EVALUATING A MENTAL HEALTH NEEDS ASSESSMENT TECHNIQUE ON A SAMPLE OF THE ELDERLY POPULATION OF THE NEW RIVER VALLEY

by

Robert A. Katz

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APPROVED:

R.A. Winett, Chairperson

D.F. Neff

D.W. Harrison

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(ABSTRACT)

The purpose of this study was to evaluate the effectiveness of the Quality of Life-Contribution Model (QOLC) developed by Murrell and Norris (1983) as a mental health needs assessment technique for the rural elderly. In this field survey method, measures of mental health areas and program targets within each mental health area are compared and prioritized according to their relative contributions to a subjective index of quality-of-life (QOL).

An in-home survey of 60 older adults was conducted. Needs were defined in terms of problems, services, and community support and were measured across the following mental health areas: 1) Depression; 2) Organic Brain Syndrome; 3) Alcohol and Drug Abuse; 4) Anxiety; 5) Caregiver Problems; 6) Schizophrenia; and 7) Health Habits.

The utility of the QOLC model was evaluated via the descriptive conclusions generated by multiple regression

analysis of the sample survey data, with QOL as the dependent variable and the different need measures and mental health areas as the independent variables. A cost analysis was also completed comparing the net total cost of the QOLC with the hypothesized net total cost of a more traditional mental health needs assessment (consisting of a key informant plus a service use statistics component).

The results suggest that although the QOLC mental health needs assessment costs more than simpler needs assessment techniques, it can yield important information that can prevent wasteful spending on increased direct mental health services and can also be used to determine the criteria that should be used to segment the target population.

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I would like to express my thanks to the people whose effort and support was critical to the conduct and reporting of this community research. and , from the New River Valley Agency On Aging, allowed me to recruit subjects from their Homebound Meal Program and Congregate Meal Sites. , , , , and graciously let me ride on their homebound meal vans and taught me much about the history of the New River Valley in the process. , , , , , , and permitted me to recruit subjects at New River Valley senior centers. , , and arranged my entry into American Association of Retired Persons meetings. , of the Wheatland Hills Retirement Center in Radford and , from the Warm Hearth Retirement Community in Blacksburg, allowed me to recruit and interview residents of their facilities. Elders throughout the New River Valley took time out of their schedules to participate in the survey.

Committee members Drs. David Harrison and Debra Neff provided thought-provoking questions which aided in the conceptualization of the study, as well as practical input regarding its execution. Statistics consultants Jeff

Vining, Russell Reeve, Boon Hwee Chan, and Dr. Robert Frary answered my questions regarding the data analysis.

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EVALUATING A MENTAL HEALTH NEEDS ASSESSMENT TECHNIQUE ON A SAMPLE OF THE ELDERLY POPULATION OF THE NEW RIVER VALLEY

Studies indicate that the elderly have a higher rate of psychopathology than the general population (Pfeiffer, 1977; Stenback et al., 1978; Blumenthal, 1980). According to Pfeiffer (1977), studies attempting to make global estimates of mental illness in the elderly fall into three categories: 1) those trying to measure whether any psychiatric disorder exists, even mildly; 2) those measuring only the existence of "significant" or at least "moderate" degree of psychiatric disturbance; and 3) studies determining prevalence of disorder by looking at how many elders are actually being seen in mental health facilities. When Pfeiffer synthesized the results of existing studies in each category, he found differing results for each category. Category 1 studies indicated that 50 to 60 percent of elders suffer from some degree of emotional disorder. Category 2 studies demonstrated that "approximately 15 percent of the elderly population in the United States suffer from significant, substantial, or at least moderate psychopathology." In a later synthesis of category 2 studies, Blazer (1980) estimates that 5-10% of the elderly have "significant psychiatric impairment," while 10-40% have

"mild to moderate impairment." Finally, Pfeiffer's (1977) category 3 studies indicated that "approximately 900,000 to 1,000,000 elderly persons residing in various kinds of institutional settings suffer from significant mental disorders." As can be seen in Table 1, studies of the prevalence of individual psychological disorders in the elderly also report differing results.

Insert Table 1 About Here

In the coming years, the mental health needs of the elderly should increase as the national population of those 65 and over is projected to increase from 29.2 million in 1986 (Bureau of the Census, 1987) to between 55 and 64 million by the year 2030 (Feinson & Thotis, 1986; U.S. Department of Health and Human Service, 1981). Also indicating an increase in elder mental health need is the finding by Kulka and Tamir (1978) that today's 20-49 year olds are far more likely than the present elderly cohort to define their problems in mental health terms, a factor that has been highly correlated with actually seeking help for

personal problems. The rates of increase will be greater for the older segment of the 65 and over age group, that is, 75-85 and 85 and over (Redick & Tanbe, 1980), whose population experiences more psychological difficulty in areas such as intellectual functioning, ability to cope (Romaniuk & McAuley, 1983), senile dementia, and suicide (Gatz & Smyler, 1983) than those persons in the 65-74 age group (This finding may be confounded by health status).

As a result of this increasing elderly mental health need, the Department of Health Education and Welfare and the Administration On Aging Commissioner have both recently called for information regarding elderly constituent need in order to establish priorities (Leinbach, 1982). Thus, it will be important for researchers to develop and evaluate techniques which can be utilized by mental health centers to attain this information. A needs assessment is a method of gathering information about met or unmet needs from a defined population (potential customer), and then utilizing that information to revise existing programs or develop new ones in order to allocate resourses more effectively (Bell, Sundel, Aponte, Murrell, & Lin, 1983).

Despite the fact that the elderly seem to have higher rates of mental illness than the general population, and that a significant amount of this psychopathology is treatable (Steur, 1982; Waxman, 1982; Butler, 1975), a very

low percentage of the elderly actually utilize mental health care. Redick and Taube (1980) found that in 1975, of the estimated 3.4 million elderly persons with a mental disorder, only 162,000 or 5% utilized mental health services. Butler and Lewis (1982) report that 4-5% of community mental health center patients are 65 and over, while psychiatrists in private practice spend only 2% of their time with elderly patients. A study by Waxman et al (1982), in which it was found that only 5% of admissions to a psychiatric emergency department were 65 years of age and above, further documents the low mental health service utilization rate of the elderly.

Reasons for the low elderly mental health service utilization rate seem to include the following: 1) lack of knowledge about mental health services and how to go about attaining them (Silverstein, 1984); 2) faulty attitudes and beliefs regarding mental illness and mental health professionals by the elderly (Steur, 1982; Knight, 1983; Waxman, 1982); 3) a dearth of physician referrals to mental health professionals (Rosen & Wiens, 1979; Blumenthal, 1980); 4) inaccessibility to mental health providers due to deficits in finances, transportation, and physical mobility (Krout, 1983; Knight, 1983; Gatz & Smyer, 1983); 5) therapist pessimism regarding the ability of elders to improve (Knight, 1983; Steur, 1982); and 6) poor mental

health services for elderly clients (Redlich & Kellert, 1978; Steur, 1982; Sue, 1976; Estes, 1979).

There has been very little research directed at increasing elder mental health service utilization rate. A mental health center wishing to increase elder service utilization might, as a first step, conduct a needs assessment in order to determine the services that they can offer which will be most helpful and desirable to the elderly residents in the area, as well as the barriers to elder service utilization. Thus, once again, the importance of developing needs assessment techniques and evaluating whether they can be utilized to attain the necessary information from the aged is underscored.

Despite the increasing need for accuracy in needs assessments for the elderly (Leinbach, 1982), it has recently been acknowledged that current needs assessment efforts are of poor quality (Lareau, 1983; Warheit, Bell, & Schwab, 1977) and that the "state of the art" is in its infancy (Little, 1980).

Since practical rather than theoretical considerations are responsible for the invention of the process of needs assessment, it has no theoretical foundation (Lareau, 1983). Thus, there is no agreement among researchers as to what constitutes a "need" (Royse & Drude, 1982). Definitions utilized thus far in the

measurement of "need" have been: a) felt need - input from the defined population as to what is needed; b) expressed need - an actual demand made for services (for example, waiting lists for services, requests for additional help from existing clients, etc.) (Royse & Drude, 1982; Little, 1980); and C) comparative need - an estimation of need determined by examining the characteristics of the people in the population actually receiving services, and then locating those people in the community with the same characteristics (Royse & Drude, 1982).

Because researchers utilize varying definitions of "need" in their needs assessments of the elderly, the methodological approaches to needs assessment generate different recommendations. According to Lareau (1983), the following is a list of these possible conclusions: 1) description of the population; 2) descriptions of the problems of the target population; 3) description of available services; 4) description of unmet need or of the service components needed; and 5) priority ranking of the service needs.

Table 2 summarizes the strengths and weaknesses of the various methodological approaches to needs assessment. Table 3 lists the potential types of conclusions described by Lareau (1983) that can be addressed by each of the needs assessment techniques (Further information regarding the

various methodological approaches to needs assessment can be found in Appendix A.).

Insert Table 2 about here

Insert Table 3 about here

The needs assessment approach being evaluated in this study, the Quality of Life-Contribution Model (QOLC) developed by Murrell and Norris (1983), is a field survey technique. In this method, measures of mental health areas and program targets within each mental health area are compared and prioritized according to their relative contributions to a subjective index of quality-of-life which

is hypothesized to measure the degree to which mental health needs are being met. Each unmet need is assessed by utilizing a variety of measures, each representing a different program target or program implication and reflecting the three components of need conceptualized by Nguyen, Attkisson, and Bottino (1983): problems, services (solutions), and community priorities.

One strength of this method stems from the fact that unlike the other needs assessment methods summarized in Table 2, the QOLC provides a means of measuring validity. Sufficient concurrent validity for a measure of unmet need is indicated by a large negative correlation between the degree of the unmet need and the self-reported measure of quality-of-life for mental health. Also, unlike the other needs assessment techniques, the QOLC is a quantitative model, and thus, should be less subject to instrument and assessor bias and should be more accurate in determining which program will be the best investment.

Since the use of a program by clients may be influenced more by their perception of needs than their actual needs (Murrell, Brockway, & Schulte, 1982; Flaskerud & Kuiz, 1984), another strength of the QOLC is the fact that it focuses on the concept of unmet need from the perspective of members of the target population (Murrell & Norris, 1983). In addition, by looking at the three different

components of need conceptualized by Nguyen, Atkisson, and Bottino (1983), and by simply including the appropriate questions, unlike the other needs assessment methods, the QOLC can be used to address all of the five types of conclusions listed above by Lareau (see Table 3), as well as recommendations regarding service barriers and community priorities. Finally, the QOLC can be applied again in the future in order to determine the actual impact of the resource decisions made (Murrell & Norris, 1983).

A potential weakness of the QOLC as a mental health needs assessment for the elderly is that respondents may be hesitant to acknowledge symptoms or problems which might indicate emotional disorder. In addition, the refusal rate for participation in field surveys seems to be high (Little, 1980).

Another problem with this technique is the high cost of adequate survey research in terms of both time and money. Most researchers, as well as the Administration On Aging, have encouraged planners to undertake the face-to-face survey, which requires more resources than any of the other survey techniques. Since very few agencies on aging employ staff members with survey research skills, outside consultants costing from $60 to $200 per interview are commonly utilized. These costs could be lowered by using students or volunteers (Leinbach, 1982), but potential

difficulties associated with this type of interviewer such as the need for more extensive training and greater supervision, questions regarding reliability and commitment, and reduced availability, must be studied further (Little, 1980). In addition, researchers have recently demonstrated that alternatives to face-to-face surveys conducted by professional interviewers such as telephone interviews or mail surveys may have considerable promise and should be studied further (Leinbach, 1982; Stefl, 1984; Hinkle & King, 1978) (See Appendix A).

THE QUALITY OF LIFE-CONTRIBUTION MODEL (QOLC)

The complete QOL-Contribution Model can be stated mathematically as follows:

$$QOL_H = \sum_i \sum_j (w_{ij} (R - S)_{ij})$$

H (human unit) = The population that is being assessed.

QOL = The self-report scale that is utilized to measure quality-of-life. This index is the criterion for determining the "goodness of fit" between the human unit and its environment. The better the fit, the

greater the QOL of the human unit (Murrell & Norris, 1983).

R (resources) = The protection available from the environment to assist in the growth and development of the human unit and buffer it from the environmental stressors.

S (stressors) = Origin of the harmful forces that contribute stress to the human unit.

R - S = The degree of met or unmet need. As (R - S) decreases, degree of unmet need increases and the Quality-Of-Life of the Human Unit decreases.

i = The different mental health areas (or life domains in a general needs assessment).

w = The differential weights of the different mental health areas, indicating their relative contributions to QOL of the human unit. For each mental health area, resource allocation should be proportional to the contribution of the unmet need in that mental health area to the QOL of the human unit.

j = The 5 measures of unmet need for each mental health area, each representing a different program target or program implication and reflecting the three components of need conceptualized by Nguyen, Attkisson, and Bottino (1983): problems, services (solutions), and community priorities. The program target within the mental health

area with the greatest potential for increasing QOL of the human unit would provide the best return on the resources invested.

Problem-Focused Measures

1) Evaluative Need: The self-recognition of a problem, which would likely determine whether one would seek or use a program.

2) Descriptive Need: Objective, descriptive information about the problem. It is utilized to determine the nature of the problem and it has relevance for the actual content of programs.

Service-Oriented Measures

3) Service Need: Looks at the degree of expected difficulty in obtaining services related to that mental health need. A wise resource allocation in response to a result showing that this measure makes a significant contribution to the QOL of the human unit would be to make the services involved in that mental health area more available and accessible instead of increasing direct services.

4) Service Barriers: Identifies the particular types of obstacles to obtaining services in a mental health area.

Community Priority Measure

5) Community Support: This measure looks at need

through the judgment of the respondent regarding the sufficiency of the services provided in a mental health area in the respondent's community. Questions are asked without reference to the respondent's personal need for or use of such services.

APPLICATION OF THE MODEL

In 1982 and again in 1983, Murrell, Brockway, Schulte, and Hutchins evaluated the QOLC model on general needs assessment surveys (See Appendix B for the results of these evaluations). The following study represents the first attempt to evaluate the effectiveness of the QOLC model as a mental health needs assessment technique for the elderly. Thus, the in-home survey will be conducted on a sample of 60 non-institutionalized persons aged 65 and older and living throughout the New River Valley of southwestern Virginia (the Human Unit, H). Needs will be defined in terms of problems (Evaluative Need and Descriptive Need), services (Service Need and Service Barriers), and community priorities (Community Support). Needs will be measured across the following mental health areas suggested by both the individual psychological disorder prevalence studies listed in Table 1 and by the results of a Key Informant

elder mental health needs assessment conducted by the New River Valley Mental Health Center: 1) Depression; 2) Organic Brain Syndrome; 3) Alcohol and Drug Abuse; 4) Anxiety; 5) Incompetent, Abusive, or Overworked Caregiver (Respite Care); 6) Schizophrenia; and 7) Health Habits. The utility of the Quality-of Life Contributions Model (QOLC) will be analyzed via the descriptive conclusions generated by multiple regression analyses of the total survey sample data, with QOL as the dependent variable and the different need measures and mental health areas as statistically independent variables.

According to Gaitz and Varner (1980), the leading stressors which impinge on the aged are reduced finances, poor health status, lack of social support, and stressful life events (A summary of the likely needs of elders with financial, health, life stressor and social support problems can be found in Appendix F). The impact of these stressors on the elderly may be affective (depression, anxiety, etc.), cognitive (disorientation, frequent forgetfulness, inability to concentrate, etc.), physical (cardiovascular disorders, diabetes, myocardial infarction, dyspepsia, insomnia, etc.), physiological (hyperglycemia, hypertension, etc.), and/or behavioral (alcoholism, drug abuse, impaired motor functioning, withdrawal, impaired speech, agitation, loss of appetite, etc.). Since most of these stress-induced

problems may be amenable to psychological treatment (Fry, 1986), they are likely to be frequently seen by geriatric mental health centers. Thus, determining the mental health needs of elder subgroups that differ with regard to these stressors via multiple regression analysis of the subgroup data may enable mental health workers to accurately predict the needs of their elderly clients after a preliminary screening.

From the perspective of social marketing, this QDLC subgroup analysis may also prove to be an effective means of determining the criteria that should be used to segment the target population (Winett, 1986). Fine (1981) defines market segmentation as "the partitioning of a market of consumers according to some criterion in order that marketing planning may be custom-tailored to suit the unique needs of each segment." Thus, by segmenting the target population of New River Valley elders based on the ability of a stressor to differentiate elder subgroups' mental health needs, a mental health center can focus its programs to attract different segments. This strategy could serve to increase elder mental health service utilization as well as client satisfaction.

To ensure that elders with differing levels of SES, health status, social support, and life stressors were interviewed, subjects were recruited from homebound meal

programs, congregate meal sites, retirement communities, and American Association of Retired Persons (AARP) chapters located throughout the New River Valley.

Methods

Sampling Design

The sample consisted of 60 non-institutionalized persons aged 65 and older (As there are not widely used formal techniques to determine the subject size needed for multiple regression, the number 60 was suggested by Dr. Robert Frary of the Learning Resources Center at Virginia Tech based on his extensive experience with multiple regression and what was feasible for the experimenter to accomplish). The subjects came from each of the surrounding counties and townships in the New River Valley: Floyd, Giles, Montgomery, Narrows, Pulaski, Radford, and Christiansburg (The characteristics of the sample are presented in Table 6.). To obtain this sample, an arrangement was made with Debbie Palmer, Executive Director of the New River Valley Agency On Aging. The Agency On

Aging serves approximately 160 meals daily to elderly homebound clients, covering each of the New River Valley townships and counties. In addition, the Agency serves meals to ambulatory elders at Congregate Meal Sites located in senior centers throughout the New River Valley. The experimenter was given the opportunity to contact the homebound and congregate meal clients that the Agency serves by utilizing a form letter requesting their assistance (See Appendix E), which the experimenter distributed in person. To ensure that elders with differing levels of SES, health status, social support, and life stressors were interviewed, subjects were also recruited from New River Valley retirement communities and American Association of Retired Persons (AARP) chapters.

