Relationship Between Choice and Quality of Life Among Residents in Long-Term-Care Facilities

Audrey M. Duncan-Myers, Ruth A. Huebner

Key Words: choice behavior • long-term care • quality of life

Objective. This study tested the association between perceptions of personal control and quality of life among older persons.

Method. Two self-report instruments, The Quality of Life Rating (QOLR) and the Duncan Choice Index (DCI), were administered to 21 residents in a long-term-care facility. The DCI was developed for this study to measure the amount of choice available in 29 self-care and leisure activities.

Results. A significant positive correlation ($r = .54$; $p = .01$) between the amount of choice residents perceive they have and their quality of life was found. The DCI was shown to be reliable with preliminary evidence of construct validity.

Conclusion. Enhancing personal control in everyday life may be associated with improved quality of life. Occupational therapy strategies to empower residents through increasing choice and control include increasing community in the facility emphasizing personal responsibility, and enabling choices in everyday tasks.


The adequate provision of services, ethical treatment, and quality of life among residents in long-term-care (LTC) environments has been a growing concern (Abeles, Gift, & Ory, 1994; Omnibus Budget Reconciliation Act, 1987). The research demonstrates that institutional procedures often dictate where, when, and how residents spend their waking hours (Cohn & Sugar, 1991; Lidz, 1992), resulting in a custodial rather than a therapeutic environment (Taft & Nehrke, 1990). Several authors (Estes & Binney, 1989; McAllister & Silverman, 1999; Williams, 1994) have suggested that the medical model or hierarchical model of care dominating LTC facilities places value on accomplishments of tasks, maintenance of control, and standardization of the environment often resulting in inhibition of autonomy and patterns of learned helplessness for residents (Cohn & Sugar, 1991; Foy & Mitchell, 1990). In contrast, the classic study by Langer and Rodin (1976) and the follow-up study (Rodin & Langer, 1977) demonstrated that enhancing personal control of nursing home residents through emphasizing self-responsibility, opportunities for decision making, and the simple task of caring for a plant resulted in increased activity, alertness, happiness, and decreased mortality one year later.

The Lazarus Project (Kari & Michels, 1991) is a powerful example of the application of the principles of occupa-
nal therapy to a community model in a LTC facility that engaged people in meaningful roles and goal-directed actions to empower them. Nonetheless, as Kari and Michels submitted, most occupational therapy practice in nursing homes is dictated by the medical model that diminishes the occupational therapy practitioners’ ability to act on their commitment to promoting quality of life in LTC facilities. Institutional settings and procedures continue to encourage depersonalization, loss of identity, and development of docile behavior that may be detrimental to a resident’s quality of life (Agbayewa, Ong, & Wilden, 1990; Gueldner et al., 1992; Lachman, Spiro, & Ziff, 1994).

Other research (Langer & Rodin, 1976; Lee & Carr, 1993; Thomas, 1988; Wallhagen, Strawbridge, Kaplan & Cohen, 1994; Wells & Taylor, 1991), couched in empowerment concepts, has demonstrated that programs which empower residents to make small, everyday choices helped improve their physical and mental health, quality of life or life satisfaction (Bowsher & Gerlach, 1990; Larson, 1989), and sense of control or morale (Chang, 1978; O’Connor & Vallerand, 1994). Empowerment is the process of assisting people in stigmatized groups to experience personal influence, to perform valued social roles, and to gain mastery over issues of concern to them (Zimmerman, 1995).

The literature on occupational therapy has demonstrated a positive relationship between measures of interests, values, personal causation, and life satisfaction (Smith, Kielhofner, & Watts, 1986) and occupational therapy theory is based on the premise that the provision of choice and achievement of successful adaptation motivates performance and promotes an internal locus of control (Kielhofner, 1992; Nelson & LaMore, 1992). The opposite pattern of learned helplessness is associated with conditions such as uncontrollable losses, the illusion of incompetence, and relinquishing control of daily living (Foy & Mitchell, 1990). Clark et al. (1997) demonstrated the positive effects of empowerment on the health and well-being of older persons through occupational therapy.

