The relationship between choice, quality of life and depression in individuals living in independent and assisted living facilities

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Abstract

The purpose of this study was to investigate the relationship and difference between choice, quality of life, and depression among residents from independent and assisted living facilities. This study was an expansion of the Vohnout (2011) study. Questionnaires were distributed to 202 residents living in a Midwestern retirement village. The questionnaires contained a demographic questionnaire, the Duncan Choice Index: Self-Care and Leisure (Duncan-Myers & Huebner, 2000), the Quality of Life Rating (Gust, 1982), and the Geriatric Depression Scale (Yesavage, 1983). A total of 102 questionnaires were returned producing a response rate of 50%.

The study found a statistically significant correlation between choice, quality of life, and depression in assisted and independent living participants. A moderate correlation ($\rho = 0.45$, $p < 0.01$) between choice and quality of life, a low correlation ($\rho = -0.21$, $p < 0.05$) between choice and depression, and a moderate correlation ($\rho = -0.53$, $p < 0.01$) between quality of life and depression were found. Therefore, the more choice a person had the higher he or she rated quality of life. Also, the more depressed a person was the lower his or her quality of life and perceived choice. In addition, the researcher found statistically significant differences between choice, quality of life, and depression scores indicating that participants living in independent living reported having more choice ($z = -3.05$, $p = 0.002$) and a higher quality of life ($z = -2.47$, $p = 0.014$) than participants living in assisted living facilities. The researcher also found that participants in assisted living reported a higher level of depression ($z = -2.28$, $p = 0.023$) than those in independent living facilities. These results suggest that the inclusion of choice in an older adult's life needs to be advocated for by occupational therapists and included more readily in their treatment sessions in order to increase quality of life and decrease depression.

The Relationship between Choice, Quality of Life and Depression in Individuals Living in Independent and Assisted Living Facilities

Choice has been a significant component of occupational therapy since its inception. The founders of occupational therapy believed it was important to individualize treatment by giving patients choices in occupations that were both meaningful and purposeful to them. As defined by Nelson and Thomas (2003), meaning is "the entire interpretive experience engaged in by an individual encountering an occupational form" (p. 101). In addition, Nelson and Thomas (2003) stated that purpose is "the felt experience of desiring an outcome" (p. 106). Past research has found that offering choice, which increases meaning and purpose, and allowing patients to match therapy to their interests is a way to enhance effort in occupational performance and increase motivation. Furthermore, it has been found that choice is related to quality of life in older adults (Duncan-Myers & Huebner, 2000; Vohnout, 2011). The present study will further expand research on the relationship between choice and quality of life in older adults living in assisted and independent living facilities. It will also determine the relationship between depression, choice and quality of life. This research proposal will first briefly review past literature on the effects of choice, then examine the relationship between choice, quality of life and depression. A description of the current study will follow.

Choice in Occupational Therapy

Offering choice in the profession of occupational therapy has been emphasized since its founding. Meyer (1922) believed that an occupational therapist's role is to give opportunities to patients rather than prescribe them. In addition, Dunton (1913) supported the idea of providing choice because he felt that it was desirable and helpful to engage a patient's interest in the work he or she is doing. Baldwin (1919) contributed to the use of choice in occupational therapy by

encouraging therapists to develop treatment plans around the interests of the patient. The founders' beliefs are being utilized by occupational therapists and tested by researchers. It has been shown that when a patient is given the opportunity to choose an occupation, the result tends to be an improvement in occupational performance, an increase in motivation, greater attention to the task and a higher confidence in the ability to perform the occupation (LaMore & Nelson, 1993; Schroeder Oxer & Kopp Miller, 2001; Parsons et al., 1990; Langer and Rodin, 1976).

A review of past research supports that offering choices to people has a positive impact on occupational performance and motivation. A study conducted by LaMore and Nelson (1993) provides evidence that a person's participation and motivation in an occupation can be increased by the offering of choices. LaMore and Nelson observed 22 adults with mental disabilities taking part in an art occupation. The participants were randomly assigned in pairs and each participant played a role in the choice and non-choice group. The first participant was given a choice on which ceramic object to paint, while the second participant was required to paint the same object chosen by the first participant in a separate session. The occupation was timed from the moment when the paint was first applied to the object to the moment when a participant reported being finished or refused to paint anymore. The number of times a participant dipped the paintbrush into the paint and applied it to the object was also recorded. Results showed that participants who were given a choice painted significantly more than those who were not given a choice. The authors concluded that choice making within parameters set by the therapist can enhance performance in adults with mental disabilities.

In a replication of LaMore and Nelson's study, Schroeder Oxer and Kopp Miller (2001) examined the effects of choice on behavior in 25 adolescents diagnosed with psychiatric conditions. Participants were either given a choice between numerous plaster objects to paint or

were given an object by the instructor to paint. Similar to LaMore and Nelson's findings, Schroeder Oxer and Kopp Miller found that adolescents applied more paint when they were given a choice compared to when they were not. In addition, it was found that participants invested more time and effort into the art project when they were given the opportunity to choose. From their findings, the authors concluded that performance among adolescents living in behavioral residential treatment programs can be enhanced when choice making is set by the occupational therapist.

Parsons, Reid, Reynolds, and Bumgarner (1990) studied the effects of choice on the work performance of four adults with severe mental disabilities. After an initial assessment of the clients' work preferences, each client was exposed to three treatment conditions throughout the work day. The treatment conditions included; (1) assigning a client to work on a high-preference task, (2) assigning a client to work on a low-preference task, or (3) allowing a client to choose to work on either a high-preference or low-preference task. The clients participated in a sequence of tasks in order to complete a plaque. The tasks included; sanding a plaque, placing a plaque onto a device that held the plaque while the trainer burned the edges, wiping burned edges of a plaque, staining a plaque, and gluing pictures on the plaque. Results indicated that when the clients were provided a choice of work tasks, they chose the highly preferred task an average of 80% of the time. In addition, clients attended to the preferred task almost twice as much as a task they did not prefer or were assigned to complete. The authors concluded that choice positively affects the occupations of adults with severe mental disabilities.

