with mental handicaps are relatively equal because all the groups came from two urban centers in Alberta.

The assessment of the four categories of Functional Behaviours area would probably indicate that the group which lived at home had the highest QOL. The group which lived at home would have scored the highest on the social interactions category. They had the largest networks, in terms of size and density, followed by the group which lived in group homes and the group which lived independently being last.

In the area of Occupational/Material Well-being the groups are probably relatively equal. However, in terms of working, Halpern et al. (1986) discovered that being employed was not highly correlated to client satisfaction. Reiter and Levi (1980) also state that the fact that a subject worked did not mean he/she had social skills or friends.

In the Accommodations area, all the subjects were getting government financial support. Therefore, the comfort and security of the accommodations are assumed to be relatively equal. However, it is speculated that the group which lived at home may have the advantage in the area of Accommodations due to family support.

In the last category, access to the community, it was

shown in this study that the group which lived at home had the least access as measured by both actual and potential social interaction scores. The group which lived in group homes had the most access based on those scores. However, due to having smaller networks, the group living independently in the community may have had the least access based on the actual and potential social interaction scores.

The assessment of the previous area might lead to the incorrect assumption that the group which lived at home had the highest QOL. However, in this study, this is not the case if life satisfaction is used as a measure of QOL. The answer lies in Parmenter's (1988) third area labeled Self. The Self area is divided into three arbitrary areas: Cognitive, Affective, and Personal Lifestyle. It is speculated that in all three areas the group which lived independently in the community would score the highest. In the Cognitive area, in this study, they had the highest average intelligence scores and the least externalized structured environment. This, according to Brown and Hughson (1987), should promote a positive self image and empowerment.

In the Affective area, the group which lived independently in the community in this study, had the highest average scores on life satisfaction, internal locus of control, and as indicated by Brown and Hughson, self-esteem. In the last area, Personal Lifestyle, again the group which lived



independently in the community appeared to come out ahead. This group with the highest internal locus of control should feel they have control over life events and their personal lifestyles. The group which lived independently in the community indicated they perceived they had the second largest amount of Perceived Potential Support and the third largest amount of Actual Perceived Social Support. These results in combination with having the highest internal locus of control, according to Dignam's model of social support (Discussed later), would give them the greatest QOL.

The results are similar with Brown et al's (1989) model. In the Objective area which consists of four elements, the groups are considered equal on the Quality of Environment element because all lived in two urban centers of Alberta. On the sub-element, the existence of a support system, the group which lived at home would have scored the highest. However, based on the actual and potential social interaction scores, they would have scored lower on the sub-elements of utilization of neighbourhood and perceiving their environment as the most secure and comfortable. On the Objective area of Growth and Mastery, the group which lived independently in the community would probably have the highest score as they had the highest average intelligence scores.

On the third element, Person's Health, all subjects were healthy and working. On the fourth element, Economic

Stability, all subjects were receiving government assistance and the results of this study show that Perceived Financial Assistance had low scores for all three groups. This indicates that financial assistance is not perceived as being required. However, the group which lived at home may have an advantage due to the availability of direct financial aid from parents.

Of the two elements in the Subjective Area, the group which lived independently scored highest on the Life Satisfaction element. Their internal locus of control orientation gave them the perception they were in control of their social support system and had more success at getting their needs met.

The group which lived independently also would score the highest on the second element on three out of its four sub-elements: self esteem, morale or happiness, ambition and sociability. They, according to Brown and Hughson (1987) would have scored the highest on self-esteem because of their less restricted environment and higher intelligence scores. They did have the highest average on the the Life Satisfaction Scale. They probably would have likely scored highest on the ambition sub-scale due to their internal locus of control orientation. Finally, the group which lived in group homes would have scored the highest on sociability because they had the highest average scores on actual and

potential social interactions.

In terms of the three models of QOL, in this study, it appears that the subjective measures are more powerful determinates of an individual's QOL than the more objective indicators. The objective indicators measure the basics of life which are covered relatively equally by government assistance. The subjective qualitative measures used in this study of social support investigated the process of social support (Pearson, 1986). This process involved being able to control one's social support which was important in expressing satisfaction with life. It appears that actively soliciting support is better than passively receiving it (Sandler & Lakey, 1982). This perception of personal control is likely to promote an "Illusion of Freedom" in which the person believes their life is voluntarily led, thereby, promoting life satisfaction (Zautra & Reich, 1983).