Although previous studies have found a relationship between aspects of control and quality of life, none has examined quality of life and choice in the domains of concern for occupational therapy—self-care, leisure, and work, in the context of long-term care. The purpose of this study was to investigate the relationship between quality of life and personal control as measured by opportunities for choice in self-care and leisure activities among residents of LTC facilities. The three research questions of interest were:

1. What is the relationship between the resident’s perception of the number of choices available in daily life and how do they rate quality of life?
2. What level of quality of life do residents perceive?
3. In which daily tasks do residents have choices in and desire more choice?

Method

Participants

The 31 residents in a LTC facility, who were 65 years or older and judged by the nursing administrator to have adequate cognition to answer the self-report questionnaires and adequate endurance for a one-hour interview, were invited to participate in the study. Twenty-one (68%) chose to participate; 5 men and 16 women. Participants ranged in age from 67 to 94 years (M = 84 years), and had spent between 2 and 91 months at the facility (M = 26 months). Three were currently receiving occupational therapy services.

Measures

Choice. Personal control was operationally defined for this study as the individual resident’s ratings of the frequency of choices available to them in self-care and leisure tasks. The only assessment of choice in daily tasks found in the literature (Kearney, Durand, & Mindell, 1995) relied on staff ratings rather than self-ratings. Because no existing instrument specifically measured perception of choice in performance areas, The Duncan Choice Index: Self-Care and Leisure (DCI) (Duncan, 1998) was developed for this study. To support content validity, DCI items were developed based on self-care and leisure performance tasks included in the Occupational Therapy Uniform Terminology (American Occupational Therapy Association [AOTA], 1994). These two performance areas were considered the most pertinent in the daily routine of persons in a LTC facility. The DCI was revised in response to a brief pilot to check clarity and in response to input from three faculty members.

The DCI includes 29 items on the amount of choice regarding what, when, where, how, and with whom leisure and self-care activities are performed. On each item, the participant indicates the frequency of choice opportunities (“I _____ have a choice in that activity”) using a 5-point scale as follows: “1” never, “2” rarely, “3” sometimes, “4” usually, and “5” always. The summary score ranges from 29 to 145; the higher the score, the more choice is perceived. Sample questions include: “Rate how often you have a choice on…,” “When I wake up in the morning…,” “How I bathe…,” or “Where I socialize….” The DCI also includes open-ended questions asking: (a) In which activities would you like to have more choice? and (b) Would you like to have more choice on when, how, or with whom you do things?

Quality of Life. The Quality of Life Rating (QOLR) (Gust, 1982) was used to measure perceptions of quality of life. This 20-item self-report instrument includes a 5-point scale to rate the perception of quality of life from “1” extremely poor to “5” quality is excellent. Total scores range from 20 to 100; the higher the score the higher the rating of quality of life.

Huebner, Allen, Inman, Gust and Turpin (1998) identified five factors of the QOLR as self-esteem and well-
being, interpersonal attachment, basic needs, recreation/leisure, and spirituality which were used as subscales in this study. The Self-Esteem and Well-Being subscale measures liking/loving self, control of life and future, and social relationships. Interpersonal Attachment measures receiving affection and close/intimate relationships. Basic Needs measures financial conditions, and work and learning opportunities. The Recreation/Leisure subscale and the Spirituality subscale measure quality of life in activities specific to each domain. These authors reported a correlation with measures of life satisfaction of .65, supporting criterion-related validity, a Cronbach's alpha of .87, and a test-retest coefficient of stability of .74.

Procedure

After obtaining informed consent and a demographic sheet, the DCI and the QOLR were administered by the first author in the stated order. Each instrument was read to the participant and responses recorded by the researcher. To assist participants, the five response choices for each instrument were printed in large type on a card. Items were repeated or clarified as needed.

Data Analysis

Subscales for the QOLR were generated based on the factor structure identified by Huebner et al. (1998). Descriptive statistics were generated for both measures and for the demographic data. A correlation matrix was generated using the subscale scores of the QOLR, the individual scores on the DCI, and the total scores on both the QOLR and DCI. An analysis of internal consistency was performed for both the DCI and QOLR using a Cronbach’s alpha.