Insert Table 6 about here

The Recruitment Procedure

The recruitment procedure served to ensure the privacy of the clients while allowing them the opportunity to participate in the study. Those clients wishing to

participate completed the form and gave it to the experimenter, who then arranged a face-to-face home interview with the elder.

In the form letter provided initially, the elders were informed that the results of this survey will be distributed to agencies which fund services for New River Valley elders (for example, New River Valley Area Agency On Aging, New River Valley Mental Health, etc.) in order to assist these agencies in making the most efficient use of their money and being responsive to the needs of the elderly. To alleviate the elders' fears about allowing a stranger to enter their home, they were encouraged to contact their local police chief, who was informed about the survey via a telephone call from the experimenter. In addition, the elders were also made aware that all of the information that they provide during the interview will be strictly confidential.

Out of approximately 295 elders, the recruitment procedure yielded a total of 92 elders (31% out of the total; 47% of homebound; 19% of congregate; 30% of AARP; and 42% of retirement home elders solicited) who initially agreed to take part in the survey. In comparing the demographic characteristics of the 32 seniors that were not interviewed (see Table 5) with the demographic characteristics of the 60 (20% of original 295) elders that

were interviewed (see Table 6), it can be seen that while the two groups were similar with respect to the male-female and black-white ratios, the non-interviewed group contained a good deal more American Association of Retired Persons (AARP) members and a lot fewer retirement home dwellers than the interviewed group. The AARP is a national organization providing adults 50 years of age and above with social welfare services, educational materials, and lectures on aging. Another goal of the AARP is to assist elders in encouraging their local politicians to support legislation important to older adults (AARP News Bulletin, 1978). Since the elders' leading reason for non-participation in the GOLC survey was that they were "too busy to be interviewed," perhaps AARP activists were busier and less welcome to diversions in their lives than elders living in retirement homes, who, for the most part seemed to greatly enjoy the survey experience.

The non-interviewed group also contained more residents of Pulaski and Floyd County, and fewer elders living in Christiansburg and Radford than the interviewed group. A possible reason for the high percentage of non-participants from Pulaski is the fact that due to the thriving AARP chapter that the experimenter attended in Pulaski and the cooperation of Pulaski AARP President Margaret Ritter, the recruitment procedure in this county

yielded many more AARP members than the other locales. As was discussed above, AARP members seemed to be busier and were less likely to be surveyed than the other client-types recruited. Floyd County elder non-participation may be attributed to the fact that the experimenter was involved in an automobile accident in which his car was totaled at the start of the period in which Floyd elders were to be interviewed. The experimenter had to postpone the scheduled interviews, and when he attempted to reschedule, many of the Floyd residents had either reconsidered or could no longer be reached.

Comparatively, the success in obtaining participation from Christiansburg and Radford recruited elders may be attributed to the fact that both locales are closer to Virginia Tech and Radford University, the two largest institutions of higher learning in the New River Valley, than Floyd and Pulaski. Christiansburg and Radford elders would thus, seem to be more likely to be supportive and comfortable with taking part in a research project conducted by a Virginia Tech graduate student. In fact, a few of the Radford elders mentioned their previous participation in gerontological studies at Radford University. Another reason why the interviewed group included more Radford residents than the non-interviewed group was that the recruitment procedure yielded a higher

percentage of retirement home elders in Radford than the other locales. It was shown previously that retirement home elders were more likely to be interviewed than the other client-types recruited.

Insert Table 5 about here

The Representativeness of the Sample

In order to determine the extent to which the survey sample was representative of the population of New River Valley elders, the demographic characteristics of the sample (see Table 6) were compared to the demographic indicators of the New River Valley elder population obtained from the Virginia Statistical Abstract (1987) and the U.S. Bureau of the Census (U.S. Department of Commerce, 1980) and presented in Table 6A.

With regard to racial composition, the survey sample was similar to the New River Valley elder population in 1980. The sample contained a higher percentage of females than the New River Valley elder population and as such, in

accordance with the U.S. Bureau of the Census (U.S. Department of Commerce, 1980), also experienced greater poverty and more instances of living alone than 1980 Valley elders in general. Since the average age of sample elders was 76, the low percentage of married females and high percentage of widows was similar to national statistics (U.S. Department of Commerce, 1983), reflecting the increasingly high difference in life expectation between males and females (Gillaspy, 1979).

The greater percentage of sample elders than 1980 New River Valley population elders that fell into the "very old" (Brody, 1979) group (those 75 and above) may be the legitimate result of the rapid rate of increase in the older segment of the 65 and over age group in the United States (Redick & Taube, 1980). Because, as was discussed previously, these "very old" adults experience more psychological and physical difficulties (Romaniuk & McCauley, 1983; Gatz & Smyer, 1983; Brody, 1979), it is not surprising that the survey sample contained a higher percentage of elders not in the labor force and living in retirement institutions, although some of the sample elders did volunteer work instead. The increase in retirement home elders in the survey sample may also be attributed to the opening of three New River Valley Retirement Centers, Wheatland Hills, English Meadow, and Warm Hearth, since

after the 1980 Census.

The fact that compared to the population of New River Valley elders, the interviewed sample had a higher perentage of residents from Christiansburg, Blacksburg, and Radford, the three locales closest to major universities, and a lower percentage of elders living in Floyd, Pulaski, and Giles, the three counties furthest from a major university, may explain the finding that contrary to the prevalent belief that the present U.S. elder cohort has received less formal education than younger cohorts (Knight, 1986), the elder sample contained a higher percentage of college graduates than the population of New River Valley persons 25 years old and over. Finally, the survey sample was similar to the New River Valley elder population in 1980 with regard to the percentage of elders living in owner-occupied and renter-occupied housing units.

Insert Table 6A about here

Measures

The survey included a consent form, a demographic questionnaire, items developed by the experimenter specifically for this mental health needs assessment, and several inventories that are believed to be especially appropriate for use with an older population (A copy of all the survey measures and forms can be found in Appendix E). Table 11 is a summary of the standard scales utilized as well as their psychometric properties.

Insert Table 11 about here

Dupuy General Well-Being Scale (GWB)

The GWB is the criterion QOL measure to determine which of the needs is the most important. Developed by Dupuy in 1970 for the National Center For Health Statistics Health Examination Surveys (Fazio, 1977), it is a global index of subjective well-being and distress. Section A of the scale consists of 14 items on a six point response

format of dimensions that vary with the item content. Section B consists of the last 4 items on the scale. These items are on eleven point scales of different feeling dimensions (Murrell, Shulte, & Hutchins, 1980). In a study evaluating the use of the GWB on a sample of elderly persons by Murrell, Shulte, and Hutchins (1980), the scale had good internal consistency (alpha coefficient = .88), a normal distribution, and a strong positive correlation with many other inventories that were expected to be associated with quality of life (Louisville General Stressfulness Scale, LSI-Z Life Satisfaction Scale, Rosenberg Self Esteem Scale, etc.).

Belloc Revised Health Scale

The health status measure that will be used in this study is the Belloc Revised Health Scale (BRHS). Developed in 1980 by Murrell, Schulte, and Hutchins for their general needs assessment survey of older persons, the Health Scale contains many items from a health index developed by Belloc, Breslow, and Hochstim (1971) for general populations, plus questions specifically directed toward medical conditions often experienced by senior citizens. The measure is multidimensional, determining the degree of limitation of activities, symptoms, and a subjective health evaluation.

It contains 17 yes-no items and 4 questions on four point response formats of varying dimensions (Murrell, Schulte, & Hutchins, 1980). The Health Scale evidenced good internal consistency (alpha coefficient = .84), a normal distribution, and a high positive correlation with inventories that were expected to be closely related to it when it was given to a sample of elderly adults (Murrell, Schulte, & Hutchins, 1980).

Income Levels

Since the Weighted Average Poverty threshold for the U.S. 65 and over population in 1984 was $4979 for one person and $6282 for a two-person household (Virgnia Statistical Abstract, 1987) and the median household income for New River Valley elders 65 and above (see Table 6A) ranged from $7,266 in Floyd to $11,985 in Radford (U.S. Department of Commerce, 1980), the following are the category household annual income ranges that will be utilized in this study:

Low Income

A) Under $3000

B) $3,000 - $4,999

C) $5,000 - $6,999

D) $7.000 - $8.999

Middle Income

E. $9,000 - $10,999

F. $11,000 - $12,999

G. $13,000 - $14,999

H. $15,000 - $16,999

I. $17,000 - $18,999

High Income

J. $19,000 - $24,999

K. $25,000 - Over

Life Experiences Survey (LES)

The scale that will be used to measure perceptions of life stresses that were experienced during the past year in this study is the Life Experiences Survey (LES). Developed by Sarason, Johnson, and Siegel (1978), one advantage of this 47-item self-report measure is the fact that it provides scores of perceived impact and desirability for both positive and negative life events and is relatively unaffected by the current mood states of the subject. When

the LES was evaluated on a sample of college students it was found to correlate strongly with several measures (State-Trait Anxiety Inventory, Psychological Screening Inventory, and the Beck Depression Inventory) (Sarason, Johnson, & Siegel, 1978).

Since the LES is retrospective, a potential problem with its use on an elderly population is that some of the aged may have poor memory for life events (Fry, 1987). In addition, the LES does not take into account the order in which events occur, which may determine the severity of the subject's distress (Monroe, 1982).

Louisville Social Support Index (SSI)

The scale utilized to measure social support in this study is the Louisville Social Support Index (SSI). Developed by Murrell, Schulte, and Hutchins in 1980, the SSI includes revised items from the Phillips Social Participation Index (Phillips, 1967), items from a social support scale created by Andrews, Tennant, Hewson, and Schonell (1978), plus some additional questions. This 14-item scale asks subjects questions about their actual degree of participaton with persons and organizations, as well as questions regarding the perceived effectiveness of

their social support system. The use of the SSI on a sample of older adults was evaluated by Murrell, Schulte, and Hutchins (1980). The SSI had a normal distribution, good internal consistency (alpha coefficient =.75), and a strong positive correlation with many other measures that it was expected to be related to.

Geriatric Depression Scale (GDS)

The objective measure of depression utilized in this needs assessment was the GDS. Developed in 1982 by Brink, Yesavage, Lum, Heersema, Adey, and Rose, this self-rating scale has the advantages of being easy to use (It consists of 30 simple yes/no items that were most highly correlated with the total score of a 100-item inventory that was originally used.) and specifically designed by geriatric clinicians for use with a geriatric population.

The authors found the GDS to be both a reliable and valid measure of geriatric depression (Yesavage, Brink, Lum, Huang, Adley, & Leirer, 1983). While the scale had a high degree of internal consistency (alpha coefficient = .94; split-half reliability coefficient = .94; median correlation with total score = .56; and mean interitem correlation = .36), the stability of the GDS scores over a one-week

interval was demonstrated by the test-retest reliability correlation of 0.85 ($p < 0.001$).

Evidence for the validity of the scale came from: 1) The superiority of the GDS to the two depression inventories most frequently utilized to measure geriatric depression (the Hamilton and the Zung scales), at being able to distinguish between a group of depressed elders and a control group; 2) the fact that while each of the depression tests was highly correlated with the other two scales, the correlation of the GDS with the Zung and the Hamilton was higher than the correlation between the other two depression tests (Brink et al., 1982); and 3) the statistically significant correlation between the GDS and the Research Diagnostic Criteria (RDC) symptoms of depression (Yesavage et al., 1983). The authors recommend that elders scoring 10 or below on the GDS be considered normal, between 11 and 20, mildly depressed, and that elders with scores 21 to 30 be considered moderately to severely depressed (Brink et al., 1982).

Folstein Mini-Mental Status Exam (MMS)

This short measure of cognitive mental state was developed by Marshal and Susan Folstein in 1974. Since it

takes only 5-10 minutes to administer, it is considered to be advantageous for use with elderly patients, paticularly those with dementia or delirium, who cooperate well for short periods of time only. The first section of the MMS covers orientation, memory, and attention, necessitates vocal responses only, and has a maximum score of 21. The second section looks at ability to name objects, follow verbal and written commands, invent and write a sentence, and copy two interconnected polygons, similar to a Bender-Gestalt figure, and has a maximum score of 9 (Folstein & Folstein, 1975). One problem with the MMS is that due to the reading and writing involved in the second part, elders with impaired vision, inability to hold a pencil due to arthritis, etc., and little education may be at a disadvantage. Thus, in this mental health needs assessment, the MMS scores of the 10 elders for whom these disadvantages could not be eased for example, by large writing, were not utilized.+

In a study by the authors in which elders with dementia, depression, and depression with cognitive impairment were given the MMS, it proved to be both valid and reliable. The test separated out the three diagnostic groups, accurately detected clinical cognitive change, showed no change in elders felt to be cognitively stable (r=.98), and was significantly correlated

with both the Wechsler Adult Intelligence Scale Verbal IQ (r=.776) and the WAIS Performance IQ (r=.66). Administration of the MMS on 200 elders found that a score of 20 or less was found only in elders with dementia, delirium, schizophrenia, or affective disorder (Folstein & Folstein, 1975).

Trait Anxiety Inventory (TAI)

The objective self-rating measure of anxiety utilized in this needs assessment was the TAI. One half of the State-Trait Anxiety Inventory developed by Spielberger, Gorsuch, and Lushene in 1970, the TAI looks at the stable aspects of anxiety. It consists of 20 items with a unvarying four point response format. The TAI is a widely used measure of anxiety, and it evidenced good internal consistency (alpha coefficient = .88), a normal distribution, and a strong positive correlation with inventories that were expected to be closely related to an anxiety scale when it was given to a sample of elderly adults (Murell, Schulte, & Hutchins, 1980).

Interview Procedure

The interviews were conducted by the experimenter, a M.S. candidate in clinical psychology. Two days before each scheduled interview, the experimenter called the subject to confirm the day and time of the interview, as well as the directions.

Upon entering the elder's home, the experimenter first made sure that the interview took place in a quiet setting with no ther persons present to ensure that the elder would not be distracted and would be able to speak his/her own opinion freely. Next, the elderly person was questioned about potential handicaps that could have affected the interview process (hearing impairment, visual impairment, etc.). Then the interviewer sat down next to the elder and went through each question with him/her until completion of the questionnaires, stopping at least once per hour to allow the subject a rest break. The interviewer also monitored the fatigue of the elder to ensure that he/she was answering the questions to the best of his/her ability.

Since the different need measures were compared, and thus, failure to complete any one item on any of the measures necessitated the removal of that respondent from the analysis, it was absolutedly imperative that the interviewer encouraged the subject to complete the measures,

even if he/she had to return to the elderly person's home a second time to finish the interview. Because the experimenter found during the pilot interviews that many of the elders were concerned about their ability to give the "right" answer, he reassured every subject that there were no right or wrong answers and that he/she was doing well if he/she was expressing his true feelings, 10 times during each interview. In addition, in order to ensure that the interviewer was not telegraphing answers by how he read the responses, the experimenter averted the gaze of the elder while reading the responses and also did his best to keep his voice at a consistent pitch and frequency.

The interview procedure seemed to be quite successful. Despite the fact that the subjects suffered from a variety of disabilities such as visual impairment and hearing loss, the interviews took an average of just under 2 hours for each of the elders to complete, and none of the surveys took more than 2 1/2 hours to finish. Although there were some complaints about the length of the interview, each of the subjects was willing to complete the survey and most seemed to be genuinely interested in the questions posed.

Qualitative evidence that the data obtained was truthful comes from the fact that the interviewer's informal impressions of the subjects' physical, cognitive, financial,

and emotional states (recorded immediately following each interview and before the self-report scales were scored) seemed to closely match the resultant self-report measures. In addition, questions of subject response variability and perseveration were rare, and when the interviewer suspected that either were occurring, he questioned the elder about it immediately or asked the subject to explain his response.

Results

Overview

The utility of the QOLC model as a mental health needs assessment technique for the elderly will be evaluated via the descriptive conclusions generated by multiple regression analysis of the sample survey data, with GWB as the dependent variable and the different need measures and mental health areas as the independent variables.

First, in order to compare each need measure within each mental health area, the raw scores of every need measure were converted to z scores. Next, when the data was checked for missing observations, it was discovered that for Mental Health Area 5, the measures of Evaluative Need and Descriptive Need had 20 and 22 missing observations. With

so much data missing, these two independent variables made the analysis impossible and thus, they were discarded.

For the third step, a multiple regression analysis was used to determine which factors provided signficant contributions to the GWB. Initially, the forward, backward and stepwise procedures, using the standard default conditions for inclusion and exclusion supplied by SAS, were pursued due to the extremely large number of independent variables. These procedures were used to reduce the number of independent variables to the point where an "all possible regressions" approach (Myers, 1986) would be feasible.

The all possible regressions approach is preferred over the stepwise procedures since these procedures assess only a subset of all the possible models. The strategy behind the stepwise procedure has been found many times to be flawed for real situations and unreliable (Myers, 1986). In the all possible regressions procedure, models were evaluated in terms of Mallows Cp statistic (Myers, 1986). This statistic is a measure of the mean squared error of prediction due to the choice of the model. The best models were those with low values for the Cp statistic.

Finally, for the best models in terms of the Cp statistic, partial t statistics were determined for each variable given the presence of all the other variables in the model. The partial t statistic is the probability that

the actual beta weight of the population is equal to 0, given the sample parameter estimate.