The results of this study indicate that those who felt they had control over their life situation required a smaller network of support. They felt this smaller group could provide all the necessary help required. However, this difference in network size was not great enough to provide significant differences on the Life Satisfaction scale when compared between the people with a internal locus of control orientation and those with a more external locus of control orientation.

Dignam et al. (1986 cf.: Barrera, 1986) present a stress prevention model which could account for the lack of significant differences found between the three groups. This model states that there are at least two ways to relieve a stressful situation. First, primary prevention, in which the person has a large social network that provides a larger amount of social support, thus, heading off possible stressful events before they occur. This is similar to the main effect model. The other is secondary stress prevention. It is similar to the buffering model from the point of view of the individual (Cohen and Wills, 1985). The person perceives the onset of a stressful event and calls upon his/her social support system to help reduce or prevent the stressful situation from occurring. This representation of the buffering model would explain why the group living independently in the community had the highest Life Satisfaction score. It was due to their high internal locus of control scores. They were able to effectively use their smaller social support networks and perceived that they could call on it when help was required.

The other two groups did not have significantly different scores from the group which lived independently. This can be explained by the primary prevention part of Dignam et al.'s (1986, cf.: Barrera, 1986) model. Both these groups had larger social networks that provided more actual perceived social

support than the group which lived independently. Their social support system prevented stressful events from occurring before these events had a chance to occur.

This theory even explains why the group living in group homes, who had higher average Actual Perceived Social Support scores had a lower average Life Satisfaction score. This group had stress occurring due to the uncertainty of not knowing what was really happening. This was indicated by the group living in the group homes having the highest average scores on the Locus of Control (Chance) scale. On the other hand, the group which lived at home with a relative may have had a smaller average amount of Actual Perceived Social Support, but they knew who was in control. They did not have the stress of uncertainty which the group who lived in the group homes is speculated to have had.

Wight-Felske (1984) state that quality of life is affected by where you live. This study tends to corroborate this statement. Living independently in the community appears to be the most satisfying of living situations. As Parmenter (1988) points out, it encapsulates the concept of empowerment. The individuals who live independently gain control and empower themselves. Satisfaction is strongly correlated with social support and only moderately with residential living conditions (Halpern, 1986). Halpern argues that it is the perception of the potential available support

under the control of the individual which is important regardless of the number of people in the person's network. Schaefer, Coyne and Lazarus, (1981) support this view.

The results from the present study were also consistent with this view. The group which lived independently had the lowest scores on the perceived potential support measures but, the highest internal locus of control scores and highest life satisfaction scores.

Living at home appeared to be the next most preferable place to live, even though individuals were over-protected by relatives (Cattermole et al., 1988) and felt they were controlled by powerful others. Even so, most of the perceived and actual social support scores in the group fell between the other two groups.

The group home setting was the least satisfying place to live, even though the subjects had the highest average scores on most of the actual and potential scales. The possible reasons could be that the subjects felt no one was in control or there was a struggle for control.

#### THE VALIDITY OF DIRECTLY ASSESSING THE PERCEPTIONS OF PEOPLE WITH MENTAL HANDICAPS

As was discussed in a previous chapter, Sigelman, et al. (1980, 1981, 1982) found there were many difficulties associated with receiving valid information from people with

mental handicaps. In this study, multiple-choice questions accompanied by visual cues in the form of histograms were used with the appropriate instruments to reduce acquiescent responses. This tactic, in concert with verbal interviewing, was used to hopefully improve the possibility of receiving appropriate responses.

However, the use of verbal interviewing, in which the subjects gave a verbal answers to verbal questions proposed by a stranger, had it's own problems. The subject may have been too anxious to give negative answers. Alternatively, it could have been the problem of social desirability in their answers (Schalock, 1988). In other words, they may have given more positive answers in an effort to please the questioner, believing that this was what the questioner wanted to hear.

An additional problem was with the measures themselves. All or some of them may not have been sensitive enough to pick up the subtleties in responses. Other undetermined factors may have also unduly influenced a measure.

The problem of sensitivity may have been one possible reason why the life satisfaction scale did not show any significant findings. In addition, the subjects may have been happy with where he/she was presently living because that person had not had the opportunity to experience other living conditions (Brown et al., 1990).

Even with these potential problems there were indications

that valid information was obtained from the subjects. There was a strong relationship between what was seen as available potential support and what was actually seen as support. This was represented by a strong significantly positive correlation between the actual perceived and perceived potential social support scales. They were administered at different points in the interview. On the actual perceived social sub-scale Actual Financial Aid, the results were skewed to the low end of the scale. This indicates that the subjects may have recognized they got financial support from sources other than their support network (i.e., government) (Brown et al., 1989).