Offering choice has also been shown to result in improvements among nursing home residents. The classic study conducted by Langer and Rodin (1976) researched the effects of enhanced personal responsibility and choice among a group of ambulatory nursing home

residents. The experimental and condition groups were randomly selected by floor. The residents who were in the experimental group received communication from the nursing home administrator that emphasized the residents' responsibility for themselves. Communication to residents in the condition group stressed the staff's responsibility for them. Additionally, the experimental group was given the opportunity to select a plant to take care of, whereas the condition group was given a plant to be taken care of by staff members. Lastly, residents in the experimental group were given a choice of whether they wanted to attend the Thursday or Friday movie night, while residents in the condition group were assigned a specific night. Results showed that 93% of the residents who were encouraged to make decisions for themselves and given choice and responsibilities showed behavioral improvement. Based on feedback from staff members, residents in the experimental group also appeared to be happier, more active and alert and more involved than those in the condition group. The authors concluded that offering choice and encouraging decision-making can lead to greater active participation and involvement in ambulatory nursing home residents. Overall, research has shown that offering choice is beneficial to participants and can help with the success of therapy.

From these research studies, it is evident that choice can lead to a greater quality of occupational performance, an increase in motivation, greater attention to the task, and a higher sense of confidence in the ability to perform occupations among individuals (LaMore & Nelson, 1993; Schroeder Oxer & Kopp Miller, 2001; Parsons et al., 1990; Langer and Rodin, 1976). Research also shows that choice can increase quality of life among individuals (Duncan-Myers and Huebner, 2000; Vohnout, 2011). This research will now be reviewed.

Choice and Quality of Life among Older Adults

The quality of life among residents in nursing homes has been found to be lower than that of older adults living in independent environments. In a study investigating the effects of the environment on the psychological well-being of older adults, Qassis and Hayden (1990) found evidence that older adults living in retirement and independent homes reported a greater well-being than those living in nursing homes. The differences in quality of life were attributed to a higher amount of visitation from family and friends, a greater ability to participate in activities of daily living, more leisure and recreation activities, and pursuit of social interests in patients living in retirement and independent homes. Not only does the environment and socialization contribute to quality of life, research also supports the idea that providence of choice can have a positive impact on quality of life.

Two research studies have been conducted that examined the correlation and difference between choice and quality of life in long-term care residents and residents in assisted and independent living facilities. First, a study conducted by Duncan-Myers and Huebner (2000) tested the relationship between perceptions of personal control and quality of life among 31 residents, 65 years old and older in a long-term care facility. Two self-report instruments, The Quality of Life Rating (Gust, 1982) and the Duncan Choice Index (Duncan-Myers & Huebner, 2000) were used in the study. The Quality of Life Rating consisted of 20 items with a 5-point scale to rate the participants' perception of quality of life. The Duncan Choice Index was used to measure perception of choice by participants. It included 29 items on the amount of choice regarding what, when, where, how, and with whom leisure and self-care activities are performed. A strong positive correlation was found between the participants' ratings of choice in self-care tasks and their perceptions of quality of life. Therefore, it was suggested that occupational

therapists and other health care professionals could promote choice and personal control to improve the quality of life in long-term care residents.

Second, a study conducted by Vohnout (2011) expanded Duncan-Myers and Huebner's study and compared the relationship between choice and quality of life among 95 residents in independent living facilities and assisted living facilities. Vohnout used The Quality of Life Rating (Gust, 1982) and the Duncan Choice Index (Duncan-Myers & Huebner, 2000) to measure residents' perceptions regarding personal control and quality of life.

For the Duncan Choice Index (Duncan-Myers & Huebner, 2000), the three items that were marked as having the highest amount of choice for participants in assisted living included "What I wear," "How I dress," and "When I use the telephone." On the other hand, items that were marked as having the least amount of choice among assisted living participants included "Whom I eat with," When I take medication," and "When I eat." Participants in independent living marked "When I perform grooming," "When I bathe," and "What time I go to bed" as the three items they had the highest amount of choice in. Additionally, "When I take medication," "Whom I eat with," and "Whom I socialize with" were marked by participants in independent living as having the least amount of choice. In relation to quality of life, the researcher found that quality of life in areas of housing/living conditions, family involvement, and overall quality of life was highest among both assisted and independent living residents. In contrast, quality of life was lowest among both assisted and independent living residents in areas of work/career activities, intimate relationships, and sexual adjustment; however, ratings failed to show that participants wanted more choice in these areas.

Consistent with Duncan-Myers and Huebner's findings, Vohnout found a significant positive correlation between the amount of choice residents perceive they have and their quality

of life. Vohnout also found a difference between choice and quality of life in assisted living and independent living participants. She found that participants living in independent living facilities had more choice and a greater quality of life compared to those living in assisted living facilities. Although it has not been researched, depression could also be correlated with choice and quality of life in residents living in assisted and independent living facilities. This relationship will now be discussed.

Depression

Because occupational therapists and other health care professionals strive to improve the quality of life and providence of choice for their patients, attention has been focused on the treatment of depression to ensure a healthy mental state and improve happiness. Depression affects more than 6.5 million Americans aged 65 years or older (National Alliance on Mental Illness, 2009). It has been found that depressive symptoms occur in about 15 percent of seniors living within the community. Twenty-five percent of seniors within nursing homes also show symptoms associated with depression (American Psychological Association, 2009). Many symptoms of depression, including lack of interest, loss of productivity and avoidance of family, friends, and social gatherings, can lead to a decreased quality of life in older adults (American Psychological Association, 2009). Depression has also been found to lead to difficulties in choice making because individuals with depression often become indecisive and uncertain (Radford et al., 1986; Saunders et al., 2000). Overall, it has been shown that depression can lead to a decreased quality of life and can cause difficulties in choice making in the elderly population. Due to the high prevalence of depression in older adults, it is important to consider the impact of a depressive state when researching quality of life and the effect of choice making in independent and assisted living facilities.

Current Study

Past research has shown that when an individual is given a choice, his or her occupational performance improves in comparison to when he or she is not given a choice (LaMore & Nelson, 1993; Schroeder Oxer & Kopp Miller, 2001; Parsons et al., 1990; Langer & Rodin, 1976; Vohnout, 2011). Although these findings are significant, more research needs to be performed in order to support the original findings and uncover the most important choices to the general older adult population. The purpose of this study is to expand research on choice and quality of life by replicating Vohnout's study and administering the Geriatric Depression Scale (Yesavage, 1983) along with The Quality of Life Rating (Gust, 1982) and Duncan Choice Index (Duncan-Myers & Huebner, 2000) scales. Given the large percentage of older adults with depressive symptoms and the debilitating effects of the disease, it is important to consider depression when looking to improve the quality of life of older adults living in assisted and independent living facilities through treatment and therapy. Providing scientific evidence of the relationship between depression, choice and quality of life will improve patient well-being by encouraging change in the amount of meaningful decisions that the assisted and independent living residents have in their everyday lives. The six research questions of interest are:

- Is there a relationship between choice and quality of life in assisted living facilities and in independent living facilities?
- Is there a relationship between choice and depression in assisted living facilities and in independent living facilities?
- Is there a relationship between quality of life and depression in assisted living facilities and in independent living facilities?
- Is there a difference between choice in assisted and independent living facilities?