Results

Frequency of Choice

The Means (M) for all scores on the DCI are displayed in Table 1. Participants rated the amount of choice on the item lowest “when they take their medications,” and highest on the item “when they use the telephone.” Of the 10 items rated as having the least choice, five items—when I take medication, eat, bathe, perform leisure, and wake up—pertained to when participants performed activities. Twenty-five of 29 DCI questions were rated with a mean score of “4” or above indicating that participants perceived that they usually or always had a choice in 86% of the activities included on the DCI. The internal consistency of the DCI was analyzed using Cronbach’s alpha test of reliability that was .84.

Quality of Life

Participants rated their quality of life lowest on QOLR items of physical/bodily conditions, volunteer activities, amount of stress, hobbies, and access to educational activities. The highest ratings of quality of life were on QOLR items of family involvement and support, housing/living conditions, liking/loving of themselves, and receiving affection. Overall, the mean rating of quality of life for each item was between 3 and 4, suggesting that residents perceived their quality of life as at least “satisfactory” to “very good” in all areas. The internal consistency of the QOLR was .84 using Cronbach’s alpha.

Relationship Between Choice and Quality of Life

A positive correlation ($r = .54, p = .01$) was demonstrated between the total score on the DCI and the total score on the QOLR, suggesting that as the ratings of choices in self-care tasks increased perceptions of quality of life also increased. Several items on the DCI were significantly correlated with subscales on the quality of life; these correlations are displayed in Table 2. The DCI item of “Whom I eat with” was significantly correlated with interpersonal attachment quality of life, leisure quality of life, and basic needs quality of life, suggesting that such a choice is important to many aspects of quality of life. Satisfaction with quality of life related to self-esteem and well-being was significantly related with the DCI items: “When I perform toilet hygiene and bathing,” “Where I perform oral hygiene and grooming,” and “What I eat,” suggesting that these choices are fundamental to perceptions of self-esteem. The DCI item of “When I perform leisure” activities was related to satisfaction of basic needs related to quality of life, supporting the importance of a simple choice.