Those coefficients whose partial t's yielded p values that were less than 0.05 were considered strongly significant, indicating that the variables associated with those coefficients were very important to the model. A coefficient whose partial t yielded a p value between .05 and .2 was considered marginally significant. However, in light of the model's performance in terms of the Cp statistic, it was thus concluded that such a variable improved the model's performance sufficiently to justify its inclusion.

It was desired to split into three groups (a low, moderate, and a high) the measures of social support (SSI), health status (BRHS), and life stressors (LES). If it is assumed that these measures follow a normal distribution, then an appropriate grouping would be:

$$\text{High Range} = (\bar{X} + .43(SD)) \text{ to } (\text{The highest score})$$

$$\text{Moderate Range} = (\bar{X} - .43(SD)) \text{ to } (\bar{X} + .43(SD))$$

Low Range = Ø to ($\bar{X}$ - .43(SD))

To determine the mental health needs of elders that differ with regard to the indices of financial status, social support, health status, and occurance of stressful life events, the QOLC findings generated by each of the various subgroups will be analyzed via multiple regression techniques similar to the ones utilized in analyzing the QOLC outcome data for the entire sample, with GWB as the dependent variable and 7 different need measures within mental health areas as the statistical independent variables: 1) Descriptive Need measure for Depression, Mental Health Area 1; 2) Descriptive Need measure for Organic Brain Syndrome, Mental Health Area 2; 3) Descriptive Need measure for Alcohol and Drug Abuse; 4) Descriptive Need measure for Anxiety, Mental Health Area 4; 5) Service Need measure for Caregiver Problems, Mental Health Area 5; 6) Service Barrier measure for Schizophrenia, Mental Health Area 6; and 7) Descriptive Need measure for Health Habits, Mental Health Area 7. Since the other 26 potential independent variables could not be utilized because of the small number of observations in each of the subgroups, the experimenter chose 1 need measure from each of the mental health areas so that all were represented. He also picked mainly inventories which yield

objective, descriptive information about the nature of the problem because it was felt that these would provide the most information for a potential geriatric mental health screening.

Contributions of the Types of Need to Quality-Of-Life

In looking at the relative contribution of each type of need to General Well-Being without regard to the mental health area, the most efficient model in explaining General Well-Being (R-Squared=.678, meaning that these measures account for almost 68% of the variance in General Well-Being) and generating the lowest Cp statistic (Cp=4.09), included the two problem-oriented measures, Descriptive Need and Evaluative Need. The F value of 29.2 (p=.0001) indicates that the model based on Descriptive Need and Evaluative Need is statistically significant. In further analyses, only the parameters Evaluative Need and Descriptive Need were determined to be significantly greater than 0 (partial t=.0001 and .0026 respectively), further indicating that the service-oriented measures (Service Need and Service Barriers) and the community priority measure (Community Support) did not make a significant contribution to General Well-Being.

Contributions of Mental Health Areas to Quality-Of-Life

To evaluate the relative contribution of each of the mental health areas to General Well-Being, the standardized scores of the need measures within each mental health area were added together and then averaged, generating an index of the degree of unmet need for each mental health area. The model that was most efficient in explaining General Well-Being (R-Squared=.314, meaning that these mental health areas account for 31% of the variance in General Well-Being) and had the lowest Cp statistic (Cp=.853), included the mental health areas Anxiety and Organic Brain Syndrome. The F value of 5.34 (p=.0014) indicates that the model based on Anxiety and Organic Brain Syndrome is statistically significant. In further analyses, only the parameters Anxiety and Organic Brain Syndrome were determined to be marginally greater than 0 (partial t=.0948 and .1946), further indicating that the mental health areas Depression, Alcohol and Drug Abuse, Caregiver Problems, Schizophrenia, and Health Habits did not make a significant contribution to General Well-Being.

Contributions of Mental Health Areas Within Individual Need Measures

In looking at the relative contribution of the mental health areas within the individual need measures, the model that was most efficient in explaining General Well-Being (R-Squared=.619, meaning that these measures account for almost 62% of the variance in General Well-Being) and generated the lowest Cp statistic (Cp=1.77), included the Descriptive Need measure for Anxiety, Mental Health Area 4 (DN4), the Descriptive Need and Evaluative Need measures for Health Habits, Mental Health Area 7 (DN7 and EN7), and the Community Support measure for Alcohol and Drug Abuse, Mental Health Area 3 (CS3). The F value of 15.2 (p=.0001) indicates that this model is statistically significant. In further analyses, only the parameters Descriptive Need for Anxiety, Descriptive Need and Evaluative Need inventories of Health Habits, and the Community Support Measure for Alcohol and Drug Abuse were determined to be significantly greater than 0 (partial T=.0001, .0096, .0202, and .0233), further indicating that the other measures did not make a significant contribution to General Well-Being.

Contributions of The Indices of Financial Status, Social Support, Health Status, and The Occurance of Stressful Life Events to Quality-Of-Life

In order to analyze whether the demographic indices contributed significantly to GWB, a main effects ANOVA was utilized. A larger model considering the interactions could not be done due to missing values. The only index which made a significant contribution to GWB was the BRHS ($F=10.07$; $p=.0002$). When pairwise comparisons were performed on the BRHS High, Low, and Moderate subgroups, the GWB scores of all of the subgroups were found to be significantly different from the others, with the Low BRHS subgroup having the highest standardized mean GWB (.8159), followed by the Moderate (.1665) and then the High BRHS (-.4719) subgroups.

Differences Between Male and Female Elders on the Indices of Social Support (SSI), Health Status (BRHS), Life Stressors (LES), Depression (GDS), Quality-Of-Life (GWB), Anxiety (TAI), and Cognitive Mental State (MMS)

To evaluate whether the sexes differed with respect to the objective indices surveyed, a series of univariate ANOVAs were performed. Since none of the F values attained significance, we cannot reject the null hypothesis that there were no differences between the index scores of the males and the females.

Correlation Coefficients Between the Objective Indices Surveyed

Table 7 summarizes the correlation coefficients that were generated between the objective indices.

Insert Table 7 about here

Contributions of Mental Health Areas Within Individual Need Measures for the Various Subgroups

The QOLC subgroup data was analyzed via multiple regression with GWB as the dependent variable and the following independent variables: 1) Descriptive Need measure for Depression, Mental Health Area 1 (DN1); 2) Descriptive Need measure for Organic Brain Syndrome, Mental Health Area 2 (DN2); 3) Descriptive Need measure for Alcohol and Drug Abuse, Mental Health Area 3 (DN3); 4) Descritive Need measure for Anxiety, Mental Health Area 4 (DN4); 5)

Service Need measure for Caregiver Problems, Mental Health Area 5 (SN5); 6) Service Barrier measure for Schizophrenia, Mental Health Area 6 (SB6); and 7) Descriptive Need measure for Health Habits, Mental Health Area 7 (DN7). Table 8 summarizes the models that were most efficient in explaining General Well-Being for the various subgroups.

Insert Table 8 about here

Cost Analysis

As indicated on the worksheet provided in Table 9, the net total cost of the QOLC was $7006 (Levin, 1983). The justification for this budget can be found in Appendix C.

Insert Table 9 about here

As indicated on the worksheet provided in Table 10, the net total cost of the simple needs assessment (Key Informant Nominal Group Method plus the Program Survey Method) conducted by the New River Valley Mental Health staff (see Appendix A) was $5725 (Levin, 1983). Justification for this budget can be found in Appendix D.

Insert Table 10 about here

Discussion

In this section, the results of the QOLC evaluation are discussed, as well as the limitations in the accuracy of the findings. Since it was previously shown that overall, the survey sample seemed to be representative of the population of New River Valley elders, the QOLC outcome data

can be generalized to New River Valley elders and perhaps, can also be generalized to rural areas with similar populations and low socioeconomic status characteristics (While the median household income for householders age 65 and above was $10,333 for the survey sample, for U.S. elders it was listed at $13,254 by the Department of Commerce in 1987.).

Tables 9 and 10 demonstrate that the use of the QOLC as a mental health needs assessment for the elderly costs more than a simple elder mental health needs assessment (Key Informant Nominal Group Method plus the Program Survey Method) conducted by a mental health center. Is the QOLC needs assessment worth the extra cost?

Several of the findings generated by the use of the QOLC Model in this study seem to demonstrate its effectiveness as a mental health needs assessment technique for the elderly. First of all, the finding that Evaluative Need and Descriptive Need together accounted for almost 68% of the variance in General Well-Being indicates good validity and that these two types of need-measures, as a set, explain a good deal of the GWB of the sample. This seems to suggest that a valid mental health needs assessment of New River Valley elders should be made up of both relatively objective and subjective problem-focused questions. Not only do other traditional mental health

needs assessment techniques such as the Key Informant Nominal Group Method (KIN) and the Program Survey Method (PSM) not provide a quantitative means of measuring validity, they are also composed of objective indices only. The fact that the Service Barriers, Service Need, and Community Support measures were not significantly related to General Well-Being seems to suggest that service-oriented and community priority measures are not needed to perform a valid mental health needs assessment of New River Valley elders.

The finding that only two of the seven mental health areas, Anxiety and Organic Brain Syndrome, made significant contributions to GWB across need measures seems to indicate that a valid mental health needs assessment of New River Valley elders could consist of fewer mental health areas, which could serve to lower the cost of the QOLC. Of the two, Mental Health Area 4, Anxiety, seemed to contribute most strongly to GWB. While the Mental Health Area 7, Health Habits, was significant on two need measures (Evaluative Need and Descriptive Need), across need measures it was highly positively correlated with the Mental Health Area 2, Organic Brain Syndrome. Although the Evaluative Need and Descriptive Need measures for Mental Health Area 5, Caregiver Problems, were removed from the analysis due to their large number of missing observations, making it

impossible to state unequivically that Caregiver Problems did not contribute significantly to GWB, the fact that the Service Need, Service Barrier, and Community Support measures for Mental Health Area 5 were among the sample parameters with the highest probability that their population parameter was zero seems to suggest evidence for this conclusion.

The QOLC outcome data can also suggest local policy changes and possibly changes in other similar communities. The finding that GWB was strongly related to an objective measure of anxiety (Descriptive Need) would suggest in a typical mental health needs assessment such as the KIN that additional traditional direct mental health services to alleviate anxiety were needed for New River Valley elders. But the fact that in this QOLC elder mental health needs assessment, GWB was unrelated to the self-recognition of anxiety as a problem (Evaluative Need), community support for anxiety programs (Community Support), and anxiety service availability measures (Service Need and Service Barriers), seems to indicate that the problem is more complex.

Thus, if our criterion is the GWB, just increasing or making more accessible psychotherapy services for elder anxiety in the New River Valley would not be helpful, since New River Valley believe that anxiety is not a problem for

them, that anxiety-reduction services would be unrelated to their GWB, and would thus, not make use of such services. Perhaps New River Valley elders have been influenced by our society to believe that high anxiety is a normal part of the aging process. Another possibility is that since 92% of the sample had never been to see a mental health professional, these elders may not understand what mental health services exist and how these services can be of help to them. Also, the elders might worry that they will be stigmatized and even institutionalized if they go to see a mental health professional. These possibilities would seem to suggest the need for mental health education programs for New River Valley elders and their family members, since 80% of the elderly consult a relative during a health crisis (Brody & Kleban, 1981). In addition, Cowen (1982) has shown that community caretakers, (especially hairdressers): 1) Are often presented with customer personal problems similar to those brought to mental health professionals; 2) feel good about being asked to help their customers and would like to receive mental health training to improve their help-giving skills; and 3) are capable of learning counseling skills. Thus, a training program designed to teach informal caregivers who are in daily contact with older persons and their family members about the problems that elders face, effective help-giving strategies, and the referral services

that are available, might prove to be a useful means of attacking the problem of elder anxiety.

For Mental Health Area 7, Health Habits, which looked at health problems that can be effectively treated by mental health professionals specialized in the areas of Behavioral Medicine and Health Psychology, the problem-focused measures were highly related to GWB while the service-oriented measures and the community support for these services were unrelated to GWB. These findings suggest that although the health habit problems were important to New River Valley elders, once again, the response to these problems should be something other than an increase in the amount and availability of direct professional mental health services, which a simple needs assessment would have suggested. One such response might be increased funding for health promotion and education groups at places in which New River Valley elders congregate such as local senior centers.

The finding that for Mental Health Area 3, Alcohol and Drug Abuse, only the community support measure was related to GWB might indicate that the elderly subjects saw alcohol and drug abuse as a problem for other New River Valley elders, but not for themselves. Evidence for this seems to come from the fact that while the elders surveyed overwhelmingly claimed to have no substance abuse problems,

many claimed to know of other elders in their area who were alcohol and/or drug abusers. Whether some of the elder subjects were unwilling to admit to actual drug and/or alcohol problems cannot be known, although the experimenter's observation that the questions regarding this mental health area generated strong emotional and defensive responses from many of the subjects would seem to favor this possibility.

Though several subgroups did not have enough range to do multiple regression due to inadequate sample size, the fact that differences were found in the mental health needs of several of the subgroups seems to indicate the potential usefulness of looking at the mental health needs of elder subgroups that differ with regard to the leading stressors which impinge on the aged. For example, the GWB was strongly related to objective questions regarding depression, health habits, and an index of the barriers to the use of schizophrenia services for the Low Income subgroup, while in the Moderate Income subgroup, an index of anxiety was strongly related to GWB. This seems to suggest that low income New River Valley elders may be more likely to need services for depression and health habits (Direct and indirect or preventive services for health habit problems are more likely to be found in white collar neighborhoods, places of work, etc. In addition, wealthier

elders are more likely to be able to afford such services.), as well as services that alleviate barriers to mental health services utilization, while higher income New River Valley elders may be more likely to need anxiety reduction services.

The QOLC outcome data for the life stress subgroups seems to indicate that high life stress New River Valley elders have a greater need for mental health services than lower life stress elders, particularly in the areas of anxiety, cognitive deficits, and difficulty getting a caregiver. New River Valley elders with lower social support also seemed to have more need for mental health services than the Good Social Support elders, with glaring differences in the areas of depression, cognitive deficits, and difficulty getting a caregiver (Perhaps members of the elders support system care for the elder themselves or hire someone else to provide help.). Finally, the lower health status elders seemed to have more of a need for services which alleviate anxiety and barriers (particularly physical barriers) to mental health service utilization than Good Health Status elders, while Good Health elders seemed to have more trouble getting a caregiver than lower health status elders, possibly because they are less likely to be eligible for Medicaid.

While the findings that the BRHS was the only index

which made a significant contribution to General Well-Being, all of the BRHS subgroups were significantly different from eachother, and that the BRHS had a significant negative correlation with the GWB, GDS, and the TAI, seem to suggest that this health status measure might be a particularly good screening device for a geriatric mental health center and an effective index with which to segment the target population, more research determining the mental health needs of elder subgroups that differ with regard to significant stressors must be done utilizing large, representative samples of older adults.

The findings generated by this QOLC mental health needs assessment may be called into doubt by limitations in the accuracy of the self-report data obtained. Researchers have found that many elders function at a high level of anxiety (Pfeiffer, 1980; Thomae, 1980). The measures utilized in this survey may have elicited a great deal of anxiety in the sample elders due to the stress of a new situation (Pfeiffer, 1980) as well as the elders' fears of being institutionalized, labelled "crazy" (Gurland, 1980), and losing their federal and state benefits (Kay & Bergmann, 1980). Evidence for this high anxiety comes from the fact that despite much effort by the interviewer to build rapport with the subjects and repeated assurances to the contrary, many of the elders continually questioned the interviewer as

to whether they would "get in trouble" by participating in the survey.

This anxiety may have raised elder arrousal beyond its optimal level (Thomae, 1980), impairing the subjects' ability to generate accurate responses (Pfeiffer, 1980). These errors are likely to be errors of ommission (Lawton, Whelihan, & Belsky, 1980) since highly anxious elders hesitate to respond, are overly cautious and vague in replying, have difficulty completing tests of intellectual ability (Gurland, 1980), and have a tendency to deny negative symptoms and present themselves in a socially desirable light (Lawton, 1986). Other factors that may have affected the accuracy of the elder sample data include sensory and motor deficits, impairment in cognitive skills, educational deprivation (Lawton, Whelihan, & Belsky, 1980), fatigue, and elder rejection of questions that seem tactless, intrusive, or irrelevent to them (Kay & Bergmann, 1980).

The findings that 30% of the sample elders scored in the mildly depressed range of the Geriatric Depression Scale, 9% of the elders fell in the moderately to severely depressed range, and 6% of the sample scored in the abnormal range of the Folstein Mini-Mental Status Exam were consonant with studies of the prevalence of individual psychological disorders in the elderly (See Table 1). However, evidence

for inaccuracies in the sample data comes from the fact that 17% of the sample elders could not complete the Folstein Mini-Mental Status Exam due to sensory impairments, motor deficits, or an inability to read. Also indicating possible erroneous responses was the finding that while the elders injested an average of four medications each day, only 28% of the sample elders answered affirmatively to the question "Is alcohol or medication (pill) use a problem for you?". This discrepancy suggests a need for the addition of direct observational techniques (Miller, 1980), performance tests, and data from significant others to future QOLC elder mental health needs assessments.

In conclusion, the results suggest that the QOLC mental health needs assessment can yield important information that can prevent wasteful spending on increased direct mental health services that may have been recommended had a simple elder mental health needs assessment such as the KIN or the PSM been utilized. A QOLC mental health needs assessment can also be used to determine the criteria that should be used to segment the target population and to increase mental health service utilization and client satisfaction. Whether these benefits outweigh the extra cost of doing a QOLC mental health needs assessment will ultimately depend on the judgement of agency decision-makers.