- Is there a difference between quality of life in assisted and independent living facilities?
- Is there a difference between depression in assisted and independent living facilities?

Methods

Participants

Two hundred and two participants were recruited from independent and assisted living facilities that are part of a Midwestern retirement village. Participants were required to be cognitively capable to read and fill out the questionnaire independently or with assistance from others. Participants' cognitive capabilities were determined by the site manager.

Instrument

The instrument used was a questionnaire that consisted of four parts (see Appendix A). The first part of the survey was a demographic questionnaire which included seven questions regarding age, gender, marital status, living facility, and level of education.

Following the demographic questionnaire was a 29-item questionnaire on the amount of choice regarding what, when, where, how, and with whom leisure and self-care activities are performed. This instrument is known as The Duncan Choice Index: Self-Care and Leisure (DCI) and was developed by Duncan-Myers (2000). For each of the 29 items, the participant was asked to indicate the frequency of choice opportunities ("I ____ have a choice in that occupation") using a 5-point scale with 1 being never, 2 rarely, 3 sometimes, 4 usually, and 5 always. Scores on the DCI can range from 29 to 145. The higher the DCI score, the more choice is perceived. In addition, the last part of the DCI contains two open-ended questions. The first question asks: "In which occupations would you like to have more choice?" The

second question asks: "Would you like to have more choice on when, how, or with whom you do things?" Based on the results of the Duncan-Myers and Huebner study (2000), the DCI was found to have an acceptable level of reliability and internal consistency by obtaining a score of .84 using Cronbach's alpha test of reliability. Additionally, evidence of concurrent validity for the DCI is supported by the finding of a strong positive correlation ($r = .54$, $p = .01$) between the total score on The Quality of Life Rating (Gust, 1982) and the total score on the DCI (Duncan-Myers & Huebner, 2000).

The third part of the questionnaire consisted of The Quality of Life Rating (QOLR) developed by Gust (1982). The QOLR is a 20-item self-report instrument used to measure perceptions of quality of life. Each item includes a 5-point scale with 1 meaning quality is extremely poor to 5 meaning quality is excellent. Scores on the QOLR can range from 20 to 100. The higher the score the higher the rating of quality of life. In a study conducted by Duncan-Myers and Huebner (2000), a correlation of .65 was found with measures of life satisfaction, as well as supporting criterion-related validity. In addition, the study found a Cronbach's alpha of .87 and a test-retest coefficient of stability of .74 for the QOLR.

The final part of the questionnaire consisted of the Geriatric Depression Scale (GDS) created by Yesavage et al. (1983). The GDS is a 30-item self-report assessment used to identify depression in the elderly population. Participants respond to the 30 questions by answering yes or no in reference to how they felt over the past week. Scores of 0-9 are considered normal, 10-19 indicate mild depression and 20-30 indicate severe depression. Questions number 1, 5, 7, 9, 15, 19, 21, 27, 29, and 30 are reversed scored (no=1 point). The GDS was found to have 92% sensitivity and 89% specificity when evaluated against diagnostic criteria. Both the validity and reliability of the GDS have been supported through clinical practice and research. In addition, a

correlation of .85 was found when calculating test-retest reliability of the GDS in a study conducted by Yesavage et al. (1983).

Procedure

Two hundred and two questionnaires containing the demographic questionnaire, the Duncan Choice Index (Duncan-Myers & Huebner, 2000), The Quality of Life Rating (Gust, 1982), and the Geriatric Depression Scale (Yesavage, 1983) were distributed to independent and assisted living residents of a Midwestern retirement village. A written consent letter for participating in the research study was also attached to the survey (see Appendix A). The questionnaires were distributed to residents' in-house mailboxes. Information about the survey was provided on a flyer that was sent to residents' in-house mailboxes prior to the distribution of the questionnaires. Residents were asked to return the questionnaires to a collection box located at the front desk of the facility's lobby.

Results

Demographic Information

Two hundred and two questionnaires were distributed to independent and assisted living residents of a Midwestern retirement village. One hundred and two questionnaires were returned, producing a response rate of 50%. Incomplete items were entered as missing data. Eighty-nine participants (87%) who responded lived in an independent living facility and 11 participants (11%) lived in assisted living. Two participants did not indicate the type of facility. SPSS for Windows Statistical Software was used to analyze all of the data.

Data that was collected from the demographic portion of the questionnaire included: age, gender, marital status, and educational level. Participants' age ranged from 57 to 100 (M = 87.04; SD = 5.83). Thirty-four of the participants were male, while 67 were female. One

participant did not disclose his or her gender. In addition, 47% of the participants were widowed, 39% were married, 10% were single, 3% were divorced, and 1% did not report a marital status. Seventeen percent of participants reported having a high school education, 21% had some college education, 1% had an Associate's degree, 34% received a Bachelor's degree, 17% had a Master's degree, 8% reported having a Doctoral degree, and 2% did not report their highest level of education. Also, 2% (n = 2) of the participants were currently receiving occupational therapy services at the time of survey distribution. Both participants lived in independent living. Lastly, the length of time participants reported living in an assisted or independent living facility ranged from 1 to 218 months (M = 60.13; SD = 55.10).

Assessment Scales

The Duncan Choice Index: Self-care and Leisure (Duncan-Myers & Huebner, 2000) was incorporated into the questionnaire to assess the amount of choice individuals have in leisure and self-care activities. The highest possible score on the Duncan Choice Index was 145. The overall mean score for participants living in independent and assisted living was 123.24 (SD = 13.27) which indicates a moderately high amount of choice.

The overall mean score on the Duncan Choice Index (DCI) (Duncan-Myers & Huebner, 2000) for participants living in independent living was 124.54 (SD = 13.12). The three items marked by the independent living participants as having the highest amount of choice were "When I perform oral hygiene," "What I wear," and "When I perform grooming." The three items that were marked by the independent living participants as having the least amount of choice were "When I take medication," "Whom I eat with," and "Where I perform grooming."