### Table 1

<table>
<thead>
<tr>
<th>Choice Item</th>
<th>Range</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Score</td>
<td>96–145</td>
<td>127.24</td>
<td>11.8</td>
</tr>
<tr>
<td>When I take medication</td>
<td>1–5</td>
<td>2.33</td>
<td>1.39</td>
</tr>
<tr>
<td>When I eat</td>
<td>1–5</td>
<td>3.47</td>
<td>1.28</td>
</tr>
<tr>
<td>When I bathe</td>
<td>1–5</td>
<td>3.81</td>
<td>1.16</td>
</tr>
<tr>
<td>Whom I eat with</td>
<td>1–5</td>
<td>3.86</td>
<td>1.39</td>
</tr>
<tr>
<td>What I eat</td>
<td>2–5</td>
<td>4.05</td>
<td>1.02</td>
</tr>
<tr>
<td>How I bathe</td>
<td>1–5</td>
<td>4.10</td>
<td>1.04</td>
</tr>
<tr>
<td>When I perform leisure</td>
<td>1–5</td>
<td>4.10</td>
<td>1.04</td>
</tr>
<tr>
<td>Whom I perform leisure with</td>
<td>3–5</td>
<td>4.10</td>
<td>0.83</td>
</tr>
<tr>
<td>What leisure activities I do</td>
<td>3–5</td>
<td>4.29</td>
<td>0.85</td>
</tr>
<tr>
<td>When I wake up in morning</td>
<td>1–5</td>
<td>4.43</td>
<td>1.12</td>
</tr>
<tr>
<td>When I dress</td>
<td>1–5</td>
<td>4.48</td>
<td>1.25</td>
</tr>
<tr>
<td>Whom I socialize with</td>
<td>2–5</td>
<td>4.48</td>
<td>0.87</td>
</tr>
<tr>
<td>What I wear</td>
<td>1–5</td>
<td>4.52</td>
<td>1.03</td>
</tr>
<tr>
<td>How I dress</td>
<td>1–5</td>
<td>4.52</td>
<td>0.98</td>
</tr>
<tr>
<td>When I socialize</td>
<td>2–5</td>
<td>4.52</td>
<td>0.87</td>
</tr>
<tr>
<td>Where I socialize</td>
<td>2–5</td>
<td>4.52</td>
<td>0.81</td>
</tr>
<tr>
<td>When I move (e.g., go down hall)</td>
<td>2–5</td>
<td>4.57</td>
<td>0.87</td>
</tr>
<tr>
<td>When I perform grooming</td>
<td>1–5</td>
<td>4.57</td>
<td>0.93</td>
</tr>
<tr>
<td>How I perform toilet hygiene</td>
<td>1–5</td>
<td>4.62</td>
<td>1.07</td>
</tr>
<tr>
<td>Where I perform toilet hygiene</td>
<td>1–5</td>
<td>4.62</td>
<td>1.07</td>
</tr>
<tr>
<td>How I perform grooming</td>
<td>1–5</td>
<td>4.62</td>
<td>0.97</td>
</tr>
<tr>
<td>When I perform oral hygiene</td>
<td>1–5</td>
<td>4.71</td>
<td>0.90</td>
</tr>
<tr>
<td>How I perform oral hygiene</td>
<td>1–5</td>
<td>4.71</td>
<td>0.78</td>
</tr>
<tr>
<td>Where I perform grooming</td>
<td>2–5</td>
<td>4.81</td>
<td>0.68</td>
</tr>
<tr>
<td>Where I perform oral hygiene</td>
<td>2–5</td>
<td>4.81</td>
<td>0.68</td>
</tr>
<tr>
<td>How I eat</td>
<td>4–5</td>
<td>4.90</td>
<td>0.30</td>
</tr>
<tr>
<td>What time I go to bed</td>
<td>3–5</td>
<td>4.90</td>
<td>0.44</td>
</tr>
<tr>
<td>When I use the telephone</td>
<td>5–5</td>
<td>5.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

*Note. N = 21.*

Means are presented from the lowest mean to the highest. The higher the mean, the higher the rating of choice.
The American Journal of Occupational Therapy

Occupational therapy practitioners could be role models to be flexible in responding to these choices. Assistants gave more choices to residents if they felt empowered to a positive perception of quality of life particularly when choices concern common tasks such as eating and toilet hygiene. These results support findings from previous studies that identify choice-making as one way to improve an internal locus of control and enhance a sense of control (Chang, 1978; Lee and Carr, 1993; Langer & Rodin, 1976; Wells & Taylor, 1991), empower elders (Kari & Michels, 1991), and improve quality of life (Bowsher & Gerlach, 1990; Larson, 1989).

To develop strategies to enhance perception of personal control, occupational therapy practitioners can embed the provision of choice in all self-care and leisure tasks even within the current medical model used in many LTC facilities. Within the typical LTC facility, Kane et al., (1997) found neither residents nor staff members were optimistic about achieving more autonomy and choice for residents despite the value placed on them. However, the nursing assistants gave more choices to residents if they felt empowered to be flexible in responding to these choices. Occupational therapy practitioners could be role models for nursing assistants in fostering flexibility and choice opportunities into the care of residents. Practical interventions and suggestions for enhancing the personal control of residents in nursing homes can be found in Martin and Smith (1993). A more fundamental change in institutional policies and care model is suggested and described by several authors as a community model (Estes & Binney, 1989; Kari & Michels, 1991; McAllister & Silverman, 1999; O’Connor & Vallerand, 1994; Williams, 1994). In the current medical model, the capacities of people to help others are valued and encouraged; choice and voice in all matters and normalization of activity are inherent in the philosophy. Occupational therapists could be leaders in promoting the shift to a community model, influencing the climate of the environment, and promoting relationships between residents and others.