In terms of network size, this study produced results similar to other studies (Edgerton & Bercovici, 1976; McWhorten, 1983). The group living independently in the community had the smallest networks. Network was positively correlated to the Actual Perceived Social Support Scales. As a social network became larger the amount of available support increased. This positive correlation between Network and available support could be the result of more people in the individual's network willing to provide assistance and/or more frequent contact.

Another indication that valid responses were obtained from the subjects was that some results mirrored those found in the "normal" population. For example, the results showed that



the External Locus of control scales were significantly and positively correlated to one another, while the external correlations to the Internal Locus of Control Scale were approaching zero. These results were similar to the findings Levenson (1972) obtained in her "normal" population of college students.

In addition, this study duplicated Levenson (1972) findings in terms of gender differences. In both studies the males were the only ones to obtain significant differences on the Locus of Control External (Chance) scale. Levenson proposed that this result was caused by the different socialization pressures applied to males and females.

The results in the present study indicated that the subjects who lived at home felt that they were controlled by powerful others. This fits with past findings. Cattermole et al. (1988) found that parents were overprotective of their adult children, which could be interpreted from the adult child's point of view as control by the parents.

Finally, although no significant findings were found on the life satisfaction scale, the trends from the analysis do agree with previous studies. Studies by Benassi et al. (1988), Peterson et al. (1978) and Zautra and Reich (1983) all indicate that life satisfaction is affected by the degree to which an individual believes he/she controls events in his/her life. A similar result was found in the present

study. The group living independently had the highest average level of life satisfaction and the highest average level of internal control. As a whole, the results presented above represent a concrete argument for giving positive consideration to the validity of the results produced in the present study.

### CONCLUSIONS AND RECOMMENDATIONS

Although there are problems in the size and scope of this project, the data does suggest that like many "normal" people, those with mental handicaps were more satisfied with life when they perceived they had control of their social support. They were less satisfied when they felt others controlled them and were the least satisfied when they felt no one was in control of the situation. This was the result regardless of the number of people they felt were available to help them. Therefore, subjective areas of satisfaction may be as/or more important in determining adjustment than overt behavior (McDevitt, et al., 1978).

Several practical recommendations are noted:

- 1) Results of this study and previous research indicate that people who perceive they have control of the environment

have a higher level of life satisfaction. Therefore, an individual with a mental handicap should be given training and opportunities to make decisions concerning his/her own life. This experience and training in making decisions, may help the individual make decisions independently. The person that is in the helping role should be available to provide only sufficient information and guidance so that the person with the handicap can make an informed decision.

- 2) There are indications from the results that it is not the size or density of the person's social network that is important to life satisfaction, but the perceived control of that network. More emphasis could be placed in rehabilitation on assessing an individual's perception of his/her support and his/her control of that support before determining whether help is needed or desired by the individual. The actual size and density of their social network appears to be less important.
- 3) The results indicated that individuals who lived in group homes were the least satisfied with their lives. In part this appeared to be due to them having an external locus of control orientation toward events happening by chance or fate. People who deal with individuals who have mental handicaps living in group homes should, within the limits

of present staffing, a) be consistent in their day to day dealings with these individuals, b) give choices to these individuals and encourage them to make their own decisions. c) Provide training in independent decision making. Again, this must be consistent as inconsistency leads to an external locus of control where the individual feels things happen by chance or fate. d) The staff should be trained to recognize the emergence of internal control in clients and ways to encourage this emergence. The group home should be seen as a training ground for individuals to move into independent living situations not as a mini-institution.

- 4) The results indicated that the people living at home or living in group homes tended to have an external locus of control orientation. Alternatively, when living in the community the subjects tended to have an internal locus of control orientation. Therefore, it should be recognized that individuals moving from living at home to living in the community may have a difficult time adjusting because they are moving from a situation in which other people were in control to a situation where the individual may exert control.

- 5) The results of this study indicated that people with

mental handicaps who lived in the community have small social networks. In addition, most but not all, individuals that lived independently in the community had an internal locus of control. People who work with this population must take into consideration their long term commitment to these individuals. The loss of a single support may be hard on the individual with an internal locus of control orientation and devastating to a person with a more external locus of control orientation.