The overall mean score on the DCI (Duncan-Myers & Huebner, 2000) for participants living in assisted living was 114.82 (SD = 10.68). The five items that were marked by

participants in assisted living as having the highest amount of choice were "What time I go to bed," "How I dress," "How I perform grooming," "When I perform toilet hygiene," and "When I perform oral hygiene." The three items marked by participants in assisted living as having the least amount of choice were "When I move (e.g., go down the hall)," "Where I perform oral hygiene," and "How I bathe." Table 1 displays the mean scores and standard deviations for each individual item from the DCI (Duncan-Myers & Huebner, 2000).

The DCI (Duncan-Myers & Huebner, 2000) also contained two open-ended questions asking which activities participants would like to have more choice in and if participants would like to have more choice in when, how, or with whom they do things. Sixty-three participants responded to the first open-ended question. Thirty-nine participants indicated satisfaction with their choice in current activities and did not desire more choice in any activity. Ten participants responded that eating was the activity they would like to have more choice in, followed by socializing which was listed by six participants. Forty-three participants responded to the second open-ended question. Twenty-three participants indicated they did not wish to have more choice in when, how, or with whom they do things. Six participants responded that they would like to socialize and eat with different companions. Additionally, three participants wished to have more choice in being able to drive at night.

The Quality of Life Rating (QOLR) (Gust, 1982) was included in the questionnaire to measure participants' perceptions of quality of life. The highest possible score on the QOLR was 100. The overall mean for participants living in independent and assisted living was 75.33 (SD = 15.06) which indicates a moderate rating of quality of life.

The overall mean score on the Quality of Life Rating (Gust, 1982) for participants living in independent living was 76.60 (SD = 14.49). The three items that were reported by the

independent living participants as having the highest levels of quality of life were "My quality of life with housing/living conditions," "My quality of life with social relationships," and "My overall quality of life." The three items that were marked by the independent living participants as having the lowest levels of quality of life were "My quality of life with sexual adjustment," "My quality of life with work/career activity," and "My quality of life with intimate relationships."

The overall mean score of the QOLR (Gust, 1982) for participants living in assisted living was 64.91 (*SD* = 17.29). The three items reported by assisted living participants as having the highest levels of quality of life were "My quality of life with financial conditions," "My quality of life with family involvement," and "My quality of life with transportation availability." The three items reported by assisted living participants as having the lowest levels of quality of life were "My quality of life with hobbies," "My quality of life with volunteer activities," and "My quality of life with sexual adjustment." Table 2 displays the mean scores and standard deviations for each individual item from the QOLR (Gust, 1982).

The final portion of the questionnaire consisted of the Geriatric Depression Scale (GDS) (Yesavage et al., 1983) which had a high possible score of 30. Scores ranging from 0-9 are considered normal, 10-19 indicate mild depression and 20-30 indicate severe depression. The overall mean score on the GDS for both participants living in assisted living and independent living was 7.18 (*SD* = 9.58). The overall mean score for participants living in independent living was 6.57 (*SD* = 9.74). The overall mean score for participants living in assisted living was 10.55 (*SD* = 6.83).

The top four positive responses reported by independent living residents on the GDS (Yesavage et al., 1983) were for the following items; "Do you think that most people are better

off than you are?," "Do you worry a lot about the past?," "Are you in good spirits most of the time?," and "Do you feel your situation is hopeless?." The top three negative items reported by independent living residents were "Do you feel full of energy?," "Is your mind as clear as it used to be?," and "Do you prefer to stay at home, rather than going out and doing new things?."

The top items in which assisted living residents responded positively on the GDS (Yesavage et al., 1983) were "Are you in good spirits most of the time?," "Do you feel happy most of the time?," "Are you afraid that something bad is going to happen to you?," "Do you often get restless and fidgety?," "Do you worry a lot about the past?," and "Do you frequently feel like crying?." Conversely, the most negative responses were for the items "Is it hard for you to get started on new projects?," "Do you feel full of energy?," "Is your mind as clear as it used to be?," "Do you find life very exciting?," and "Have you dropped many of your activities and interests?." The frequencies of positive and negative responses to the items on the GDS (Yesavage et al., 1983) are located in Table 3.

Additional Comparisons

A spearman's rho was completed to determine if there was a correlation between choice and quality of life, choice and depression, and quality of life and depression in assisted and independent living residents. There was a statistically significant correlation between each of the variables. A moderate correlation ($\rho = 0.45$, $p < 0.01$) was found between choice and quality of life, a low correlation ($\rho = -0.21$, $p < 0.05$) between choice and depression, and a moderate correlation ($\rho = -0.53$, $p < 0.01$) between quality of life and depression. Therefore, the more choice a person had the higher he or she rated quality of life. Also, the more depressed a person was the lower his or her quality of life and perceived choice was.

In order to determine if there was a statistically significant difference between participants in assisted and independent living, a Mann-Whitney U test was completed on the scores from the choice, quality of life, and depression portions of the questionnaire. The result of the choice portion of the questionnaire was $z = -3.05$ ($p = 0.002$) indicating a statistically significant difference. The result of the quality of life portion of the questionnaire was $z = -2.47$ ($p = 0.014$) indicating a statistically significant difference. Additionally, the result of the depression portion of the questionnaire was $z = -2.28$ ($p = 0.02$) indicating a statistically significant difference. The test showed that participants reported having more choice and a higher quality of life in independent living as compared to assisted living facilities. It was also found that participants in assisted living reported a higher level of depression than those in independent living facilities.

Discussion

The purpose of this study was to investigate the relationship and difference between choice, quality of life, and depression among residents living in independent and assisted living facilities in a Midwestern retirement village. This study was an expansion of the Vohnout (2011) study.

A statistically significant positive correlation was found between independent and assisted living residents' quality of life and their perceived amount of choice. This finding suggests the more choice residents are given with activities of daily living (e.g., bathing, grooming, dressing) and instrumental activities of daily living (e.g., taking medication) the higher they feel their quality of life is. This finding is consistent with the results of Vohnout's study. Also, statistically significant negative correlations were found between choice and depression, as well as quality of life and depression. Therefore, it is believed that the more

depressed a resident is, the lower his or her quality of life and perceived choice. Additionally, the less depressed an individual is, the greater his or her quality of life and perceived choice.

It was found that independent living residents perceived to have more choice and a higher quality of life compared to residents living in assisted living which could be due to the amount of assistance individuals in independent living need versus individuals in assisted living. Assisted living residents require assistance from staff members when participating in activities of daily living and instrumental activities of daily living, whereas independent living residents often complete these tasks independently or with minimal assistance from a loved one or family member.