**Limitations**

The findings of this study are limited in generalizability because of the small convenience sample of volunteers. Participants frequently asked for clarification of specific items on both the DCI and QOLR; they wanted to elaborate on each response and were eager to talk about their choices and quality of life. These questions and elaborations were encouraged, but the explanations and discussion may have biased the participants’ answers. Overall, participants were pleased with the amount of choice they had, in contrast to the low satisfaction with choice in the study by Kane et al. (1997). Although confidentiality and anonymity were assured, the participants may have hesitated to portray a negative image of their residence for reasons of social desirability. The high scores on the DCI may also reflect the facility’s commitment to provide quality health care, a comfortable stay, beautiful surroundings, and choices for residents (C. Williams, personal communication, November 1, 1997), all of which may be very different at other facilities.

**Conclusion**

Despite these limitations, this study sampled the subjective feelings of the residents rather than the ratings of care providers, consistent with a client-centered approach. The Cronbach’s alpha obtained on scores for the DCI provides support for its internal consistency and acceptable level of reliability. In addition, the strong correlation of the QOLR with scores on the DCI adds support to the concurrent validity of the DCI. Despite the small sample size, the measures used in this study were adequately reliable and statistically significant results were obtained, suggesting a large effect size between the variables studied (Cohen, 1992).

More research is warranted to strengthen the validity of these results and to examine the psychometric properties of the Duncan Choice Index. We also need to identify ways to increase choice opportunities for those in long-term-care facilities and among all populations served by occupation-

---

### Table 2

<table>
<thead>
<tr>
<th>Choice Item</th>
<th>Interpersonal Attachment</th>
<th>Basic Needs</th>
<th>Recreation</th>
<th>Leisure</th>
<th>Self-Esteem</th>
<th>Spirituality</th>
<th>Total DCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total DCI</td>
<td>.49*</td>
<td>.36</td>
<td>.35</td>
<td>.42</td>
<td>.32</td>
<td>.54*</td>
<td></td>
</tr>
<tr>
<td>When I wake up</td>
<td>.53*</td>
<td>.34</td>
<td>.39</td>
<td>.33</td>
<td>.26</td>
<td>.49*</td>
<td></td>
</tr>
<tr>
<td>When I perform</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>toilet hygiene</td>
<td>.24</td>
<td>.01</td>
<td>.10</td>
<td>.52*</td>
<td>.19</td>
<td>.36</td>
<td></td>
</tr>
<tr>
<td>What I wear</td>
<td>.43</td>
<td>-.04</td>
<td>.53*</td>
<td>-.12</td>
<td>.52*</td>
<td>.21</td>
<td></td>
</tr>
<tr>
<td>How I dress</td>
<td>.29</td>
<td>.12</td>
<td>.44*</td>
<td>-.01</td>
<td>.40</td>
<td>.24</td>
<td></td>
</tr>
<tr>
<td>What I eat</td>
<td>.36</td>
<td>-.31</td>
<td>-.22</td>
<td>.68**</td>
<td>-.05</td>
<td>.45</td>
<td></td>
</tr>
<tr>
<td>What time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I go to bed</td>
<td>.40</td>
<td>.10</td>
<td>.49*</td>
<td>-.03</td>
<td>.38</td>
<td>.25</td>
<td></td>
</tr>
<tr>
<td>Whom I eat with</td>
<td>.59*</td>
<td>.61*</td>
<td>.57*</td>
<td>-.04</td>
<td>.41</td>
<td>.50*</td>
<td></td>
</tr>
<tr>
<td>When I move</td>
<td>.20</td>
<td>-.05</td>
<td>.54*</td>
<td>.12</td>
<td>.38</td>
<td>.25</td>
<td></td>
</tr>
<tr>
<td>When I perform leisure</td>
<td>.10</td>
<td>-.50*</td>
<td>-.07</td>
<td>-.16</td>
<td>.02</td>
<td>.01</td>
<td></td>
</tr>
<tr>
<td>Where I perform</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>grooming</td>
<td>.02</td>
<td>.12</td>
<td>-.48*</td>
<td>.48*</td>
<td>-.22</td>
<td>.16</td>
<td></td>
</tr>
<tr>
<td>When I perform</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>oral hygiene</td>
<td>.45*</td>
<td>.05</td>
<td>.42</td>
<td>.08</td>
<td>.45*</td>
<td>.31</td>
<td></td>
</tr>
<tr>
<td>How I perform</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>oral hygiene</td>
<td>.41</td>
<td>-.01</td>
<td>.37</td>
<td>.11</td>
<td>.45*</td>
<td>.29</td>
<td></td>
</tr>
<tr>
<td>Where I perform</td>
<td>.02</td>
<td>.08</td>
<td>-.53*</td>
<td>.48*</td>
<td>-.34</td>
<td>.12</td>
<td></td>
</tr>
<tr>
<td>oral hygiene</td>
<td>.24</td>
<td>.29</td>
<td>.19</td>
<td>.45*</td>
<td>.06</td>
<td>.41</td>
<td></td>
</tr>
</tbody>
</table>