Future directions suggested by this study include the following: 1) Allocating resources based on the QOLC outcome data recommendations, including for alternatives to traditional direct mental health services, and repeating the QOLC to determine the actual impact of the resource decisions made; 2) utilizing QOLC outcome data to increase elder mental health service utilization; 3) continuing exploration of alternatives to face-to-face surveys and eliminating service-oriented and community priority need measures as well as some mental health areas as a means of lowering the cost of conducting a QOLC needs assessment; 4) further research determining the mental health needs of elder subgroups that differ with regard to significant stressors; 5) conducting a similar QOLC mental health needs assessment on an urban elder sample and comparing the results to this one; and 6) as was discussed above, adding direct observational techniques, performance tests, and data from significant others to future QOLC elder needs assessments in order to increase the accuracy of the sample data obtained.

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TABLE 1: THE PREVALENCE OF INDIVIDUAL PSYCHOLOGICAL DISORDERS IN THE ELDERLY

MENTAL DISORDER	AUTHORS	PREVALENCE
Acute Organic Brain Syndrome (Able to care for self without assistance)	Kay & Bergmann 1980	15% of elderly admitted to geriatric and acute general medical wards.
	Kay, 1977	2.6% to 15%
Chronic Organic Brain Syndrome (Unable to care for self without assistance)	Kay & Bergmann 1980	5% to 8%
	Neugebauer 1980	3.5% to 5%
	Kay, 1977	1% to 7%
Alcohol Abuse	Kay & Bergmann 1980	1% to 3% of elderly males
	Schuckit & Pastor, 1979	20% of community elders
Schizophrenia	Kay & Bergmann 1980	1% to 4%
	Neugebauer 1980	3.5%
Personality Disorder	Kay & Bergmann 1980	3%
	Neugebauer 1980	5%
Hypochondriasis	Kay & Bergmann 1980	33% of community elders
Depression	Bergmann, 1971	4% of males and 11% of females suffer from depression of at least moderate severity.
	Blazer & Williams, 1980	3% to 6% of elders have clinically diagnosable major depressive disorder.
	Blumenthal 1980	20% to 25% mildly depressed
	Post, 1976	52% of elders with Parkinson's disease diagnosed as suffering from a Major Depressive Episode.

TABLE 2: METHODOLOGICAL APPROACHES TO NEEDS ASSESSMENT

TECHNIQUE	METHOD	STRENGTHS	WEAKNESSES
1. Secondary Data Use	Infer needs from descriptive statistics already in existence.	Low-cost time-saver	Reliability unknown Dearth of useful secondary data sets available Need projections imprecise Subject to biases of planner Ignore opinions of client group
2. Key Informant	"Experts" asked to present their opinions	Low-cost time-saver Ensures cooperation from service providers	Purely qualitative Vocal, powerful members can dominate the meetings & thus overinfluence the findings Ignore opinions of client group "Experts" programmatic self-interest & ignorance of the portion of the population that does not seek services at their own agencies may lead to inaccuracies

TABLE 2 : METHODOLOGICAL APPROACHES TO NEEDS ASSESSMENT (CONTINUED)

TECHNIQUE	METHOD	STRENGTHS	WEAKNESSES
3. Service Use Statistics	Service user requests &/or statistics are analyzed	Low-cost time-saver Indirectly looking at a sample of client group perceptions	Sample is not representative since it is biased toward the services provided by the program staff No new understanding or solutions to problems derived Lack of standardization of service user statistics makes it difficult to compare & combine data from different service agencies
4. Field Survey	Selecting and interviewing a community sample from the client group	Can be quantitative & thus, less subject to assessor bias & more accurate Directly measuring client group perspective May increase client group involvement in services	Client group hesitancy to acknowledge symptoms or problems High refusal rate High cost in time and money

TABLE 3: CONCLUSIONS ADDRESSED BY EACH NEEDS ASSESSMENT TECHNIQUE

TECHNIQUE	CONCLUSIONS THAT CAN BE ADDRESSED
1. Secondary Data Use	Description of the population
2. Key Informant	Description of the problems of the target population
	Determination of unmet need
	A priority ranking of the needs
3. Service Use Statistics	Description of available services
	Determination of unmet need
4. Field Survey	Description of the population
	Description of the problems of the target population
	Description of available services
	Description of unmet need and the service components needed
	Priority ranking of the needs

TABLE 5: AVAILABLE DEMOGRAPHIC CHARACTERISTICS OF THE 32 INITIALLY RECRUITED ELDERS THAT WERE NOT INTERVIEWED AND THE REASONS FOR THEIR NONPARTICIPATION

SEX(%)		RACE(%)	
Male	Female	White	Black
28	72	97	3

CLIENT TYPE(%)				
Homebound	Meal Program	Nutrition Site	Retirement Home	AARP
38		25	6	31

LOCALE	(%)
Blacksburg	16
Christiansburg	9
Radford	6
Floyd	16
Pulaski	31
Narrows	9
Giles	9
Dublin	3

REASONS FOR NONPARTICIPATION(%)	
Medical	9
Phone Disconnected	6
Refusal to Sign Consent Form	9
Afraid to Have Stranger Over	3
Too Busy to be Interviewed	18
Phone Number Changed to Unlisted	3
No Longer Interested in Being Interviewed	15
No Phone and Off Homebound Meal Driver's Route	9
Not Home	3
Bereaving Spouse's Death	9
Adament in Belief That Can't Provide Helpful Information	3
Elder Confused and/or Demented	12

TABLE 6: DEMOGRAPHIC CHARACTERISTICS OF THE SAMPLE

AGE(years)	SEX(%)		RACE(%)	
	Male	Female	White	Black
$\bar{X}$ = 76	28	72	93	7

EDUCATION(avg grade level)			# OF RESIDENTS IN HOUSEHOLD	
Male	Female	Overall	Male	Female
10th	11th	11th	1.65	1.47

YEARS OF SCHOOL COMPLETED BY SAMPLE ELDERS

12 YEARS OR MORE	16 YEARS OR MORE
30%	23%

CLIENT TYPE(%)

Homebound Meal Program	Nutrition Site	Retirement Home	AARP
38	25	18	18

LOCALE	(%)
Blacksburg	20
Christiansburg	20
Radford	15
Floyd	5
Pulaski	22
Narrows	8
Giles	10

MARITAL STATUS(%)

	Married	Widowed	Divorced	Never Married
Male	59	24	6	12
Female	19	72	2	7
Overall	30	58	3	8

INCOME(%)

	Low	Middle	High	Don't Know
Male	59	24	18	0
Female	61	23	7	9
Overall	60	23	10	7

BEEN TO MENTAL HEALTH PROFESSIONAL SINCE TURNING 65(%)

	Yes	No
Male	12	88
Female	2	98
Overall	5	95

TABLE 6: DEMOGRAPHIC CHARACTERISTICS OF THE SAMPLE CONTINUED

	OWN A CAR(%)	
	Yes	No
Male	59	41
Female	40	60
Overall	45	55

	EMPLOYMENT(%)		
	Yes (Paid)	Yes (Volunteer)	No
Male	6	24	70
Female	5	21	74
Overall	5	22	73

	LIVING SITUATION			
	Apartment	Retirement Home Apartment		Own House
Male	12	6		82
Female	14	23		63
Overall	13	18		68

	LIVING ADULT CHILDREN (#)		
	Daughters	Sons	Total Kids
Male	2.2	1.5	3.7
Female	1.6	1.4	3.0
Overall	1.8	1.4	3.2

DISTANCE OF LIVING ADULT CHILDREN FROM ELDER (MILES)	
Daughters	Sons
145	189

RELIGION	(%)
Bretheren	3
Methodist	30
Presbeterian	5
Lutheran	3
Baptist	27
Pentecostal	17
Christian Church	3
Holiness	3
Jehovah's Witness	2
Episcopalian	2
Christian Scientist	2
None	3

TABLE 6: DEMOGRAPHIC CHARACTERISTICS OF THE SAMPLE CONTINUED

AGE BREAKDOWN

	65-69	70-74	75-79	80-84	85-
Total	17%	33%	15%	15%	20%
Male	70%	35%	11%	11%	8%
Female	30%	65%	89%	89%	92%

LIVING SITUATION OF THE SAMPLE ELDERS (%)

LOCALE	HOUSEHOLDER OR SPOUSE	OTHER RELATIVES	NONRELATIVES IN HOUSEHOLDS	LIVING ALONE M	LIVING ALONE F	LIVING ALONE AVG	IN INSTITUTION
Blacksburg	8	17	---	33	55	50	25
Christiansburg	50	8	---	20	57	42	0
Radford	11	---	---	0	13	11	78
Giles	55	---	---	25	57	45	0
Pulaski	46	8	---	33	50	46	0
Floyd	33	---	---	0	100	66	0
							17%

MEDIAN HOUSEHOLD INCOME FOR ELDER SAMPLE

ELDER HOUSEHOLD HEAD MALE	ELDER HOUSEHOLD HEAD FEMALE	ELDER HOUSEHOLD HEAD AVERAGE	ELDER UNRELATED INDIVIDUAL MALE	ELDER UNRELATED INDIVIDUAL FEMALE	ELDER UNRELATED INDIVIDUAL AVERAGE
$10,500	$10,166	$10,333	$6,500	$5,250	$5,591

SAMPLE ELDERS LIVING IN POVERTY

LOCALE	% WITH INCOME BELOW POVERTY LEVEL MALES	FEMALES	AVERAGE
Blacksburg	0	55	42
Christiansburg	20	43	33
Radford	0	13	11
Giles	0	14	9
Pulaski	33	20	23
Floyd	100	50	66
Overall	19	30	27

TABLE 6A: DEMOGRAPHIC CHARACTERISTICS OF THE POPULATION

SEX (%) OF NEW RIVER VALLEY ELDER POPULATION

Male	Female
37	63

SOURCE: U.S. Department of Commerce (1980)

RACE (%) OF NEW RIVER VALLEY ELDER POPULATION

White	Black
95	5

SOURCE: U.S. Department of Commerce (1980)

LIVING SITUATION OF NEW RIVER VALLEY GENERAL POPULATION

LOCALE	OWNER-OCCUPIED HOUSING UNITS (%)	RENTER-OCCUPIED HOUSING UNITS (%)
Blacksburg	33.7	66.3
Christiansburg	69.7	31.3
Narrows	80.6	19.4
Giles	75	25
Pulaski	67	33
Radford	63.3	36.7
Floyd	72	28
AVG	67%	33%

SOURCE: U.S. Department of Commerce (1980)

LIVING SITUATION OF NEW RIVER VALLEY ELDERS

COUNTY	HOUSEHOLDER OR SPOUSE	OTHER RELATIVES	NONRELATIVES IN HOUSEHOLDS	LIVING ALONE	IN INSTITUTION
Floyd	64%	5%	1%	28%	2%
Giles	65%	8%	2%	24%	1%
Montgomery	59%	7%	2%	28%	4%
Pulaski	58%	11%	2%	24%	4%
Radford	58%	12%	2%	28%	0%

SOURCE: U.S. Department of Commerce (1980)

YEARS OF SCHOOL COMPLETED BY NEW RIVER VALLEY PERSONS AGED 25 YEARS OLD AND OVER

LOCALE	12 YEARS OR MORE	16 YEARS OR MORE
Floyd	40.1%	7.6%
Giles	52.6%	7.2%
Montgomery	62.0%	26.8%
Pulaski	46.7%	8.8%
Blacksburg	85.5%	56.2%

SOURCE: U.S. Department of Commerce (1980)

TABLE 6A CONTINUED: DEMOGRAPHIC CHARACTERISTICS OF THE POPULATION

NEW RIVER VALLEY ELDER EMPLOYMENT CHARACTERISTICS

LOCALE	SEX	EMPLOYED (PAID)	UNEMPLOYED	NOT IN LABOR FORCE
Blacksburg	M	26%	0%	74%
	F	7%	0%	93%
Christiansburg	M	20%	0%	80%
	F	6%	0%	94%
Pulaski	M	20%	2%	78%
	F	7%	0%	93%
Radford	M	16%	0%	84%
	F	11%	0%	89%
Floyd	M	21%	1%	78%
	F	5%	0%	95%
Giles	M	11%	0%	89%
	F	3%	1%	96%
Overall	M	19%	1%	81%
	F	7%	0%	93%

SOURCE: U.S. Department of Commerce (1980)

MEDIAN HOUSEHOLD INCOME FOR NEW RIVER VALLEY ELDERS IN 1979

LOCALE	ELDER HOUSEHOLD HEAD	ELDER UNRELATED INDIVIDUAL BY SEX	
		MALE	FEMALE
Giles	$10,437	$4515	$4543
Montgomery	$11,529	$4671	$4230
Floyd	$7,266	$2718	$3000
Pulaski	$10,605	$4739	$3757
Radford	$11,985	$6500	$5034

SOURCE: U.S. Department of Commerce (1980)

NEW RIVER VALLEY ELDERS LIVING IN POVERTY

LOCALE	% WITH INCOME BELOW POVERTY LEVEL
Floyd	35%
Giles	16%
Mongomery	17%
Pulaski	20%
Radford City	8%

SOURCE: U.S. Department of Commerce (1980)

MONEY INCOME OF VIRGINIA ADULTS AGED 65 AND OVER BY SEX IN 1979

SEX	MEDIAN	$5999 OR LESS	$6000 TO $14999	$15000 TO $49999	$50000 OR MORE
MALES	$6743	45%	35%	18%	2%
FEMALES	$3564	72%	22%	6%	0%

TABLE 6A CONTINUED: DEMOGRAPHIC CHARACTERISTICS OF THE POPULATION

LOCALE OF NEW RIVER VALLEY ELDER POPULATON	%
Blacksburg	10
Christiansburg	10
Radford	10
Floyd	15
Pulaski	33
Narrows	3
Giles	18

SOURCE: U.S. Department of Commerce (1980)

AGE BREAKDOWN OF NEW RIVER VALLEY ELDER POPULATION

	65-69	70-74	75-79	80-84	85-
Total	38%	26%	18%	10%	8%
Male	45%	43%	39%	38%	34%
Female	55%	57%	61%	62%	66%

SOURCE: U.S. Department of Commerce (1980)

MARITAL STATUS OF UNITED STATES ELDER POPULATION (%)

	MARRIED		DIVORCED		WIDOWED		NEVER MARRIED	
	65-74	75-	65-74	75-	65-74	75-	65-74	75-
Male	80.6	69.7	3.6	2.4	7.5	21.7	4.9	3.3
Female	49.3	22	5.1	1.8	38.3	68.5	5.3	6.1

SOURCE: U.S. Department of Commerce (1983)

Table 7: Correlation Coefficients Between the Objective Indices

Variable 1	Variable 2	r	Prob > |R|	Comment
SSI	LES	-.03829	.8059	Not Significant
SSI	GWB	.159157	.2853	Not Significant
SSI	BRHS	-.215309	.1461	Not Significant
SSI	GDS	.393315	.0062	Significant
SSI	TAI	.410701	.0041	Significant
SSI	MMS	-.185450	.2120	Not Significant
LES	SSI	-.036829	.8059	Not Significant
LES	GWB	.467755	.0009	Significant
LES	BRHS	-.260818	.0766	Not Significant
LES	GDS	.366019	.0114	Not Significant
LES	TAI	.300673	.0400	Not Significant
LES	MMS	-.137702	.3560	Not Significant
GWB	SSI	.159157	.2853	Not Significant
GWB	LES	.467755	.0009	Significant
GWB	BRHS	-.585880	.0001	Significant
GWB	GDS	.671870	.0001	Significant
GWB	TAI	.692258	.0001	Significant
GWB	MMS	-.215210	.1463	Not Significant
BRHS	SSI	-.215309	.1461	Not Significant
BRHS	LES	-.260818	.0766	Not Significant
BRHS	GWB	-.585880	.0001	Significant
BRHS	GDS	-.493312	.0004	Significant
BRHS	TAI	-.530250	.0001	Significant
BRHS	MMS	.247679	.0932	Not Significant
GDS	SSI	.393315	.0062	Significant
GDS	LES	.366019	.0114	Not Significant
GDS	GWB	.671870	.0001	Significant
GDS	BRHS	-.493312	.0004	Significant
GDS	TAI	.790909	.0001	Significant
GDS	MMS	-.325654	.0255	Not Significant
TAI	SSI	.410701	.0041	Significant
TAI	LES	.300673	.0400	Not Significant
TAI	GWB	.692258	.0001	Significant
TAI	BRHS	-.530250	.0001	Significant
TAI	GDS	.790909	.0001	Significant
TAI	MMS	-.337887	.0202	Not Significant
MMS	SSI	-.185450	.2120	Not Significant
MMS	LES	-.137702	.3560	Not Significant
MMS	GWB	-.215210	.1463	Not Significant
MMS	BRHS	.247679	.0932	Not Significant
MMS	GDS	-.325654	.0255	Not Significant
MMS	TAI	-.337887	.0202	Not Significant

Table 8: Models That Account For The Most Variance In General Well-Being

SUBGROUP	MODEL	p Value	F	PR > F	Cp	R^2
LOW INCOME	DN1, SB6, DN7		15.72	.0001	1.78	.616
	DN1	.0152				
	SB6	.1101				
	DN7	.0018				
MODERATE INCOME	DN4	.0001	28.65	.0001	3.19	.636
HIGH INCOME	NOT ENOUGH OBSERVATIONS TO MAKE MEANINGFUL INFERENCES ABOUT CONCLUSIONS					
POOR HEALTH STATUS	NOT ENOUGH OBSERVATIONS TO MAKE MEANINGFUL INFERENCES ABOUT CONCLUSIONS					
MODERATE HEALTH STATUS	DN2, DN4, SB6		4.70	.0356	1.17	.638
	DN2	.1198				
	DN4	.0124				
	SB6	.1646				
GOOD HEALTH STATUS	SN5, DN2, DN7		7.47	.0024	2.75	.583
	SN5	.0087				
	DN2	.0166				
	DN7	.0485				
HIGH LIFE STRESS	NOT ENOUGH OBSERVATIONS TO MAKE MEANINGFUL INFERENCES ABOUT CONCLUSIONS					
MODERATE LIFE STRESS	DN1, DN2, DN4, SN5, DN7		4.34	.0274	5.38	.707
	DN1	.0112				
	DN2	.0121				
	DN4	.0023				
	SN5	.1008				
	DN7	.0391				
LOW LIFE STRESS	DN1, DN7		25.06	.0001	.352	.649
	DN1	.0001				
	DN7	.0566				
POOR SOCIAL SUPPORT	NOT ENOUGH OBSERVATIONS TO MAKE MEANINGFUL INFERENCES ABOUT CONCLUSIONS					
MODERATE SOCIAL SUPPORT	DN1, DN2, DN4, SN5, DN7		5.42	.0235	5.13	.795
	DN1	.1529				
	DN2	.0275				
	DN4	.0742				
	SN5	.1286				
	DN7	.0228				
GOOD SOCIAL SUPPORT	DN4, DN7		12.1	.0002	.455	.671
	DN4	.0005				
	DN7	.0657				