A difference was also found in the items of the Duncan Choice Index (Duncan-Myers & Huebner, 2000) that independent and assisted living residents felt they had the most and least amount of choice in. Independent living residents rated "When I perform oral hygiene," "What I wear," and "When I perform grooming" as having the highest amount of choice. On the other hand, assisted living residents rated "What time I go to bed," "How I dress," "How I perform grooming," "When I perform toilet hygiene," and "When I perform oral hygiene" as having the highest amount of choice. Both independent and assisted living residents reported having a high amount of choice with activities of daily living; however, independent living residents described having more choice with when and what self-care activities they participate in and assisted living residents described having a greater amount of choice in when and how they perform activities of daily living.

Items that were rated by independent living residents as having the least amount of choice included: "When I take medication," "Whom I eat with," and "Where I perform grooming." Assisted living residents rated "When I move (e.g., go down the hall)," "Where I perform oral

hygiene," and "How I bathe" as having the least amount of choice. Assisted living residents reported having less choice in occupations that require assistance and that are dependent on their physical capability to safely perform the task. Assisted living residents often need assistance with bathing, dressing, and functional mobility, therefore staff members most likely make choices for them to ensure safety.

The results of the study also showed differences between assisted and independent living residents in the responses to items pertaining to quality of life. Independent residents reported quality of life in the areas of housing/living conditions, social relationships, and overall quality of life as being the highest. On the other hand, assisted living residents rated their quality of life in the areas of financial conditions, family involvement, and transportation availability as being the highest. Furthermore, quality of life in the areas of sexual adjustment, work/career activity, and intimate relationships were rated lowest among independent living residents, whereas quality of life in the areas of hobbies, volunteer activities, and sexual adjustment were lowest for assisted living residents. If assisted and independent living residents were given more choice with hobbies, work experiences, and volunteer activities, then their quality of life may increase due to their reported desire to have more choice with pursuing interests and socialization.

Overall, independent living residents had a lower level of depression than assisted living residents. Assisted living residents had a higher percentage of negative responses to items on the Geriatric Depression Scale (Yesavage et al., 1983). Their top negative responses were to the items; "Is it hard for you to get started on new projects?," "Do you feel full of energy?," "Is your mind as clear as it used to be?," "Do you find life very exciting?," and "Have you dropped many of your activities and interests?." Independent living residents also had a majority of respondents who did not feel full of energy and who reported that their minds were not as clear

as they used to be; however, the percentage that answered negatively was much lower compared to assisted living residents. Depression may also be higher in residents living in assisted living due to the increased need of assistance from others and a decreased feeling of independence.

Past research has discovered that choice results in improvement of occupational performance, an increase in motivation, greater attention to tasks, and higher confidence in the ability to perform an occupation (LaMore & Nelson, 1993; Schroeder Oxer & Kopp Miller, 2001; Parsons et al., 1990; Langer and Rodin, 1976). In addition, past research has looked at the relationship between perceived amount of choice and quality of life. Research has shown the greater amount of choice given to individuals, the higher their quality of life (Duncan-Myers & Huebner, 2000; Vohnout, 2011). Furthermore, researchers have found that depression can lead to difficulties in choice making and decreased quality of life (Radford et al., 1986; Saunders et al., 2000). Findings from this research study expand upon the relationship between choice, quality of life and depression.

Results of the current study have implications for the profession of occupational therapy. First, occupational therapists should advocate for more choice to be given to residents living in assisted and independent living facilities. Occupational therapists could advocate for choice by educating staff members on ways in which more choice can be provided to their residents and the benefits of it. For instance, a majority of the participants stated they wished to have more choice in the food items that are served to them, who they eat with, and when they perform ADLs. Therefore, the kitchen staff could provide a menu with 3-4 choices for entrées and side dishes and allow the residents to choose what they would like to eat. In addition, instead of having assigned seating or transporting a patient to a certain table in the dining room, staff members could ask the patient where he or she would like to sit. Furthermore, staff could allow patients to

make decisions about daily schedules pertaining to ADLs so they feel more involved in making choices.

Occupational therapists could make changes and advocate for ways to improve quality of life in the areas of sexual adjustment, work/career activities, hobbies, and volunteer opportunities. Occupational therapists could acknowledge sexual concerns of their patients and create a positive, non-judgmental atmosphere regarding safe and normal sexual exploration. To address residents' interests in work and volunteer opportunities, occupational therapists could advocate for the creation of on-site job duties, such as distributing mail and helping with dining services, and support residents participating at off-site volunteer events. Also, occupational therapists could encourage the facility to create hobby groups based on the interests of the residents, provide any necessary materials, and make meeting places available to the groups.

The results of the study showed a strong need for addressing patients with depression. In attempt to become more aware of and communicate better with residents who are feeling depressed, occupational therapists could screen for signs of depression and keep the results on file. Support groups could be created based on the top reasons why patients stated they were depressed when screened. In addition, opportunities could be provided for socialization among residents, physical activity, and family involvement to combat feeling of loneliness, loss of energy, and abandonment.

Another implication for occupational therapy is providing more choice into treatment sessions when working with the older adult population. Occupational therapists should seek to be creative, innovative, and client-centered when planning treatment sessions in order to allow patients to choose from multiple occupations which are relevant to their lifestyle and mask their

interests. Providing more meaningful and purposeful treatment options to patients could help increase quality of life and decrease depression.

Limitations

A limitation of this study was the use of surveys as a data collection method. Although there are advantages to survey research (e.g., ability to reach a large number of respondents with relatively minimal expenditure, collect data on numerous variables, and respondent anonymity), it has disadvantages as well. Survey research has the potential for response bias, which may result from respondents being unable to recall information accurately, interpreting the meaning of questions differently than intended by the researcher, or response choices that do not accurately express respondents' experiences or opinions. Although participants' cognitive capabilities were determined by the site manager, some older adults may not have had high enough cognitive levels to correctly interpret the meaning of the survey questions. Another limitation was that the survey was only conducted once on the population and did not account for fluctuations in mood. As a result, residents' emotions, health, or level of depression at the time the survey was taken could have influenced the answers that were given and may have caused them to express more positive/negative opinions.

A final limitation was limited generalizability. Most of the participants were female, which may not reflect the true opinions and experiences of the male older adult population. In addition, surveys were only distributed to assisted and independent living residents at one Midwestern retirement village. Furthermore, a majority of the respondents were from independent living versus assisted living, which may result in a Type I error. Since the sample size for assisted living residents was small, it may cause misleading results due to chance.