- 6) The results indicated that although there were certain tendencies toward an external locus of control in the groups which lived at home and the group homes, by no means did everyone have an external locus of control in these two groups. Therefore, parents and staff of group homes must recognize that as an individual develops an internal locus of control, they are not becoming more difficult to deal with or harder to handle but, are trying to develop their decision making skills. More time may be needed to be spent with these individuals to help them understand what situations can be in their control and which are not. There are indications that this development of an internal locus of control will, in the long run, make the individuals with handicaps more satisfied with their lives as they move into more areas of independence.

- 7) The results indicated that some individuals with an external locus of control were also part of the group that lived independently in the community. Care should be taken to identify such individuals and ensure they have adequate support as well as training in independent decision making to ensure their success in living in the community.
- 8) People who work with individuals with mental handicaps should be encouraged to ask these individuals about their wants and needs, especially in the area of cultivating relationships and controlling their own social networks. This study points out that just because a person has a large active support network, it does not mean it provides the support needed or wanted by the individual. It was found that the individuals with a sense of control over their lives were the happiest.
- 9) At least in terms of control issues, the results have been similar to those found in the "normal" population. Therefore, if a control issue arises, the care giver should consider how they would perceive the problem if they were in that position, which would probably be close to how the person with the mental handicap is perceiving it.

10) In the area of life satisfaction and other perceptual factors, research in the "normal" population should be considered. As Cameron et al. (1973) discovered in their studies, there was no evidence to support the contention that there were differences between the individuals with a mental handicap and the normal population in self-reported life satisfaction.

Recommendations for future research in this area should include:

- 1) This small study has trends which reflect tendencies in the "normal" population. A larger study is needed to replicate these present findings, to see if these variables continue to have similar trends as those found in the "normal" population.
- 2) A study could be conducted which attempts to get a clearer picture of the locus of control orientations in different living situations. The present small study only indicates there are tendencies toward a certain orientation depending on type of living condition.
- 3) Further studies are needed into the interrelationships of locus of control orientation and social support that

include an investigation of the causes of the different types of orientations. The present study only touched on the associations between these two aspects of QOL. Therefore causality might be surmised but not shown.

- 4) This study indicated that individuals in different living situations had a tendency toward a particular locus of control orientation. A longitudinal study of the factors studied in this project with emphasis on examining how the person adjusts to moving from one living condition to another is needed. Such a study could give indications as to whether locus of control changes as individuals move from one living situation to another or whether certain people move because of their personal locus of control orientation.
- 5) This study attempted to investigate some subjective indicators of QOL, while other studies have examined the more objective indicators of QOL. A few studies have even directly asked people with mental handicaps their opinions. A project which involves a thorough investigation of all the domains of a Quality of Life model, both objective and subjective, from the point of view of the person would be a large but possibly very important to furthering research on the QOL of people with mental handicaps.



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Appendix ADATA PAGE

Subject Identification A B C /\_\_\_ / M F /ID#\_\_\_

AGE OF SUBJECT \_\_\_\_\_

DATE OF BIRTH \_\_\_\_\_  
DAY MONTH YEAR

## APPROXIMATE FAMILY INCOME

Please circle one of the following:

- 1) under \$10,000
- 2) \$10,000- \$15,000
- 3) \$15,000- \$20,000
- 4) \$20,000- \$25,000
- 5) \$30,000- \$35,000
- 6) \$35,000- \$40,000
- 7) \$40,000- \$45,000
- 8) \$45,000- \$50,000
- 9) over \$50,000

If living in group home .

How many years have you lived here \_\_\_\_\_ years

If living independently :

How many years have you lived here \_\_\_\_\_ years

## Appendix B

### INVENTORY OF SOCIAL SUPPORT BEHAVIOURS SCALE (ISSB)

The items of the ISSB are intended to measure of the Actual Perceived Social Support available in an individual's support system. The items are presented in their respective social support modes.

#### Guidance/Feedback Mode:

- 5. Told you what he /she did in a situation that was similar to yours.
- 12.Helped you in setting a goal for yourself.
- 13.Made it clear what was expected of you.
- 15.Gave you some information on how to do something .
- 16.Suggested some action you should take.
- 19.Gave you some information to help you understand a situation you were in.
- 21.Checked back with you to see if you followed the advice you were given.
- 23.Helped you to understand why you didn't do something well
- 27.Said things that made your situation clearer and easier to understand.
- 28.Told you how she/he felt when something similar had happened to them.
- 32.Told you who you should see for help or assistance.