TABLE 9

TABLE 9 Worksheet for Estimating Costs of QOLC

1 Ingredients	2 Total Cost	3 Cost to Sponsor	4 Cost to Other Government Agencies	5 Contributed Private Inputs	6 Imposed Student and Family Costs
Personnel					
Coordinator	$3460	$3460			
Facilities					
PSC	$2069			$2069	
Materials and Equipment					
Printing	$118	$118			
Office Supplies	$100	$100			
Others					
(specify)					
Transportation ($.23/mile)	$759	$759			
Computer (1 hour CPU)	$500	$500			
Value of Client Time and Other Client Inputs					
Total Ingredients Cost	$7006	$4937		$2069	
User Fees		-( )			+( )
Other Cash Subsidies		-( )	+( )	+( )	
Net Costs	$7006	$4937		$2069	

TABLE 10

TABLE 10 Worksheet for Estimating Costs of KIN Plus PSM

1 Ingredients	2 Total Cost	3 Cost to Sponsor	4 Cost to Other Government Agencies	5 Contributed Private Inputs	6 Imposed Student and Family Costs
Personnel					
Coordinator	$1730	$1730			
Facilities					
10% of New River Valley Mental Health	$2653			$2653	
Materials and Equipment					
Printing	$100	$100			
Poster Paper	$50	$50			
Office Supplies	$100	$100			
Others					
(specify)					
Refreshments	$40	$40			
Transportation ($.23/mile)	$552	$552			
Computer (1 Hour CPU)	$500	$500			
Value of Client Time and Other Client Inputs					
Total Ingredients Cost	$5725	$3072		$2653	
User Fees		-( )			+( )
Other Cash Subsidies		-( )	+( )	+( )	
Net Costs	$5725	$3072		$2653	

TABLE 11: SUMMARY OF MEASURES UTILIZED

INSTRUMENT	DOMAIN	FORMAT	PSYCHOMETRIC PROPERTIES
Dupuy General Well-Being Scale (GWB)	Quality-of-Life	Self-report; A - 14 items; 6-pt scale B - 4 items; 11-pt scale	Alpha Coefficient=.88 Normal Distribution; Strong positive correlation with many other inventories
Belloc Revised Health Scale (BRHS)	Physical Health Status	Self-report; 17 yes-no to presence of symptoms and activity limitations; 4 subjective health evaluation; 4-pt scale	Alpha Coefficient=.84 Normal Distribution; Strong positive correlation with many other inventories
Life Experiences Survey (LES)	Stressful Life Events	Self-report; Indicate which of a standard 47-item list has occurred, when and how negative or positive it was	Strong positive correlation with many other inventories
Louisville Social Support Index (SSI)	Social Support	Self-report; Perceived effectiveness of and actual degree of participation with persons and organizations in support system	Alpha Coefficient=.75 Normal Distribution; Strong positive correlation with many other inventories
Geriatric Depression Scale (GDS)	Depression	Self-report 30 yes-no items	Alpha coefficient=.94 Test-retest reliability coefficient = .85 Strong positive correlation with Hamilton Rating Scale for Depression, Zung Self-Rating Depression Scale, & Research Diagnostic Criteria symptoms of depression; Distinguished between diagnosed depressed elders and control group;

TABLE 11: SUMMARY OF MEASURES UTILIZED (CONTINUED)

INSTRUMENT	DOMAIN	FORMAT	PSYCHOMETRIC PROPERTIES
Folstein Mini-Mental Status Exam (MMS)	Mental Status & Cognitive Function	5-10 minute interview; Questions correct or incorrect on orientation, L/T & S/T memory, attention, naming objects, following commands, and psychomotor functioning	Distinguished between elders with dementia, depression, and depression with cognitive impairment; Test-retest reliability coefficient = .98 Accurately detected clinical cognitive change; Strong positive correlation with WAIS Verbal & Performance I.Q.
Trait Anxiety Inventory (TAI)	Anxiety	Self-report 20-items; 4-pt scale	Alpha Coefficient=.88 Normal Distribution; Strong positive correlation with many inventories

APPENDIX A

METHODOLOGICAL APPROACHES TO NEEDS ASSESSMENT

1. Secondary Data Use

This commonly used needs assessment technique utilizes descriptive statistics already in existence (Lareau, 1983), with the assumption being that mental health needs can be inferred from variables that have been highly correlated with the need for mental health services. One problem with using secondary data is that its reliability is not usually known (Royse & Drude, 1982). Another problem is the dearth of secondary data sets that contain the information necessary for a description of the problems of the elderly (Lareau, 1983). In addition, since these data are only indirect measures of the need for mental health services (Royse & Drude, 1982), need projections are necessarily imprecise and subject to the biases of the planner while ignoring the opinions of the client group (Lareau, 1983). Thus, the use of secondary data as a needs assessment method can be used to address effectively only one of the types of conclusions listed by Lareau (1983), the descripton of the population.

2. Key Informant

In the next most popular technique, the key informant method, persons active in the community whose experience is expected to provide them with an understanding of the needs of the elderly, are asked to present their opinions (Lareau, 1983). A variant of this technique, the Key Informant Nominal Group Method (KIN), was performed by the New River Valley Mental Health Center staff as part of their needs assessment. Knowledgeable service providers or advocates for the elderly in the New River Valley were recruited and met two times as a group to nominate and rank order their perceptions of the needs of the elderly in the New River Valley (Cogswell, 1987). This technique can be used to address qualitatively three of the types of conclusions listed by Lareau (1983): 1) description of the problems of the target population; 2) determination of unmet need; and 3) a priority ranking of the needs. Another advantage of this method is its low cost (Royse & Drude, 1982). In addition, involving service providers and advocates in the needs assessment process increases the probability that they will cooperate with and support the programmatic decisions made by New River Valley Mental Health. Finally, unlike traditional key informant methods, where vocal, powerful

members can dominate meetings and thus influence the findings (Royse & Drude, 1982), the use of the nominal group ranking method provides for equal input from all the participants (Cogswell, 1987).

A disadvantage of the KIN is that due to its qualitative nature, no statistical probability statement about needs can be garnered from this data (Royse & Drude, 1982). Another problem is that the technique does not provide a description of the population being served, relying solely on the subjective opinions of advocates whose programmatic self-interest (Lareau, 1983) and ignorance of the needs of the portion of the population that does not seek services at their own agencies, may lead to inaccuracies (Royse & Drude, 1982). Evidence of this problem comes from a study by Eva Kahana (1976) in which the elderly members of a community differed from members of service agencies for the elderly and "significant others" both in the degree and kind of needs they perceived. If consumers do not perceive a need, they will probabably not make use of a service (Flaskerud & Kuiz, 1984).

3. Service Use Statistics

In this needs assessment technique, service user requests and/or service user statistics are analyzed in

order to address two of the potential types of conclusions described by Lareau (1983): 1) a description of available services; and 2) an estimate of unmet need. A variant of this technique, the program survey method (PSM), was also performed by the New River Valley Mental Health staff (along with the KIN) during their needs assessment of the elderly. Information on the services available and the current utilization patterns were utilized to estimate service needs and resource requirements, and to "compare the population at risk with the population receiving services" (Cogswell, 1987). Strengths of this method include the following: 1) it is inexpensive; 2) it will determine for the first time, specifically what mental health services are available for the elderly in the New River Valley, thus providing an accurate baseline; 3) from a social marketing perspective, by providing the information that will be utilized to ensure a supply-demand match, the researchers are indirectly looking at a sample of elder need perceptions, thus ensuring service utilization if the sample is a representative one.

The following are the weaknesses of the PSM: 1) since the sample of elders looked at is biased towards clients already in a program, it is very likely that the sample is not a representative one; 2) the technique also has potential biases towards the services provided by the program staff; 3) by reviewing previous solutions to

problems, no new understandings or solutions will be derived; 4) the lack of standardization of service user statistics makes it difficult to compare and combine data from different service agencies (Lareau, 1983; Cogswell, 1986).

4. Survey of Elderly Respondents

The most frequently utilized needs assessment method (Lareau, 1983), this technique involves selecting and interviewing a community sample from the elderly population (Little, 1980). Sufficient concurrent validity for a measure of unmet need is indicated by a large negative correlation between the degree of the unmet need and the self-reported measure of quality-of-life for mental health. Also, unlike the KIN and the PSM, the QOLC is a quantitative model, and thus, should be less subject to instrument and assessor bias and should be more accurate in determining which program will be the best investment.

Since the use of a program by clients may be influenced more by their perception of needs than their actual needs (Murrell, Brockway, & Schulte, 1982; Flaskerud & Kuiz, 1984), another strength of the QOLC is the fact that it focuses on the concept of unmet need from the perspective of members of the target population (Murrell & Norris,

1983). In addition, by looking at the three different components of need conceptualized by Nguyen, Atkisson, and Bottino (1983), and by simply including the appropriate questions, unlike the other needs assessment methods, the QOLC can be used to address all of the five types of conclusions listed above by Lareau, as well as recommendations regarding service barriers and community priorities. Finally, the QOLC can be applied again in the future in order to determine the actual impact of the resource decisions made (Murrell & Norris, 1983).

A potential weakness of the field survey as a needs assessment for the elderly is that respondents may be hesitant to acknowledge symptoms or problems which might indicate emotional disorder. In addition, the refusal rate for participation in field surveys seems to be high (Little, 1980).

Another problem with this technique is the high cost of adequate survey research in terms of both time and money. Most researchers, as well as the Administration On Aging, have encouraged planners to undertake the face-to-face survey, which requires more resources than any of the other survey techniques. Since very few agencies on aging employ staff members with survey research skills, outside consultants costing from $60 to $200 per interview are commonly utilized. These costs could be lowered by using

students or volunteers (Leinbach, 1982), but potential difficulties associated with this type of interviewer such as the need for more extensive training and greater supervision, questions regarding reliability and commitment, and reduced availability, must be studied further (Little, 1980).

Recently, researchers have been looking at the possibility of utilizing telephone interviews or mail surveys as less expensive alternatives to the face-to-face survey. Telephone and mail interviews have been found to be as time consuming as the face-to-face survey (Leinbach, 1982; Little, 1980), and all three procedures seem to overrepresent upper SES members of the population (Hinkle & King, 1978).

While some studies have demonstrated lower response rates for the telephone and particularly the mail-out surveys (Hinkle & King, 1978), in a carefully controlled study by Leinbach (1982), no statistically significant difference in elderly response rate was observed among the three interview techniques. In addition, in this study (which is the only one of its kind performed with an elderly population), it was found that both mail surveys and telephone surveys produced statistically similar results to the face-to-face survey with regard to the needs assessment data.

Of the three interview techniques, the telephone survey seems to be the least expensive method, both in absolute cost and in cost per completed survey (Stefl, 1984; Hinkle & King, 1978).

Since according to Sudman (1976), the percentage of rural households that have unlisted telephones is approximately 5%, and nearly 98% of the population is now accessible by phone (Stefl, 1984), telephones samples cannot be considered to be seriously biased against households without telephones or with unlisted telphone numbers. Approximately 90% of the residences interviewed in the research surveys of both Flaskerud and Kuiz (1984) and Hinkle and King (1978) had telephones. One potential problem with telephone interviews is that telephone surveyors may experience more emotional discomfort than face-to-face surveyors (Hinkle & King, 1978).

Thus, it seems that alternatives to face-to-face surveys conducted by professional interviewers may have considerable promise and should be studied further.

APPENDIX B

APPLICATION OF THE MODEL

In 1982, Murrell, Brockway, and Schulte evaluated the QOLC model on a statewide in-home general needs assessment survey of a representative sample of 570 non-institutionalized older persons (aged 60 and above) in Kentucky. The four need measures (j) (Descriptive Need, Evaluative Need, Service Need, and Service Barriers) were asked in each of the following six life domains (areas of life) (i) that were believed to contain problems for the elderly: Mental Health, Nutrition, Physical Health, Social, Transportation, and Income. The criterion measure (QOL) was the Life Satisfaction Index-form Z (Wood, Wylie, & Sheafor, 1969). It was assumed that the better needs are being met, the higher the life satisfaction (Larson, 1978).

In conducting a forward stepwise regression with the four need measures as the statistically independent variables, the researchers found that these measures accounted for nearly 40% of the variance in Life Satisfaction and yielded a significant F-ratio, indicating that the measures relate to the life satisfaction of the elder Kentucky population. Individually, the results demonstrate the potential usefulness of problem-oriented

survey measures for older adults as the two problem-oriented measures, Descriptive Need and Evaluative Need made significant and strong contributions to life satisfaction. In addition, Service Barriers made a significant but weak contribution and Service Difficulty did not make a significant contribution to life satisfaction, thus questioning the usefulness of service-oriented measures.

A forward stepwise regression in which the overall unmet need indices for each problem area were the independent variables indicated that the problem areas accounted for 38% of the variance in life satisfaction. The significant F-test implies that the problem areas were associated with elder life satisfaction. Four of the six problem areas made significant contributions to life satisfaction, with Mental Health making the strongest contribution, followed by Physical Health, Income, and Nutrition. These findings suggest the importance of conducting a mental health needs assessment of the aged.

In 1983, Murrell, Schulte, Hutchins, and Brockway again evaluated the QOLC model, conducting an in-home generalized needs assessment survey of a representative sample of 1,847 adults, including a subsample of 681 elders. Needs were defined in terms of problems (Evaluative Need and Descriptive Need) and services (Service Need and Service Barriers) as in the previous survey, as well as in terms of

community priority (Community Support). Needs were measured across the life domains of Employment , Environment, Financial, Health, Mental Health, Nutrition, Social, and Transportation. The Perceived Quality of Life Scale (Andrews & Withey, 1976) was utilized as the criterion to determine which of the needs were most prominent.

The QOLC was useful as a generalized needs assessment technique and as a means of making resource decisions. The forward stepwise multiple regression analysis with quality-of-life as the dependent measure and type of need as the statistically independent measure yielded a significant F-test for both the adult sample and the elder subsample, with Evaluative Need contributing strongly to QOL across samples. Forward step-wise multiple regression with the life domain as the statistically independent measure and quality-of-life as the dependent measure produced a significant F-ratio for both samples, indicating that the set of life domains was related to the QOL of the samples. Mental Health, Social, and Employment made significant contributions to the QOL of both samples.

To compare the life domains on each program target, a separate forward step-wise regression was completed for each type of need, with the type of need measure for each life domain as the statistically independent measures and QOL being the dependent measure. The beta weights for Service

Need indicated that the services most likely to improve the QOL of the adult population would be in the Social and Financial life areas, while Health services would be the best QOL investment for the elderly subsample. The low Community Support for Social services though, also signified the need for increased education and community involvement regarding the proposed programs. For both populations, QOL was strongly related to self-recognition of Employment as a problem (Evaluative Need) and to Community Support for Employment programs, but not to whether one was employed or not (Descriptive Need). These findings suggest that from the perspective of the populations surveyed, increasing the appropriateness of jobs would seem to be more effective at improving QOL than simply creating new jobs, which may have been the response of service providers following a different needs assessment technique. Thus, the use of the QOLC is necessitated by the fact that the at-risk population may define programmatic goals differently from the service providers.

QOLC outcome data may also suggest major policy changes. For both the adult population and the elderly subsample, QOL was highly related to the problem-oriented need measures in the Mental Health domain, but unrelated to service availability and community support Mental Health measures. Thus, despite the fact that Mental Health was an

important problem to the population and that they had an actual need for mental health services, the groups believed that additional or more accessible direct mental health services would not have improved their QOL. These findings seem to provide an explanation for the low mental health service utilization rates traditionally found in this country (Link & Dohrenwend, 1980; Cohen, Barbano, & Locke, 1976; Elinson, Padilla, & Perkins, 1967), and imply that the use of nonprofessional indirect mental health servicse should be studied further.

APPENDIX C

Justification For the QOLC Cost Analysis in Table 9

Personnel

Coordinator (M.S. Candidate in Clinical Psychology) - Based on salary of $10 per hour.