Future Research

Future research should focus on distributing the questionnaire two separate times in order to eliminate the possibility of residents' answers being influenced by their mental state on a particular day and allow for a more accurate picture of the average opinions of the amount of choice, quality of life, and depression assisted and independent living residents have. In addition, since the current study was conducted at one Midwestern retirement village, future research should be carried out at multiple assisted and independent living facilities in various regions around the United States. Additional research should also include a larger sample of assisted living residents in order to determine a more precise difference in levels of choice, quality of life, and depression between independent and assisted living residents. Lastly, since a majority of the sample size for this study was female, future research should include more males to better determine the difference in opinions between the two genders.

Conclusion

This study found a statistically significant positive correlation between perceived amount of choice and quality of life according to the DCI (Duncan-Myers & Huebner, 2000) and QOLR (Gust, 1982) among independent and assisted living residents. In addition, statistically significant negative correlations were found between choice and depression and quality of life and depression. A statistically significant difference was also found between independent and assisted living residents, indicating that independent living residents perceive to have more choice and a higher quality of life compared to assisted living residents. Furthermore, it was determined that assisted living residents have higher levels of depression than independent living residents. Results also displayed that assisted living residents have the least amount of choice in when they move (e.g., go down the hall), where they perform oral hygiene, and how they bathe.

On the other hand, independent living residents have less choice in when they take medication, whom they eat with, and where they perform grooming. It was also found that quality of life in the areas of sexual adjustment, work/career activity, and intimate relationships were lowest among independent living residents, whereas quality of life in the areas of hobbies, volunteer activities, and sexual adjustment were lowest for assisted living residents. These findings suggest that the inclusion of choice in ADL/IADL participation needs to be advocated for by occupational therapists and included more readily in their treatment sessions in order to increase quality of life and decrease depression.

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Appendix A

Informed Consent Letter

IRB Number _____

Dear Participant:

You were selected as part of a sample of older adults to participant in a survey regarding the amount of choice that you have and how it relates to your perceived quality of life and to depression. I am conducting this study in fulfillment of the requirements for my Doctoral degree in Occupational Therapy at the University of Toledo. The results from this study will be used for research purposes only.

The enclosed questionnaire will take approximately 20 minutes of your time. It is my intention to advance the knowledge of choice, quality of life and depression among older adults living in assisted living and independent living facilities. This is an area that is important to the field of occupational therapy and yet it is relatively unexplored.

Your participation in this study is voluntary and anonymous. Your reply will be held in the strictest confidence, so please do not place your name or any other identifying information on the questionnaire. By completing this survey you are implying your consent to participate in this study. Please return the completed questionnaire by _____ in the collection box at the front desk of the lobby. If you have any questions or concerns regarding this survey or its contents, please call Lauren Yoh at (440) 488-0128 or Barbara Kopp Miller at (419) 530-5308.

Your time and assistance is greatly appreciated.

Sincerely,

Barbara Kopp Miller, Ph.D
Principal Investigator

Lauren Yoh, OTDS
Co-Investigator

If assistance is needed to complete this survey, please call Lauren Yoh at (440) 488-0128

Choice, Quality of Life and Depression Questionnaire

1. Age:_____

2. Gender: Male _____ Female _____

3. Marital Status: Single _____ Married _____ Divorced _____ Widowed _____

4. Where do you currently live at?

Independent Living _____ Assisted Living _____

5. How long have you been living in this setting? _____ year(s) and _____ month(s)

6. Are you currently receiving occupational therapy services? Yes _____ No _____

   If yes, what for? _____

7. Please check the highest level of education that you have received.

   High School____ Some college____ Associate's degree____

   Bachelor's degree____ Master's degree____ Doctoral degree____

Please circle the AMOUNT OF CHOICE you have in regards to each of the following activities, as if to say "I _____ have a choice in that activity." <u>Please be sure to answer every question.</u>

1. **When** I take medication.

1	2	3	4	5
Never a choice	Rarely a choice	Sometimes a choice	Usually a choice	Always a choice

2. **When** I eat.

1	2	3	4	5
Never a choice	Rarely a choice	Sometimes a choice	Usually a choice	Always a choice

Please circle the AMOUNT OF CHOICE you have in regards to each of the following activities, as if to say "I _____ have a choice in that activity." Please be sure to answer every question.

3. **How** I eat.

1	2	3	4	5
Never a choice	Rarely a choice	Sometimes a choice	Usually a choice	Always a choice

4. **Whom** I eat with.

1	2	3	4	5
Never a choice	Rarely a choice	Sometimes a choice	Usually a choice	Always a choice

5. **What** I eat.

1	2	3	4	5
Never a choice	Rarely a choice	Sometimes a choice	Usually a choice	Always a choice

6. **When** I bathe.

1	2	3	4	5
Never a choice	Rarely a choice	Sometimes a choice	Usually a choice	Always a choice

7. **How** I bathe.

1	2	3	4	5
Never a choice	Rarely a choice	Sometimes a choice	Usually a choice	Always a choice

8. **When** I perform leisure.

1	2	3	4	5
Never a choice	Rarely a choice	Sometimes a choice	Usually a choice	Always a choice

Please circle the AMOUNT OF CHOICE you have in regards to each of the following activities, as if to say "I _____ have a choice in that activity." Please be sure to answer every question.

9. **Whom** I perform leisure with.

1	2	3	4	5
Never a choice	Rarely a choice	Sometimes a choice	Usually a choice	Always a choice

10. **What** leisure activities I do.

1	2	3	4	5
Never a choice	Rarely a choice	Sometimes a choice	Usually a choice	Always a choice

11. **When** I wake up in the morning.

1	2	3	4	5
Never a choice	Rarely a choice	Sometimes a choice	Usually a choice	Always a choice

12. **What** time I go to bed.

1	2	3	4	5
Never a choice	Rarely a choice	Sometimes a choice	Usually a choice	Always a choice

13. **When** I dress.

1	2	3	4	5
Never a choice	Rarely a choice	Sometimes a choice	Usually a choice	Always a choice

14. **What** I wear.

1	2	3	4	5
Never a choice	Rarely a choice	Sometimes a choice	Usually a choice	Always a choice

Please circle the AMOUNT OF CHOICE you have in regards to each of the following activities, as if to say "I _____ have a choice in that activity." Please be sure to answer every question.

15. **How** I dress.

1	2	3	4	5
Never a choice	Rarely a choice	Sometimes a choice	Usually a choice	Always a choice

16. **When** I socialize.

1	2	3	4	5
Never a choice	Rarely a choice	Sometimes a choice	Usually a choice	Always a choice

17. **Where** I socialize.