33.Told you what to expect in a situation that was about to happen.

35.Taught you how to do something.

36.Gave you feedback on how you were doing without saying it was good or bad.

Emotional Support Mode:

2. Was right there with you (physically) in an upsetting situation.

8. Let you know that you did something well.

10.Told you that you are OK just the way you are.

11.Told you the she/he would keep things that you talk about private- just between the two of you.

14.Gave you praise because you were able to do something well.

18.Comforted you by showing you some physical affection.- e.g. gave you a hug.

24.Listened to you talk about your private feelings.

26.Agreed that what you wanted to do was right.

29.Let you know that she/he will always be around if you need help.

30.Expressed interest and concern in your well-being.

31.Told you the she/he felt close to you.

**Social Interaction Mode:**

6.Did some activity with you to help you get your mind off things.

7.Talked with you about some interests of yours.

37.Joked and kidded to try to cheer you up.

**Material Aid Mode:**

17.Gave you OVER \$25.

22.Gave you UNDER \$25.

34.Loaned you OVER \$25.

40.Loaned you UNDER \$25.

**Behavioral Aid Mode:**

1.Looked after a family member when you were away.

3.Provided you with a place where you could get away for awhile.

4.Watched after your possessions when you were away (pets, plants, home apartment, etc.)

9.Went with you to someone who could take action on a problem.

20.Provided you with some transportation (eg. A car ride).

\*25.Loaned or gave you something (a physical object other than money ) that you needed.

\*38.Provided you with a place to stay.

39.Pitched in to help you do something that needed to get

done.

- \* These items were originally in the Material aid mode but were moved to the Behavioral Aid Mode to more closely reflect the item content of Financial Assistance Mode and Practical Assistance mode of the Social Support Behaviour Scale.

### Appendix C

#### SOCIAL SUPPORT BEHAVIOR (SS-B) SCALE

The items of the SS-B Scale are intended to measure the perceived social support available in an individual's support system. The items are presented in the respective social support modes.

##### Guidance/Advice Mode:

10.Would suggest how I could find out more about a situation (problem).

15.Would suggest a way I might do something.

17.Would give me advice about what to do.

19.Would help me figure out what I wanted to do.

22.Would help me decide what to do.

25.Would Help me figure out what was going on.

28.Would tell me who to talk to for help.

33.Would tell me about the available choices and options.

(what choices you have to do things).

35.Would give me reasons why I should or should not do something (advice).

39.Told me the best way to get something done.

42.Told me what to do.

44.Helped me think about a problem.

**Emotional Support Mode:**

- 3. Would comfort me if I was upset.
- 8. Would joke around or suggest doing some-thing to cheer me up.
- 12. Would listen if I needed to talk about my feelings.
- 16. Would give me encouragement to do something difficult (tell me to go for it).
- 20. Would show me that they understood how I was feeling.
- 23. Would give me a hug, or otherwise show me I was cared about.
- 27. Would not pass judgement on me (be my friend no matter what happens good or bad).
- 30. Would be sympathetic if I was upset.-(would tell you they understood how you were feeling.)
- 31. Would stick by me in a crunch (when things got tough).
- 36. Would show affection for me. (give me a hug etc.)

**Socialization Mode:**

- 1. Would suggest doing something, just to take my mind off my problems.
- 2. Would visit with me, or invite me over (to their place)
- 5. Would have lunch or dinner with me.
- 9. Would go to a movie or concert with me.



13.Would have a good time with me.

18.Would chat (talk) with me.

24.Would call me just to see how I was doing.

**Financial Assistance Mode:**

14.Would pay for my lunch if I was broke.

21.Would buy me a drink if I was short on money.

26.Would help me out with a necessary purchase.

29.Would loan me money for a long time.

32.Would buy me clothes if I was short on money.

26.Would help me out with some necessary purchase. (would  
help you pay for it.)

29.Would loan me money for an indefinite period.

32.Would buy me clothes if I was short of money.

38.Brought me presents of things I needed.

41.Loaned me money and wanted to "forget about it".

45.Loaned me a fairly large sum of money.

**Practical Assistance Mode:**

4.Would give me a ride if I needed one.

6.Would look after my belongings(house, pets, apartment, for  
awhile.

11.Would help me out with a move or other big chore.

34.Would loan me tools, equipment or appliances if I needed  
them.

37. Showed me how to do something I didn't know how to do.

40. Talked to other people, to arrange something for me

(appointment etc.)

43. Offered me a place to stay for awhile.