Preparation	40 hours
Subject Recruitment	
Ride with homebound meal drivers to request interviews with elders	20 hours
Visit Congregate Meal Cites	9 hours
Attend AARP (American Association of Retired Persons) meetings	7 hours
60 Interviews With Elders	210 hours
Data Analysis	20 hours
Write-Up	40 hours
	346 hours

(346 hours) X ($10) = $3460

Facilities

10% of Psychological Services Center space

Annual Cost = (Replacement Cost) X (30 year useful lifetime of Building at 10% Interest) X (10% of Building)
= ($195,000) X (.1061) X (.10) = $2069

Materials

Printing	($.05) X (2350 copies)	= $118
Office Supplies		= $100

Others

Transportation
($.23/mile) X (60 Interviews) X (40 miles) = $552

($.23/mile) X (10 Subject Recruitment Meetings) X (90 miles) = $207

$759

Computer
1 Hour of CPU = $500

APPENDIX D

Justisfication For Key Informant Nominal Group Method
Plus Program Survey Method Cost Analysis In Table 10

Personnel

Coordinator (M.S. Candidate in Clinical Psychology) - Based on a Salary of $10 Per Hour

40 Hours Preparation
70 Hours Interviewing Elder Mental Health Service Providers
3 Hours Running KIN Group
20 Hours Data Analysis
40 Hours Write-Up

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173 Hours X $10/Hour = $1730

Facilities

10% of New River Valley Mental Health Space
Annual Cost = ($250,000) X (.1061) X (.10) = $2653

Materials

Office Supplies = $100
Printing = $100
Poster Paper = $50

Others

Refreshments For KIN = $40
Transportation
($.23/mile) X (40 Interviews) (60 miles) = $552
Computer
1 Hour CPU = $500

Appendix E

COLLEGE OF ARTS AND SCIENCES

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

Blacksburg, Virginia 24061

DEPARTMENT OF PSYCHOLOGY
(703) 961-6581

June 19, 1987

Dear Resident:

In conjunction with Virginia Tech and the New River Valley Mental Health staff, I am currently conducting a survey to determine what the needs are of the elderly residents living in the New River Valley. The results of this survey will be distributed to agencies which fund services for New River Valley elders (e.g., New River Valley Agency on Aging, New River Valley Mental Health, etc.) so that they can make the most efficient use of their money. In order to ensure that your voice is heard regarding these important decisions, I would like to ask you to participate in my survey. If you agree to participate, write your name, address, and phone number in the spaces provided, and please sign the release statement which simply gives me the right to contact you. Once I receive this form, I will call you on the telephone to set up a short home visit to ask you questions regarding your needs and the services that you believe are most needed by the elderly residents living in the New River Valley. All of the information that you provide will be strictly confidential.

In conclusion, I thank you for considering my request and hope that you will allow me to interview you for my survey. If you have any questions, please contact me or your local police chief, who has also been informed about my survey.

Sincerely,

Robert Katz, B.S.
Interviewer

clk

I, _____, agree to participate in a short interview in which I will be asked questions concerning my needs and the needs of the elderly residents living in the New River Valley. I understand that the interviewer will call me in order to arrange the interview, which will take place at my home.

I have been told that all the inforamtion I give will be held strictly confidential. I understand that none of the information will be used for any other purpose than this research project. I realize that I may withdraw at any time.

_____ _____ _____
Name Date Phone

_____
Address

STATEMENT OF INFORMED CONSENT

Permit me to explain once again, the nature of this study. In conjunction with Virginia Tech and the New River Valley Mental Health staff, I am conducting a survey to determine the needs of the elderly residents living in the New River Valley. The survey will consist of information that you (if you agree to participate) and 59 other residents of the New River Valley aged 65 and over will provide in these questionnaires. I will assist you in completing the questionnaires. The questionnaires should take approximately 2 hours to finish.

The results of this survey will be distributed to agencies which fund services for New River Valley elders (for e.g., New River Valley Agency On Aging, New River Valley Mental Health, etc) to aid them in being responsive to your needs and making the most efficient use of their money. The survey will not include your name or any other information that could be used to identify you. The information that you provide in these questionnaires will not be used for any purposes other than those described above, without your prior approval.

You are free to withdraw your consent and discontinue participation in this survey at any time without prejudice or penalty. Please answer the following question:

Are there any medical problems that might arise while we are completing the questionnaires? Yes___ No____

If yes, please elaborate: _____

This project has been approved by the Human Subjects Research Committee and the Institutional Review Board of Virginia Polytechnic Institute and State University. Any questions that you have about the project should be directed to:

Dr. Stephen J. Zaccaro, Ph.D. 961-7916
Mr. Charles D. Waring 961-5284

I hereby agree to voluntarily participate in the research project described above and under the conditions described above.

_____ _____
Respondent's Signature Date

CONFIDENTIAL INFORMATION FORM

CODE NUMBER:_____
DATE:_____

DATE OF BIRTH:_____
AGE:_____ HEIGHT: _____ WEIGHT_____
SEX: MALE____ FEMALE_____

RELIGIOUS PREFERENCE:_____

RACE: CAUCASIAN___ AFRO-AMERICAN___ ASIAN___ HISPANIC___
OTHER___

MARITAL STATUS: SINGLE___ WIDOWED___ LIVING WITH
SIGNIFICANT OTHER___ SEPARATED___
DIVORCED___

EDUCATION: PLEASE INDICATE HIGHEST LEVEL OF EDUCATION

ELEMENTARY SCHOOL (WHAT GRADE?):_____
HIGH SCHOOL (WHAT GRADE?): _____
TECHNICAL/BUSINESS SCHOOL (# OF YEARS):_____
SOME COLLEGE (# OF YEARS):_____
COMPLETED COLLEGE (DEGREE RECEIVED):_____
GRADUATE/PROFESSIONAL SCHOOL (DEGREE RECEIVED &
MAJOR)___

PAST WORK SITUATION:_____

CURRENT WORK SITUATION:_____

DO YOU GET PAID FOR YOUR WORK? YES/NO

LIVING SITUATION:_____

PLEASE LIST ALL PERSONS CURRENTLY LIVING WITH YOU:

MALE/FEMALE	AGE	RELATIONSHIP TO RESPONDENT
_____	____	_____
_____	____	_____
_____	____	_____
_____	____	_____
_____	____	_____

DO YOU CURRENTLY RECEIVE:

INTERESTS OR DIVIDENDS? YES/NO
SOCIAL SECURITY? YES/NO

PENSION? YES/NO
FINANCIAL SUPPRT FROM FAMILY/FRIENDS? YES/NO
MEDICARE? YES/NO
MEDICAID? YES/NO
HEALTH INSURANCE? YES/NO

HERE ARE SOME BROAD INCOME RANGES. WOULD YOU CONSIDER GIVING ME THE CORRECT RANGE?

YEARLY	MONTHLY
A. UNDER $3,000	UNDER $250
B. $3,000 - $4,999	$250 - $417
C. $5,000 - $6,999	$418 - $583
D. $7,000 - $8,999	$584 - $750
E. $9,000 - $10,999	$751 - $917
F. $11,000 - $12,999	$918 - $1,083
G. $13,000 - $14,999	$1,084 - $1,249
H. $15,000 - $16,999	$1,250 - $1,417
I. $17,000 - $18,999	$1,418 - $1,583
J. $19,000 - $24,999	$1,584 - $2,083
K. $25,000 - OVER	$2,084 - OR OVER
L. DON'T KNOW	
M. NO RESPONSE	

HEALTH HISTORY

DO YOU HAVE ANY PERMANENT DISABILITIES? YES___ NO___
IF YES, PLEASE DESCRIBE THEM _____

DO YOU HAVE ANY LIVING SIBLINGS OR CHILDREN? YES/NO
IF YES:

MALE/FEMALE	AGE	RELATIONSHIP TO RESPONDENT	PLACE OF RESIDENCE

APPROXIMATELY HOW MANY TIMES HAVE YOR BEEN TO A MEDICAL DOCTOR IN THE PAST YEAR?

DOCTOR	# OF TIMES	REASONS FOR VISIT(s)
GENERAL PRACTIONER		
INTERNIST		
GYNECOLOGIST		
UROLOGIST		
CARDIOLOGIST		
DENTIST		

OTHER

SINCE TURNING 65, HAVE YOU SEEN A PSYCHOLOGIST, SOCIAL WORKER, PSYCHIATRIST, OR OTHER MENTAL HEALTH PROFESSIONAL? IF YES, PLEASE CHECK OFF THE TYPE OF MENTAL HEALTH PROFESSIONAL AND THE CAPACITY IN WHICH HE/SHE WORKS.

PSYCHOLOGIST___
PSYCHIATRIST___
SOCIAL WORKER___
COUNSELOR____
OTHER____

PRIVATE PRACTICE___
MENTAL HEALTH CENTER___
PSYCHIATRIC HOSPITAL___
HOSPITAL____

NATURE OF THE CONTACT

HAVE YOU SEEN A MENTAL HEALTH PROFESSIONAL IN THE PAST YEAR? IF YES, PLEASE CHECK OFF THE TYPE OF MENTAL HEALTH PROFESSIONAL AND THE CAPACITY IN WHICH HE/SHE WORKS.

PSYCHOLOGIST___
PSYCHIATRIST___
SOCIAL WORKER___
COUNSELOR___
OTHER___

PRIVATE PRACTICE___
COMMUN MENTAL HEALTH CNTR___
PSYCHIATRIC HOSPITAL___
HOSPITAL___

NATURE OF THE CONTACT_____
NUMBER OF TIMES ATTENDED_____

QUESTIONNAIRE FOR PERSONS 65 AND OLDER

MENTAL HEALTH AREA #1: DEPRESSION

A) EVALUATIVE NEED

1. How much of a problem is depression for you?

1	2	3	4
A big problem			Not a problem

B) DESCRIPTIVE NEED

1. GDS (Brink, 1982)

C) SERVICE NEED

1. If you needed help for depression, in general, how difficult or easy would it be for you to get help? Would it be...

1	2	3	4
Difficult			Easy

D) SERVICE BARRIERS

1) I will read you a list of things that sometimes make it difficult to get services for depression. Please circle the ones that are not true in your case:

a) lack of transportation
b) not enough money
c) physically unable to utilize the services
d) don't know what services for depressed older adults exist
e) don't know how to get the services

E) COMMUNITY SUPPORT

1. In general, for the depressed elder, do you think your community:

a) needs additional services
b) has just the right amount of services
c) has too many services

MENTAL HEALTH AREA #2: ORGANIC BRAIN SYNDROME

A) EVALUATIVE NEED

1. How much of a problem is memory loss for you?

1 2 3 4
A big problem Not a problem

2. Have you noticed changes in your personality recently? For example, do you find yourself becoming more supicious of others, taking greater risks in what you do and what you say, caring less about your appearance, becoming more quiet, etc.?

4 3 2 1
No changes Big Changes

3. Have you noticed changes in your ability to do work recently and think clearly?

1 2 3 4
Big changes No changes

4. Have you noticed changes in your ability to learn new things recently?

4 3 2 1
No changes Big changes

5. How much of a problem is sleeping for you? For example, do you have insomnia, daytime drowsiness, nightmares, restlessness, etc.?

1 2 3 4
A big problem Not a problem

6. Have you noticed changes in your speech recently? For example, do others have trouble understanding you?

4 3 2 1
No changes Big changes

7. Have you noticed changes in your appetite recently?

1	2	3	4
Big changes			No changes

B) DESCRIPTIVE NEEDS

Folstein's MMSE

C) SERVICE NEED

1. If you needed help for memory loss, loss of intellectual functioning, personality change, or inability to do work, how difficult or easy would it be for you to get help? Would it be...

1	2	3	4
Difficult			Easy

D) SERVICE BARRIERS

1) I will read you a list of things that sometimes make it difficult to get services for memory loss, loss of intellectual functioning, personality change, or inability to do work. Please circle the ones that are not true in your case:

a) lack of transportation
b) not enough money
c) physically unable to utilize the services
d) don't know what services for the older adults with these problems exist
e) don't know how to get the services

E) COMMUNITY SUPPORT

1. In general, for older people with memory loss, loss of intellectual functioning, personality change, or inability to do work, do you think your community
   a) needs additional services
   b) has just the right amount of services
   c) has too many services

MENTAL HEALTH AREA #3: MEDICATION AND ALCOHOL PROBLEMS

B) DESCRIPTIVE NEED

1. What is your average intake of alcohol per day? (Consider one drink to equal 1 bottle of beer, 4 oz of wine, or 1 & 1/2 oz of liquor)

Ø___ Ø-1____ 1-2____ 2-3____ 3-4____ 4 or more___

2) Do you have trouble controlling your drinking or medication use? For example, do you try to stop drinking or using your medication, but find it impossible to quit or cut down?

1 2 3 4
Frequently Never

3) Do you ever forget the events that occur while you are drinking?

1 2 3 4
Frequently Never

4) Does your drinking or use of medications hurt your relationships with family or friends?

4 3 2 1
Never Frequently

5) Please list all of the medications and drugs that you are currently taking:

MEDICATION/DRUG	DOSE	X/DAY	DATE STARTED	PRESCRIBED FOR WHAT?

A) EVALUATIVE NEED

1. Is alcohol or medication (pill) use a problem for you?

1 2 3 4
A big problem Not a problem

C) SERVICE NEED

1. If you had a problem with your drinking or your use of medications, in general, how difficult or easy would it be for you to get help?
Would it be...

1	2	3	4
Difficult			Easy

D) Service Barriers

1) I will read you a list of things that sometimes make it difficult to get services for alcohol or medication problems. Please circle the ones that would not be true in your case:

a) lack of transportation
b) not enough money
c) physically unable to utilize the services
d) don't know what services for elderly alcohol and medication problems exist
e) don't know how to get the services

E) COMMUNITY SUPPORT

1. In general, for older adults with medication or alcohol problems, do you think your community
a) needs additional services
b) has just the right amount of services
c) has too many services

MENTAL HEALTH AREA #4: ANXIETY

A) EVALUATIVE NEED

1. How much of a problem is anxiety (nervousness) for you?

1	2	3	4
A big problem			Not a problem

B) DESCRIPTIVE NEED

1. Trait Anxiety Inventory (TAI)

C) SERVICE NEED

1. If you needed help for anxiety (nervousness), in general, how difficult or easy would it be for you to get help? Would it be...

1	2	3	4
Difficult			Easy

D) SERVICE BARRIERS

1) I will read you a list of things that sometimes make it difficult to get services for anxiety (nervousness). Please circle the ones that would not be true in your case:

a) lack of transportation
b) not enough money
c) physically unable to utilize the services
d) don't know what services for the anxious elderly exist
e) don't know how to get the services

E) COMMUNITY SUPPORT

1. In general, for older adults that have problems with anxiety (nervousness), do you think your community
   a) needs additional services
   b) has just the right amount of services
   c) has too many services

MENTAL HEALTH AREA #5: INCOMPETENT, ABUSIVE, OR OVERWORKED CAREGIVER (RESPITE CARE)

Is there a person/persons that comes in to give you help on a regular basis (at least once per week)? YES___ NO____
IF YES, please specify this person/person's relationship to you and fill out the 6 measures._____

A) EVALUATIVE NEED

1. Is this person/persons giving you problems or having difficulty with helping you out due to his/her being overworked (tired)?

1	2	3	4
Frequently			Never

2. How competent is this person/persons at helping you?

1	2	3	4
incompetent			very competent

3. Is this person/persons verbally abusive to you?

1	2	3	4
very abusive			not verbally abusive

4. Is this person/persons physically abusive towards you?

1	2	3	4
abusive			not physically abusive

B) DESCRIPTIVE NEED

1. How many hours does this person help you each week? ___

2. In addition to the work that he/she does with you each week, does he/she have another job? YES___ NO____
IF YES, please specify: _____

3. How many hours does he/she work at this job? ____

(To score, add question 1 and question 3 together:

1	2	3	4
60 hours or more			40 hours or less

4. Is this person physically/mentally disabled in any way?
(1) YES (2) NO IF YES, please specify:_____

5. Please indicate this person's highest level of education:

1. Elementary School (what grade?):
2. High School (what grade?):
3. Technical/Business School (# of years):
4. Some College
5. Completed College
6. Graduate/Professional School

6. Please indicate this person's/persons' age: _____

1	2	3	4
65 and over or 18 and under	55-65 or 18-25	25-40	40-55

C) SERVICE NEED

1. If you had a problem with your caregiver (he/she is overworked, abusive, or incompetent) and needed help, in general, how difficult or easy would it be for you to get help?

1	2	3	4
Difficult			Easy

D) SERVICE BARRIERS

1. I will read you a list of things that sometimes make it difficult to get help when a caregiver is overworked, incompetent, or abusive. Please circle the ones that would not be true in your case:

a) lack of transportation
b) not enough money
c) physically unable to utilize the services
d) don't know what services exist for this type of problem
e) don't know how to get the services

E) COMMUNITY SUPPORT

1. In general, to provide assistance when a caregiver is overworked, incompetent, or abusive, do you think your community

a) needs additional services
b) has just the right amount of services
c) has too many services

MENTAL HEALTH AREA #6: SCHIZOPHRENIA

A) EVALUATIVE NEED

1. Do you have delusional thoughts (false beliefs that are not consistent with reality)?

1	2	3	4
Frequently			Never

2. Do your thoughts tend to race, making it difficult for you to concentrate?

4 3 2 1
Never Frequently

3. Do you hear voices that other people can't hear?

1 2 3 4
Frequently Never

4. Do you see things that other people can't see?

4 3 2 1
Never Frequently

5. Do you feel that people are out to get you?

1 2 3 4
Frequently Never

B) DESCRIPTIVE NEED

1. Folstein MMSE

C) SERVICE NEED

1. If you needed help for schizophrenia, in general, how difficult or easy would it be for you to get help?

1 2 3 4
Difficult Easy

D) SERVICE BARRIERS

1. I will read you a list of things that sometimes make it difficult to get services for schizophrenia. Please circle the ones that would not be true in your case:

a) lack of transportation
b) not enough money
c) physically unable to utilize the services
d) don't know what services for schizophrenia exist
e) don't know how to get the services

E) COMMUNITY SUPPORT

1. In general, for elderly schizophrenics, do you think your community

a) needs additional services
b) has just the right amount of services
c) has too many services

MENTAL HEALTH AREA #7: HEALTH HABITS/BEHAVIORAL MEDICINE

A) EVALUATIVE NEED

1. Is cigarette, pipe, or cigar smoking a problem for you?

1 2 3 4
A big problem not a problem

2. Do you feel that you get enough exercise? (4)YES (1)NO

3. How much of a problem is chronic pain for you?

4 3 2 1
Not a problem A big problem

4. How much of a problem are headaches for you?

1 2 3 4
A big problem Not a problem

5. How much of a problem is obesity for you?

4 3 2 1
Not a problem A big problem

6. How much of a problem is stress for you?

1 2 3 4
A big problem Not a problem

7. How much of a problem is high blood pressure for you?

4 3 2 1
Not a problem A big problem

8. How much of a problem is high cholesterol for you?

1	2	3	4
A big problem			Not a problem

9. Do you feel that you are in need of a cardiac rehabilitation program for people with heart problems? (1) YES (2) NO

B) DESCRIPTIVE NEED

1. How many headaches do you have per week? _____

1	2	3	4
> 6			Ø - 1

2. Describe what these headaches feel like.

3. Do you currently smoke cigarettes? Yes___ No ___
IF YES:
How long have you been smoking (years)? _____

1	2	3	4
> 10 years			1 year or less

How many cigarettes do you currently smoke per day?_____

1	2	3	4
> 15			Ø

4. Do you currently exercise? Yes___ No___ IF YES:
What kind of exercise do you do? _____

1	2	3	4
lowest caloric expenditure			highest caloric expenditure

How often do you exercise? _____

1	2	3	4
none			Ø min/week or greater

5. Do you have high cholesterol? (1) YES (2) NO

C) SERVICE NEED

1. If you needed help for one or more of the health habits described above, in general, how difficult or easy would it be for you to get help?