1	2	3	4	5
Never a choice	Rarely a choice	Sometimes a choice	Usually a choice	Always a choice

18. **Whom** I socialize with.

1	2	3	4	5
Never a choice	Rarely a choice	Sometimes a choice	Usually a choice	Always a choice

19. **When** I use the telephone.

1	2	3	4	5
Never a choice	Rarely a choice	Sometimes a choice	Usually a choice	Always a choice

20. **When** I move (e.g., go down the hall).

1	2	3	4	5
Never a choice	Rarely a choice	Sometimes a choice	Usually a choice	Always a choice

Please circle the AMOUNT OF CHOICE you have in regards to each of the following activities, as if to say "I _____ have a choice in that activity." Please be sure to answer every question.

21. **When** I perform grooming.

1	2	3	4	5
Never a choice	Rarely a choice	Sometimes a choice	Usually a choice	Always a choice

22. **Where** I perform grooming.

1	2	3	4	5
Never a choice	Rarely a choice	Sometimes a choice	Usually a choice	Always a choice

23. **How** I perform grooming.

1	2	3	4	5
Never a choice	Rarely a choice	Sometimes a choice	Usually a choice	Always a choice

24. **When** I perform toilet hygiene.

1	2	3	4	5
Never a choice	Rarely a choice	Sometimes a choice	Usually a choice	Always a choice

25. **Where** I perform toilet hygiene.

1	2	3	4	5
Never a choice	Rarely a choice	Sometimes a choice	Usually a choice	Always a choice

26. **How** I perform toilet hygiene.

1	2	3	4	5
Never a choice	Rarely a choice	Sometimes a choice	Usually a choice	Always a choice

Please circle the AMOUNT OF CHOICE you have in regards to each of the following activities, as if to say "I _____ have a choice in that activity." Please be sure to answer every question.

27. **When** I perform oral hygiene.

1	2	3	4	5
Never a choice	Rarely a choice	Sometimes a choice	Usually a choice	Always a choice

28. **Where** I perform oral hygiene.

1	2	3	4	5
Never a choice	Rarely a choice	Sometimes a choice	Usually a choice	Always a choice

29. **How** I perform oral hygiene.

1	2	3	4	5
Never a choice	Rarely a choice	Sometimes a choice	Usually a choice	Always a choice

30. In which activities (e.g., eating, grooming, socializing) would you like to have more choice?

_____
_____

31. Would you like to have more choice on when, how, or with whom you do things? Please explain your answer.

___Yes___No

_____
_____
_____

Please circle the amount of agreement as appropriate to the following statements related to our own personal perception of quality of life. Please be sure to answer every question.

1. My quality of life with recreation activities is

Extremely poor 1 2 3 4 5 Excellent

2. My quality of life with social relationships is

Extremely poor 1 2 3 4 5 Excellent

3. My quality of life with intimate relationships is

Extremely poor 1 2 3 4 5 Excellent

4. My quality of life with hobbies is

Extremely poor 1 2 3 4 5 Excellent

5. My quality of life with spiritual activities is

Extremely poor 1 2 3 4 5 Excellent

6. My quality of life with volunteer activities is

Extremely poor 1 2 3 4 5 Excellent

7. My quality of life with financial conditions is

Extremely poor 1 2 3 4 5 Excellent

8. My quality of life with learning activities is

Extremely poor 1 2 3 4 5 Excellent

9. My quality of life with work/career activity is

Extremely poor 1 2 3 4 5 Excellent

Please circle the amount of agreement as appropriate to the following statements related to our own personal perception of quality of life. Please be sure to answer every question.

10. My quality of life with emotional balance is

Extremely poor 1 2 3 4 5 Excellent

11. My quality of life with transportation availability is

Extremely poor 1 2 3 4 5 Excellent

12. My quality of life with sexual adjustment is

Extremely poor 1 2 3 4 5 Excellent

13. My quality of life with family involvement is

Extremely poor 1 2 3 4 5 Excellent

14. My quality of life with physical/bodily condition is

Extremely poor 1 2 3 4 5 Excellent

15. My quality of life with liking myself is

Extremely poor 1 2 3 4 5 Excellent

16. My quality of life with housing/living conditions is

Extremely poor 1 2 3 4 5 Excellent

17. My quality of life with receiving affection is

Extremely poor 1 2 3 4 5 Excellent

18. My quality of life with control of life and future is

Extremely poor 1 2 3 4 5 Excellent

Please circle the amount of agreement as appropriate to the following statements related to our own personal perception of quality of life. Please be sure to answer every question.

19. My quality of life with amount of stress is

Extremely poor 1 2 3 4 5 Excellent

20. My overall life quality is

Extremely poor 1 2 3 4 5 Excellent

Instructions: Choose the best answer for how you felt over the past week.

No.	Question	Answer
1.	Are you basically satisfied with your life?	Yes / No
2.	Have you dropped many of your activities and interests?	Yes / No
3.	Do you feel that your life is empty?	Yes / No
4.	Do you often get bored?	Yes / No
5.	Are you hopeful about the future?	Yes / No
6.	Are you bothered by thoughts you can't get out of your head?	Yes / No
7.	Are you in good spirits most of the time?	Yes / No
8.	Are you afraid that something bad is going to happen to you?	Yes / No
9.	Do you feel happy most of the time?	Yes / No
10.	Do you often feel helpless?	Yes / No
11.	Do you often get restless and fidgety?	Yes / No

12.	Do you prefer to stay at home, rather than going out and doing new things?	Yes / No
13.	Do you frequently worry about the future?	Yes / No
14.	Do you feel you have more problems with memory than most?	Yes / No
15.	Do you think it is wonderful to be alive now?	Yes / No
16.	Do you often feel downhearted and blue?	Yes / No
17.	Do you feel pretty worthless the way you are now?	Yes / No
18.	Do you worry a lot about the past?	Yes / No
19.	Do you find life very exciting?	Yes / No
20.	Is it hard for you to get started on new projects?	Yes / No
21.	Do you feel full of energy?	Yes / No
22.	Do you feel that your situation is hopeless?	Yes / No
23.	Do you think that most people are better off than you are?	Yes / No
24.	Do you frequently get upset over little things?	Yes / No
25.	Do you frequently feel like crying?	Yes / No
26.	Do you have trouble concentrating?	Yes / No
27.	Do you enjoy getting up in the morning?	Yes / No
28.	Do you prefer to avoid social gatherings?	Yes / No