1	2	3	4
Difficult			Easy

D) SERVICE BARRIERS

1. I will read a list of things that sometimes make it difficult to get services for the health habits listed above. Please circle the ones that would not be true in your case:

a) lack of transportation
b) not enough money
c) physically unable to utilize the services
d) don't know what services for the elderly who have problems with these health habits exist
e) don't know how to get the services

E) COMMUNITY SUPPORT

1. In general, for the older adults with problems in these health habits, do you think your community
   a) needs additional services
   b) has just the right amount of services
   c) has too many services

Now I will read a number of statements that people have used to describe themselves. After I read each one, please tell me how you <u>generally</u> feel.

There are no right or wrong answers. Please do not spend too much time on any one statement but give the answer which seems to best describe how you generally feel. Go to Card C on the next page of the booklet.

For each statement tell me how often you feel this way: Almost never; sometimes, often, or almost always. I'll begin by reading the first statement.

		ALMOST NEVER	SOMETIMES	OFTEN	ALMOST ALWAYS	NR	
A1.	I feel pleasant.	1	2	3	4	8	50
A2.	I tire quickly.	1	2	3	4	8	51
A3.	I feel like crying.	1	2	3	4	8	52
A4.	I wish I could be as happy as others seem to be.	1	2	3	4	8	53
A5.	I am losing out on things because I can't make up my mind soon enough.	1	2	3	4	8	54
A6.	I feel rested.	1	2	3	4	8	55
A7.	I am "calm, cool, and collected."	1	2	3	4	8	56
A8.	I feel that difficulties are piling up so that I cannot overcome them.	1	2	3	4	8	57
A9.	I worry too much over something that really doesn't matter.	1	2	3	4	8	58
A10.	I am happy.	1	2	3	4	8	59
A11.	I am inclined to take things hard.	1	2	3	4	8	60
A12.	I lack self-confidence.	1	2	3	4	8	61
A13.	I feel secure.	1	2	3	4	8	62
A14.	I try to avoid facing a crisis or difficulty.	1	2	3	4	8	63

		ALMOST NEVER	SOMETIMES	OFTEN	ALMOST ALWAYS	NR	
A15.	I feel blue.	1	2	3	4	8	64
A16.	I am content.	1	2	3	4	8	65
A17.	Some unimportant thought runs through my mind and bothers me.	1	2	3	4	8	66
A18.	I take disappointments so keenly that I can't put them out of my mind.	1	2	3	4	8	67
A19.	I am a steady person.	1	2	3	4	8	68
A20.	I get in a state of tension or turmoil as I think over my recent concerns and interests.	1	2	3	4	8	69

TIME __ : __ CODE MINUTES ELAPSED [ ][ ] 70-71

*** GO TO THE NEXT PAGE ***

Now I would like to ask some questions about your health. Here is a list of activities that people sometimes have trouble with. For instance, some people have trouble feeding themselves...

		YES	NO	NR	
H1.	Do you have trouble with this (feeding self)?	1	2	8	72
H2.	Others have trouble dressing themselves. Do you?	1	2	8	73
H3.	Do you have trouble moving around?	1	2	8	74
H4.	Trouble climbing stairs. Do you have trouble with this?	1	2	8	75
H5.	Trouble getting outdoors?	1	2	8	76
H6.	Are you now UNABLE to work because of some illness or injury?	1	2	8	77
H7.	Have you had to change the kind of work you used to do because of some illness or injury?	1	2	8	78
H8.	Have you had to cut down on the number of hours you used to work because of some illness or injury?	1	2	8	79

CARD NO. 2 [2] 80

CARD NO. 3 I.D. NUMBER [ ][ ][ ][ ] 1-4

Here is a list of medical conditions that usually last for some time. Have you had any of these conditions during the past 12 months? Remember, I want to know about the past year.

		YES	NO	NR	
H9.	High blood pressure?	1	2	8	5
H10.	Nerves?	1	2	8	6
H11.	Kidney or bladder disease?	1	2	8	7
H12.	Heart trouble? Have you had this condition in the last 12 months?	1	2	8	8
H13.	Serious lung trouble causing difficulty breathing?	1	2	8	9
H14.	Stomach ulcers?	1	2	8	10

		YES	NO	NR
H15.	Cancer?	[1]	[2]	[8]
H16.	Hardening of the arteries? Have you had this in the past 12 months?	[1]	[2]	[8]
H17.	Stroke?	[1]	[2]	[8]
H18.	Diabetes?	[1]	[2]	[8]

Now let's talk about some other physical ailments. But this time, tell me if you have had any of these in the past 6 months.

		YES	NO	NR
H19.	Frequent cramps in the legs?	[1]	[2]	[8]
H20.	Pain in the heart or tightness or heaviness in the chest?	[1]	[2]	[8]
H21.	In the past six months have you had trouble breathing or shortness of breath?	[1]	[2]	[8]
H22.	Swollen ankles?	[1]	[2]	[8]
H23.	Pains in the back or spine?	[1]	[2]	[8]
H24.	Repeated pains in the stomach?	[1]	[2]	[8]
H25.	In the past six months have you had frequent headaches?	[1]	[2]	[8]
H26.	Constant coughing or frequent heavy chest colds?	[1]	[2]	[8]
H27.	Paralysis of any kind?	[1]	[2]	[8]
H28.	Stiffness, swelling, or aching in any joint or muscle?	[1]	[2]	[8]
H29.	In the past six months, have you been getting very tired in a short time?	[1]	[2]	[8]

H30. Would you say you have more energy or less energy than most people your age?

More energy	[1]
Less energy	[2]
Same energy	[3]
NO RESPONSE	[8]

H31. How often do you have trouble going to sleep or staying asleep?

Every night	1
At least once a week	2
Maybe once a month	3
Hardly ever	4
DO NOT READ — NO RESPONSE	8

H32. When you have only four or five hours of sleep during the night, how tired do you feel the next day? Are you. . .

Very tired	1
A little tired	2
Not very tired	3
Not at all tired	4
DO NOT READ — NO RESPONSE	8

H33. How often are you completely worn out at the end of the day? Would you say. . .

Very often	1
Somewhat often	2
Once in a while	3
Hardly ever	4
DO NOT READ — NO RESPONSE	8

H34. Compared with others of about the same age, would you say your overall health is...

Very good	1
Good	2
Only fair (or)	3
Poor	4
DO NOT READ — NO RESPONSE	8

TIME __ __ : __ __ CODE IN MINUTES ELAPSED [ ][ ]

This next set of questions is about people's social activities:

P1. During the past few weeks, how many times did you get together with friends--I mean things like going out together or visiting in each others homes?

11 times or more	1
6 to 10 times	2
3 to 5 times	3
Once or twice	4
None	5
NO RESPONSE	8

P2. About how many neighbors around here do you know well enough to visit with?

21 or more	1
16 to 20 neighbors	2
6 to 15 neighbors	3
1 to 5 neighbors	4
None	5
NO RESPONSE	8

P3. What about organizations such as church and school groups, labor unions, or social, civic, and fraternal clubs. About how many do you take an active part in?

Five or more	1
Three or four	2
Two	3
One	4
None	5
NO RESPONSE	8

P4. Turn to Card P and use the responses to tell me these things. How often do you visit with family and relatives who live outside the home? Would you say. . .

	Less than once a year	1
	Less than once a month	2
	Monthly	3
	Every week or so (or)	4
	Daily	5
DO NOT READ	NO RESPONSE	8

20

P5. How often do you talk to family and relatives by phone?

Less than once a year	1
Less than once a month	2
Monthly	3
Every week or so (or)	4
Daily	5
NO RESPONSE	8

21

P6. How often do you talk with friends by phone?

Less than once a year	1
Less than once a month	2
Monthly	3
Every week or so (or)	4
Daily	5
NO RESPONSE	8

22

How often do you talk with neighbors by phone?

Less than once a year	1
Less than once a month	2
Monthly	3
Every week or so (or)	4
Daily	5
NO RESPONSE	8

That is all the questions for CARD P.

P8. In an average day, how many people would you say "hello" to, either on the phone or in person?

Five or more	1
Three or four	2
Two	3
One	4
None	5
NO RESPONSE	8

P9. If everything went badly, how many people could you turn to for real comfort and support?

21 or more	1
16 to 20	2
6 to 15	3
1 to 5	4
None	5
NO RESPONSE	8

Turn to CARD Q, please.

P10 People deal with emergencies in different ways. In an emergency, how much help would your relatives be able to give you? Would you say. . .

	A great deal of help	1
	A fair amount of help	2
	Only a little help	3
	No help at all	4
DO NOT READ	NO RESPONSE	8

26

P11. In an emergency, how much help would friends be able to give you?

A great deal of help	1
A fair amount of help	2
Only a little help	3
No help at all	4
NO RESPONSE	8

27

P12. In an emergency, how much help would neighbors be able to give you?

A great deal of help	1
A fair amount of help	2
Only a little help	3
No help at all	4
NO RESPONSE	8

28

P13. In an emergency, how much help would your church be able to give you?

A great deal of help	1
A fair amount of help	2
Only a little help	3
No help at all	4
NO RESPONSE	8

29

P14. All things considered, compared to the help that others can call on in a crisis, do you think you have. . .

	Much less help	1
	A little less help	2
	About the same as others	3
	A little more help	4
	Much more help than others	5
DO NOT READ	NO RESPONSE	8

30

TIME: ___ ___ : ___ ___ CODE IN MINUTES ELAPSED TIME ☐☐

31-32

This next list of questions is about how you have been feeling and how things have been going for you during the past year.

W1. Please turn to Card F. How have you been feeling in general during the past year?

46

In excellent spirits	1
In very good spirits	2
In good spirits mostly	3
I have been up and down in spirits a lot	4
In low spirits mostly	5
In very low spirits	6
NO RESPONSE	8

W2. Please turn to Card G. Have you been bothered by nerviousness or your nerves in the last month?

47

Extremely so--to the point where I could not work or take care of things	1
Very much so	2
Quite a bit	3
Some--enough to bother me	4
A little	5
Not at all	6
NO RESPONSE	8

W3. Now turn to Card H. Have you been in firm control of your behavior, thoughts, emotions OR feelings during the past month?

48

Yes, definitely so	1
Yes, for the most part	2
Generally so	3
Not too well	4
No, and I am somewhat disturbed	5
No, and I am very disturbed	6
NO RESPONSE	8

W4. Please turn to Card I. Have you felt so sad, discouraged, hopeless, or had so many problems that you wondered if anything was worthwhile during the past month?

Extremely so--to the point that I have just about given up	1
Very much so	2
Quite a bit so	3
Some--enough to bother me	4
A little bit	5
Not at all	6
NO RESPONSE	8

W5. Please turn to Card J. Have you been under or felt you were under any strain, stress, or pressure during the past month?

Yes--almost more than I could bear or stand	1
Yes--quite a bit of pressure	2
Yes--some - more than usual	3
Yes--some - but about usual	4
Yes - a little	5
Not at all	6
NO RESPONSE	8

W6. Now turn to Card K. How happy, satisfied, or pleased have you been with your personal life during the past month?

Extremely happy--could not have been more satisfied or pleased	1
Very happy	2
Fairly happy	3
Satisfied--pleased	4
Somewhat dissatisfied	5
Very dissatisfied	6
NO RESPONSE	8

W7 Please turn to Card L. Have you had any reason to wonder if you were losing your mind, or losing control over the way you act, talk, think, feel, or of your memory during the past month? 52

Not at all	1
Only a little	2
Some--but not enough to be concerned	3
Some and I have been a little concerned	4
Some and I am quite concerned	5
Yes, very much so and I am very concerned	6
NO RESPONSE	8

W8. Please turn to Card M. Have you been anxious, worried, or upset during the past month? 53

Extremely so--to the point of being sick or almost sick	1
Very much so	2
Quite a bit	3
Some--enough to bother me	4
A little bit	5
Not at all	6
NO RESPONSE	8

W9. Now turn to Card N. Have you been waking up fresh and rested during the past month? 54

Every day	1
Most every day	2
Fairly often	3
Less than half the time	4
Rarely	5
None of the time	6
NO RESPONSE	8

W10. Please turn to card O. Have you been bothered by any illness, bodily disorder, pains, or fears about your health during the past month?

All the time	1
Most of the time	2
A good bit of the time	3
Some of the time	4
A little of the time	5
None of the time	6
NO RESPONSE	8

W11. Has your daily life been full of things that were interesting to you during the past month?

All of the time	1
Most of the time	2
A good bit of the time	3
Some of the time	4
A little of the time	5
None of the time	6
NO RESPONSE	8

W12. Have you felt down-hearted and blue during the past month?

All of the time	1
Most of the time	2
A good bit of the time	3
Some of the time	4
A little of the time	5
None of the time	6
NO RESPONSE	8

Have you been feeling emotionally stable and sure of yourself during the past month?

All of the time	1	57
Most of the time	2	
A good bit of the time	3	
Some of the time	4	
A little of the time	5	
None of the time	6	
NO RESPONSE	8	

V14. Have you felt tired, worn out, used-up, or exhausted during the past month?

All of the time	1	59
Most of the time	2	
A good bit of the time	3	
Some of the time	4	
A little of the time	5	
None of the time	6	
NO RESPONSE	8	

V15. Now turn to Card P. How concerned or worried about your health have you been during the past month?

For scales on this and the next thre questions, note that the words at each end of the 0 to 10 scale describe opposite feelings. Put an (X) on the blank closest to how you have generally felt during the past month.

Not concerned at all	00	60-61
	01	
	02	
	03	
	04	
	05	
	06	
	07	
	08	
	09	
Very Concerned	10	

W16. [redacted] How relaxed or tense have you been during the past month?

Very relaxed	00
	01
	02
	03
	04
	05
	06
	07
	08
	09
Very tense	10
NO RESPONSE	88

W17. Please turn to Card R. How much energy, pep, vitality have you felt during the past month?

No energy at all, listless	00
	01
	02
	03
	04
	05
	06
	07
	08
	09
Very energetic, dynamic	10
NO RESPONSE	88

W18. Now, please turn to Card S. How depressed or cheerful have you been during the past month?

66-67

Very depressed	00
	01
	02
	03
	04
	05
	06
	07
	08
	09
Very cheerful	10
NO RESPONSE	88

TIME ___ ___ : ___ ___ CODE TIME ELAPSED

68-69 ☐☐

BLANK 8X 70-78

CARD 7 [0] [7] 79-80

CARD NO. 8 I.D. # [0] ☐☐☐ 1-4

The Life Experiences Survey

Listed below are a number of events which sometimes bring about change in the lives of those who experience them and which necessitate social readjustment. *Please check those events which you have experienced in the recent past and indicate the time period during which you have experienced each event.* Be sure that all check marks are directly across from the items they correspond to.

Also, for each item checked below, *please indicate the extent to which you viewed the event as having either a positive or negative impact on your life* at the time the event occurred. That is, *indicate the type and extent of impact that the event had.* A rating of −3 would indicate an extremely negative impact. A rating of 0 suggests no impact either positive or negative. A rating of +3 would indicate an extremely positive impact.

Section 1

	0 to 6 mo	7 mo to 1 yr	extremely negative	moderately negative	somewhat negative	no impact	slightly positive	moderately positive	extremely positive
			−3	−2	−1	0	+1	+2	+3
1. Marriage			−3	−2	−1	0	+1	+2	+3
2. Detention in jail or comparable institution			−3	−2	−1	0	+1	+2	+3
3. Death of spouse			−3	−2	−1	0	+1	+2	+3
4. Major change in sleeping habits (much more or much less sleep)			−3	−2	−1	0	+1	+2	+3

	0 to 6 mo	7 mo to 1 yr	extremely negative	moderately negative	somewhat negative	no impact	slightly positive	moderately positive	extremely positive
5. Death of close family member:									
a. mother			−3	−2	−1	0	+1	+2	+3
b. father			−3	−2	−1	0	+1	+2	+3
c. brother			−3	−2	−1	0	+1	+2	+3
d. sister			−3	−2	−1	0	+1	+2	+3
e. grandmother			−3	−2	−1	0	+1	+2	+3
f. grandfather			−3	−2	−1	0	+1	+2	+3
g. other (specify)			−3	−2	−1	0	+1	+2	+3
6. Major change in eating habits (much more or much less food intake)			−3	−2	−1	0	+1	+2	+3
7. Foreclosure on mortgage or loan			−3	−2	−1	0	+1	+2	+3
8. Death of close friend			−3	−2	−1	0	+1	+2	+3
9. Outstanding personal achievement			−3	−2	−1	0	+1	+2	+3
10. Minor law violations (traffic tickets, disturbing the peace, etc.)			−3	−2	−1	0	+1	+2	+3
11. *Male*: Wife/girlfriend's pregnancy			−3	−2	−1	0	+1	+2	+3
12. *Female*: Pregnancy			−3	−2	−1	0	+1	+2	+3
13. Changed work situation (different work responsibility, major change in working conditions, working hours, etc.)			−3	−2	−1	0	+1	+2	+3
14. New job			−3	−2	−1	0	+1	+2	+3
15. Serious illness or injury of close family member:									
a. father			−3	−2	−1	0	+1	+2	+3
b. mother			−3	−2	−1	0	+1	+2	+3
c. sister.			−3	−2	−1	0	+1	+2	+3
d. brother			−3	−2	−1	0	+1	+2	+3
e. grandfather			−3	−2	−1	0	+1	+2	+3
f. grandmother			−3	−2	−1	0	+1	+2	+3
g. spouse			−3	−2	−1	0	+1	+2	+3
h. other (specify)			−3	−2	−1	0	+1	+2	+3
16. Sexual difficulties			−3	−2	−1	0	+1	+2	+3
17. Trouble with employer (in danger of losing job, being suspended, demoted, etc.)			−3	−2	−1	0	+1	+2	+3
18. Trouble with in-laws			−3	−2	−1	0	+1	+2	+3
19. Major change in financial status (a lot better off or a lot worse off)			−3	−2	−1	0	+1	+2	+3
20. Major change in closeness of family members (increased or decreased closeness)			−3	−2	−1	0	+1	+2	+3
21. Gaining a new family member (through birth, adoption, family member moving in, etc.)			−3	−2	−1	0	+1	+2	+3
22. Change of residence			−3	−2	−1	0	+1	+2	+3
23. Marital separation from mate (due to conflict)			−3	−2	−1	0	+1	+2	+3
24. Major change in church activities (increased or decreased attendance)			−3	−2	−1	0	+1	+2	+3

	0 to 6 mo	7 mo to 1 yr	extremely negative	moderately negative	somewhat negative	no impact	slightly positive	moderately positive	extremely positive
25. Marital reconcilation with mate			−3	−2	−1	0	+1	+2	+3
26. Major change in number of arguments with spouse (a lot more or a lot less arguments)			−3	−2	−1	0	+1	+2	+3
27. *Married male*: Change in wife's work outside the home (beginning work, ceasing work, changing to a new job, etc.)			−3	−2	−1	0	+1	+2	+3
28. *Married female*: Change in husband's work (loss of job, beginning new job, retirement, etc.)			−3	−2	−1	0	+1	+2	+3
29. Major change in usual type and/or amount of recreation			−3	−2	−1	0	+1	+2	+3
30. Borrowing more than $10,000 (buying home, business, etc.)			−3	−2	−1	0	+1	+2	+3
31. Borrowing less than $10,000 (buying car, TV, getting school loan, etc.)			−3	−2	−1	0	+1	+2	+3
32. Being fired from job			−3	−2	−1	0	+1	+2	+3
33. *Male*: Wife/girlfriend having abortion			−3	−2	−1	0	+1	+2	+3
34. *Female*: Having abortion			−3	−2	−1	0	+1	+2	+3
35. Major personal illness or injury			−3	−2	−1	0	+1	+2	+3
36. Major change in social activities, e.g., parties, movies, visiting (increased or decreased participation)			−3	−2	−1	0	+1	+2	+3
37. Major change in living conditions of family (building new home, remodeling, deterioration of home, neighborhood, etc.)			−3	−2	−1	0	+1	+2	+3
38. Divorce			−3	−2	−1	0	+1	+2	+3
39. Serious injury or illness of close friend			−3	−2	−1	0	+1	+2	+3
40. Retirement from work			−3	−2	−1	0	+1	+2	+3
41. Son or daughter leaving home (due to marriage, college, etc.)			−3	−2	−1	0	+1	+2	+3
42. Ending of formal schooling			−3	−2	−1	0	+1	+2	+3
43. Separation from spouse (due to work, travel, etc.)			−3	−2	−1	0	+1	+2	+3
44. Engagement			−3	−2	−1	0	+1	+2	+3
45. Breaking up with boyfriend/girlfriend			−3	−2	−1	0	+1	+2	+3
46. Leaving home for the first time			−3	−2	−1	0	+1	+2	+3
47. Reconciliation with boyfriend/girlfriend			−3	−2	−1	0	+1	+2	+3
Other recent experiences which have had an impact on your life. List and rate.									
48._____			−3	−2	−1	0	+1	+2	+3
49._____			−3	−2	−1	0	+1	+2	+3
50._____			−3	−2	−1	0	+1	+2	+3

	0 to 6 mo	7 mo to 1 yr	extremely negative	moderately negative	somewhat negative	no impact	slightly positive	moderately positive	extremely positive
Section 2: Student Only									
51. Beginning a new school experience at a higher academic level (college, graduate school, professional school, etc.)			−3	−2	−1	0	+1	+2	+3
52. Changing to a new school at same academic level (undergraduate, graduate, etc.)			−3	−2	−1	0	+1	+2	+3
53. Academic probation			−3	−2	−1	0	+1	+2	+3
54. Being dismissed from dormitory or other residence			−3	−2	−1	0	+1	+2	+3
55. Failing an important exam			−3	−2	−1	0	+1	+2	+3
56. Changing a major			−3	−2	−1	0	+1	+2	+3
57. Failing a course			−3	−2	−1	0	+1	+2	+3
58. Dropping a course			−3	−2	−1	0	+1	+2	+3
59. Joining a fraternity/sorority			−3	−2	−1	0	+1	+2	+3
60. Financial problems concerning school (in danger of not having sufficient money to continue)			−3	−2	−1	0	+1	+2	+3

Received June 23, 1977

Patient.....
Examiner .....
Date .....

"MINI-MENTAL STATE"

Maximum Score	Score	
		ORIENTATION
5	( )	What is the (year) (season) (date) (day) (month)?
5	( )	Where are we: (state) (county) (town) (hospital) (floor).
		REGISTRATION
3	( )	Name 3 objects: 1 second to say each. Then ask the patient all 3 after you have said them. Give 1 point for each correct answer. Then repeat them until he learns all 3 Count trials and record.
		Trials

ATTENTION AND CALCULATION

5 ( ) Serial 7's. 1 point for each correct. Stop after 5 answers. Alternatively spell "world" backwards.

RECALL

3 ( ) Ask for the 3 objects repeated above. Give 1 point for each correct.

LANGUAGE

9 ( ) Name a pencil, and watch (2 points)
Repeat the following "No ifs, ands or buts." (1 point)
Follow a 3-stage command:
"Take a paper in your right hand, fold it in half, and put it on the floor" (3 points)
Read and obey the following:
CLOSE YOUR EYES (1 point)
Write a sentence (1 point)
Copy design (1 point)

_____ Total score

ASSESS level of consciousness along a continuum

Alert Drowsy Stupor Coma

INSTRUCTIONS FOR ADMINISTRATION OF MINI-MENTAL STATE EXAMINATION

ORIENTATION

(1) Ask for the date. Then ask specifically for parts omitted, e.g., "Can you also tell me what season it is?" One point for each correct.
(2) Ask in turn "Can you tell me the name of this hospital?" (town, county, etc.). One point for each correct.

REGISTRATION

Ask the patient if you may test his memory. Then say the names of 3 unrelated objects, clearly and slowly, about one second for each. After you have said all 3, ask him to repeat them. This first repetition determines his score (0–3) but keep saying them until he can repeat all 3, up to 6 trials. If he does not eventually learn all 3, recall cannot be meaningfully tested.

ATTENTION AND CALCULATION

Ask the patient to begin with 100 and count backwards by 7. Stop after 5 subtractions (93, 86, 79, 72, 65). Score the total number of correct answers.
If the patient cannot or will not perform this task, ask him to spell the word "world" backwards. The score is the number of letters in correct order. E.g. dlrow = 5, dlorw = 3.

RECALL

Ask the patient if he can recall the 3 words you previously asked him to remember. Score 0–3.

LANGUAGE

Naming: Show the patient a wrist watch and ask him what it is. Repeat for pencil. Score 0–2.

Repetition: Ask the patient to repeat the sentence after you. Allow only one trial. Score 0 or 1.

3-*Stage command:* Give the patient a piece of plain blank paper and repeat the command. Score 1 point for each part correctly executed.

Reading: On a blank piece of paper print the sentence "Close your eyes", in letters large enough for the patient to see clearly. Ask him to read it and do what it says. Score 1 point only if he actually closes his eyes.

Writing: Give the patient a blank piece of paper and ask him to write a sentence for you. Do not dictate a sentence, it is to be written spontaneously. It must contain a subject and verb and be sensible. Correct grammar and punctuation are not necessary.

Copying: On a clean piece of paper, draw intersecting pentagons, each side about 1 in., and ask him to copy it exactly as it is. All 10 angles must be present and 2 must intersect to score 1 point. Tremor and rotation are ignored.

Estimate the patient's level of sensorium along a continuum, from alert on the left to coma on the right.

GERIATRIC DEPRESSION SCALE

		r with total score
*. Are you basically satisfied with your life?.....	yes / no	.49
2. Have you dropped many of your activities and interests?	yes / no	.57
3. Do you feel that your life is empty?	yes / no	.57
4. Do you often get bored?	yes / no	.56
5. Are you hopeful about the future?.....	yes / no	.50
6. Are you bothered by thoughts you can't get out of your head?	yes / no	.54
*. Are you in good spirits most of the time?	yes / no	.53
8. Are you afraid that something bad is going to happen to you?	yes / no	.53
9. Do you feel happy most of the time?	yes / no	.53
*0. Do you often feel helpless?.....	yes / no	.52
*1. Do you often get restless and fidgety?	yes / no	.52
*2. Do you prefer to stay at home, rather than going out and doing new things?	yes / no	.54
*3. Do you frequently worry about the future?	yes / no	.50
*4. Do you feel you have more problems with memory than most?	yes / no	.44
*5. Do you think it is wonderful to be alive now?.....	yes / no	.49
*6. Do you often feel downhearted and blue?	yes / no	.61
*7. Do you feel pretty worthless the way you are now?	yes / no	.48
*8. Do you worry a lot about the past?	yes / no	.48
*9. Do you find life very exciting?	yes / no	.48
20. Is it hard for you to get started on new projects?.....	yes / no	.46
21. Do you feel full of energy?	yes / no	.48
22. Do you feel that your situation is hopeless?	yes / no	.46
23. Do you think that most people are better off than you are?	yes / no	.46
24. Do you frequently get upset over little things?	yes / no	.46
25. Do you frequntly feel like crying?.....	yes / no	.46
26. Do you have trouble concentrating?	yes / no	.43
27. Do you enjoy getting upin the morning?	yes / no	.45
28. Do you prefer to avoid social gatherings?	yes / no	.43
29. Is it easy for you to make decisions?	yes / no	.44
30. Is your mind as clear as it used to be?	yes / no	.44

APPENDIX F

Health Status

The elderly suffer a greater amount of physical illness than other age groups. Since these physical diseases may threaten survival, decrease working ability, and limit motor activity, they may cause the aged to become anxious, depressed, and hypochondriacal. Researchers have also found that medical illness is often the major precipitant of alcohol abuse among the elderly (Fry, 1983; Williams & Mysak, 1973; Rosin & Glatt, 1971). In addition, psychopathology may also be a symptom of a particular disease or induced by a medication taken to alleviate the physcial illness (Blumenthal, 1980). Thus, elders with poor health status are likely to need direct mental health services in such mental health areas as depression, anxiety, and alcohol and drug abuse.

In addition, aged persons in poor health seem to have a need for services that alleviate their barriers to mental health service utilization. One of these barriers is the lack of knowledge about what mental health services are available th the elderly (Silverstein, 1984), how these programs can be of help to the aged (Waxman, Carner, & Blum,

1983), and how to go about attaining these services (Silverstein, 1984). Family physicians contribute to this problem by being less likely to refer elderly patients for mental health treatment than younger patients (Rosen & Wiens, 1979). Physicians do not believe that the elderly can be helped by psychotherapy, despite the fact that it has been demonstrated that psychological treatment may decrease the use of medical services by the elderly (Steur, 1983). Also, general physicians often fail to detect psychiatric problems in the elderly, ignoring behavioral disorders (Waxman, Carner, & Klein, 1984), and failing to distinguish senile dementia from pseudodementia (Blumenthal, 1980). These findings bespeak the need for mental health education programs for the elderly, as well as for their family members and physicians.

Another barrier to mental health service utilization by the physically ill aged is their inaccessibility to mental health providers. Many elderly individuals lack the transportation necessary to attend a mental health clinic (Knight, 1983), a problem particularly salient to low health status elderly, who are less likely to be physically capable of walking long distances. This need for transportation is greater in rural areas such as the New River Valley than urban areas because the population is more dispersed, lack of public tranportation, and because of the unwillingness of

many rural elderly individuals to accept public service programs as legitimate (Krout, 1983). In addition, the mental health clinic itself may be physically inaccessible to the elderly due to such barriers as steps, etc. Furthermore, many poor health status elderly individuals live in institutions such as nursing homes, where there are no mental health providers (Knight, 1983). These findings demonstrate the need for an increase in mental health outreach services, transportation programs, and architectural planning for buildings to be utilized by senior citizens.

Financial Status

Due to the high elderly unemployment rate, the large number of women who have lost husbands that typically earned higher wages than themselves, and the fact that Social Security payments have not kept pace with the cost of living, a large proportion of the elderly live in poverty. In 1985, the annual income for 12.6% of persons 65 and over was below the poverty level (Statistical Abstracts, 1987). Since income and socioeconomic level have demonstrated to be highly correlated with psychopathology (Fry, 1987; Murrell, Schulte, & Hutchins, 1980; Gaitz & Varner, 1980; Blazer, 1980; Rahe & Arthur, 1978; Tichener & Ross, 1974), poor

elders are likely to need direct mental health services.

In addition, like elders in poor health, low income senior citizens also seem to have a need for services that alleviate their barriers to mental health service utilization. The most important of these barriers to mental health care is obviously financial. Currently, Medicare limits reinbursement for outpatient psychotherapy to approximately $250 per year, and will pay only physicians (who traditionally charge higher fees than other mental health professionals) for this service. Many private third party payers have similar restrictions. This makes outpatient office treatment impractical for elderly individuals on a fixed income. Patients who are granted a fee reduction may feel embarrassed or demeaned at having to accept "charity." For some elderly persons, this issue may become a resistance to treatment (Gatz & Smyer, 1983). Another barrier is the fact that low income elderly may be especially likely to be lacking in knowledge about mental health services (Silverman, 1984; Waxman, Carner, & Blum, 1983) and may fear that they will be institutionalized and stigmatized if they go to see a mental health professional (Knight, 1983; Waxman, et al., 1983). Finally, the low mental health service utilization rates of the low income elderly may be in part, a response to poor service (Steur, 1982). Since the aged are generally viewed as low status

patients, and in light of the fact that there appears to be a high correlation between the status of the mental health professional and the socioeconomic and clinical status of the patient (Redlich & Kellert, 1978), the elderly, and poor senior citizens in particular, tend to be seen by nurses or paraprofessionals with regard to their mental health needs, and are less likely to be seen individually than younger individuals at a community mental health center (Sue, 1976).

Life Stressors

Due to the biological, social, economic, cultural, and psychological parameters of aging in Western society, elders face a greater number of stressful events than other age groups, as well as a increased susceptability to stress due to changes in physiological functioning and metabolic activity (Goodstein, 1981; Gaitz & Varner, 1980; Renner & Birren, 1980; Meier-Ruge, 1975; Martin, Bemston, & Acock, 1974). In addition, the ability of the elderly to cope with these stressors may decrease as those who have been accustomed to handling crises through active mstery strategies find themselves unable to do so due to the decrement in physical and mental energy level that is thought to accompany aging (Verwoerdt, 1981; Zetzel, 1966).

Since many researchers have found a high positive correlation between stressful life events and psychiatric symptomatology (Dekker & Webb, 1974; Paykel et al., 1969) and between life changes and the occurrence of depression, anxiety, and tension (Blazer, 1980; Rahe & Arthur, 1978; Plutchnik, Hyman, Conte, & Karasu, 1977; Miller, Ingham, & Davidson, 1976; Vinokur & Selzer, 1975; Constastini, Braun, Davis, & Iervolino; 1973), elders with a high degree of life stressors are likely to need direct mental health services as well as services that alleviate their barriers to mental health service utilization.

Social Support

Social support has been defined as "help that would be available to the elderly individual in difficult or stress-arousing situations" (Fry, 1987). It has been hypothesized that social support acts to buffer an individual against the debilitating effects of stresses (Bowlby, 1973; Hirsch, 1980; Pfeiffer, 1980). Gerontological research has shown that social support can lessen the effects of stressful experiences such as losses, bereavement, and environmental dislocation on the elderly (Fulton & Gottesman, 1980; Myers, Murphey, & Riker, 1981).

Unfortunately, studies have shown that many elders

suffer a drastic decrement in perceived social support (Blazer, 1982) due to the loss of integral members of their social support system by death (spouse, friends), migration (While friends may migrate to retirement communities, etc., the elderly person's children may also move away with their own families), and retirement from work and community activities. Many elderly persons live alone (Waxman, Carner, & Klein, 1984). Evidence suggests that the rate of depression and suicide in the elderly is related to the degree of perceived social support (Pfeiffer & Busse, 1973; Zarit, 1980; Blazer, 1982). Thus, many elders low in social support may be in need of mental health services.

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