29.	Is it easy for you to make decisions?	Yes / No
30.	Is your mind as clear as it used to be?	Yes / No

Table 1

Mean Scores of Individual Items on the Duncan Choice Index

Choice Item	Mean Score	
	Assisted Living M/(SD)	Independent Living M/(SD)
When I take medication.	3.27 (1.49)	4.39 (1.28)**
When I eat.	3.82 (1.47)	4.70 (0.65)
How I eat.	4.36 (0.50)	4.77 (0.62)
Whom I eat with.	3.18 (1.54)	4.38 (0.80)**
What I eat.	4.10 (0.99)	4.69 (0.61)
When I bathe.	3.90 (1.10)	4.85 (0.51)
How I bathe.	2.91 (1.58)**	4.74 (0.72)
When I perform leisure.	4.55 (0.69)	4.70 (0.53)
Whom I perform leisure with.	3.73 (1.49)	4.54 (0.70)
What leisure activities I do.	4.55 (0.69)	4.66 (0.55)
When I wake up in the morning.	3.73 (1.56)	4.49 (0.64)
What time I go to bed.	4.82 (0.40)*	4.79 (0.46)
When I dress.	4.09 (0.94)	4.77 (0.50)
What I wear.	4.64 (0.50)	4.84 (0.40)*
How I dress.	4.82 (0.40)*	4.78 (0.53)
When I socialize.	4.45 (0.52)	4.70 (0.53)
Where I socialize.	3.91 (1.22)	4.59 (0.60)
Whom I socialize with.	4.00 (1.18)	4.60 (0.54)
When I use the telephone.	4.64 (0.67)	4.81 (0.45)
When I move (e.g., go down the hall).	3.82 (1.66)**	4.76 (0.50)
When I perform grooming.	4.64 (0.50)	4.83 (0.41)*
Where I perform grooming.	4.64 (0.67)	4.71 (0.80)**
How I perform grooming.	4.82 (0.40)*	4.76 (0.73)
When I perform toilet hygiene.	4.82 (0.40)*	4.77 (0.68)
Where I perform toilet hygiene.	4.64 (0.67)	4.79 (0.58)
How I perform toilet hygiene.	4.73 (0.47)	4.80 (0.65)
When I perform oral hygiene.	4.82 (0.40)*	4.91 (0.33)*
Where I perform oral hygiene.	4.09 (1.58)**	4.72 (0.78)
How I perform oral hygiene.	4.55 (1.21)	4.81 (0.54)
Total	114.82 (10.68)	124.54 (13.12)

Scale: 1=Never a Choice to 5=Always a Choice
*Notes top rated items
**Notes low rated items

Table 2

Mean Scores of Individual Items on the Quality of Life Rating

Quality of Life with	Mean Score	
	Assisted Living M/(SD)	Independent Living M/(SD)
Recreation activities	3.64 (1.36)	4.24 (0.82)
Social relationships	3.64 (1.29)	4.48 (0.70)*
Intimate relationships	3.80 (1.23)	3.91 (1.24)**
Hobbies	2.82 (1.66)**	3.99 (1.19)
Spiritual activities	4.09 (1.30)	4.29 (1.04)
Volunteer activities	2.82 (1.60)**	4.18 (1.05)
Financial conditions	3.45 (0.69)*	4.42 (0.76)
Learning activities	3.36 (1.29)	4.15 (0.94)
Work/career activity	3.27 (1.42)	3.68 (1.26)**
Emotional balance	3.73 (0.90)	4.27 (0.73)
Transportation availability	4.00 (0.89)*	4.31 (0.99)
Sexual adjustment	4.00 (1.53)**	3.90 (1.31)**
Family involvement	4.10 (0.74)*	4.46 (0.82)
Physical/bodily condition	3.33 (1.32)	3.94 (0.98)
Liking myself	3.91 (0.94)	4.25 (0.89)
Housing/living conditions	3.64 (1.29)	4.71 (0.57)*
Receiving affection	3.70 (0.95)	4.27 (0.99)
Control of life and future	3.55 (1.37)	4.16 (0.96)
Amount of stress	3.70 (0.95)	4.06 (0.86)
Overall life quality	3.50 (1.27)	4.42 (0.70)*
Total	64.91 (17.29)	76.60 (14.49)

Scale: 1=Extremely Poor Quality of Life to 5=Excellent Quality of Life
*Notes top rated items
**Notes low rated items

Table 3

Frequencies of Individual Items on the Geriatric Depression Scale

Item	Frequency			
	Assisted Living		Independent Living	
	Yes	No	Yes	No
Are you basically satisfied with your life?	46%	55%	89%	8%
Have you dropped many of your activities and interests?	64%	36%	34%	62%
Do you feel that your life is empty?	36%	64%	6%	91%
Do you often get bored?	46%	55%	11%	82%
Are you hopeful about the future?	46%	46%	82%	12%
Are you bothered by thoughts you can't get out of your head?	27%	73%	18%	76%
Are you in good spirits most of the time?	91%	9%	94%	3%
Are you afraid that something bad is going to happen to you?	18%	82%	11%	87%
Do you feel happy most of the time?	82%	18%	91%	7%
Do you often feel helpless?	46%	46%	17%	80%
Do you often get restless and fidgety?	18%	82%	15%	81%
Do you prefer to stay at home, rather than going out and doing new things?	46%	55%	43%	49%
Do you frequently worry about the future?	27%	64%	25%	72%
Do you feel you have more problems with memory than most?	36%	55%	10%	88%
Do you think it is wonderful to be alive now?	73%	18%	91%	7%
Do you often feel downhearted and blue?	18%	73%	12%	83%
Do you feel pretty worthless the way you are now?	36%	55%	6%	92%
Do you worry a lot about the past?	18%	82%	5%	94%
Do you find life very exciting?	27%	64%	63%	30%
Is it hard for you to get started	73%	18%	32%	63%

on new projects?				
Do you feel full of energy?	9%	82%	36%	56%
Do you feel that your situation is hopeless?	27%	64%	5%	94%
Do you think that most people are better off than you are?	18%	73%	3%	96%
Do you frequently get upset over little things?	36%	55%	20%	75%
Do you frequently feel like crying?	9%	82%	9%	88%
Do you have trouble concentrating?	46%	46%	23%	72%
Do you enjoy getting up in the morning?	46%	34%	71%	21%
Do you prefer to avoid social gatherings?	18%	73%	27%	71%
Is it easy for you to make decisions?	73%	18%	65%	29%
Is your mind as clear as it used to be?	27%	64%	43%	52%
Overall Mean Score	10.55 (*SD* = 6.83)		6.57 (*SD* = 9.74)	