* = significant at the 0.05 level. ** = significant at the 0.01 level.

Note. QOLR = Quality of Life Rating; DCI = Duncan Choice Index.
al therapy. By empowering others through providing choic-
es, occupational therapists may improve the quality of life
for many people. ▲

Acknowledgments
We thank the residents and administrator from TanBark Health Center
who participated in the study. We also thank Onda Bennett, Joy
Anderson, Joe Olmstead, and Lisa Fowler who contributed to the
research. The first author dedicates this article to the memory of
Terrance S. Duncan who supported her efforts during the research.

References
Abeles, R. P., Gift, H. C., & Ory, M. G. (Eds.). (1994). Aging and
Agbayewa, M. O., Ong, A., & Wilden, B. (1990). Empowering
long term care facility residents using a resident staff group approach.
American Occupational Therapy Association (1994). Uniform
Terminology for Occupational Therapy Services (3rd ed.). Rockville, MD:
Author.
Bosworth, J. E., & Gerlach, M. J. (1990). Personal control and
other determinants of psychological well-being in nursing home elders.
Scholarly Inquiry for Nursing Practice: An International Journal, 4,
91–101.
Chang, B. L. (1978). Generalized expectancy, situational percep-
tion and morale among institutionalized aged. Nursing Research, 27,
316–324.
Clark, F., Azen, S. P., Zemke, R., Jackson, J., Carlson, M., Mandel,
D., Hay, J., Josephson, K., Cherry, B., Hessel, C., Palmer, J., & Lipson,
L. (1997). Occupational therapy for independent-living older adults: A
randomized controlled trial. Journal of the American Medical Association,
278, 1321–1326.
155–159.
in the frail elderly. In J. E. Birren, D. E. Duechtem, J. E. Lubben, & J.
C. Rowe (Eds.), The concept and measurement of quality of life in the frail
among residents in LTC facilities. Unpublished special project. Eastern
Kentucky University: Richmond, KY.
Estes, C. L., & Binney, E. A. (1989). The biomedicalization of
learned helplessness in the institutionalized aged: A literature review.
Physical and Occupational Therapy in Geriatrics, 3, 1–24.
Gueltnner, S. H., Clayton, G. M., Schroeder, M. A., Butler, S., Ray,
J., & Ray, P. (1992). Environmental interaction patterns among institutional-
ized and non-institutionalized older adults. Physical and
Occupational Therapy in Geriatrics, 11, 37–53.
Huebner, R. A., Allen, J. B., Inman, T. H., Gust, T., & Turpin, S. G.
(1998). Quality of life rating: Psychometric properties and theoretical
8–16.
Kane, R. A., Caplan, A. L., Urv-Wong, E. K., Freeman, I. C.,
nursing home residents: Wish for and perception of choice and control.
Journal of the American Geriatrics Society, 45, 1086–1093.
of empowerment. The American Journal of Occupational Therapy, 45,
719–725.
assessment in residential settings. Journal of Developmental and Physical
a sense of control in later life. In R. P. Abeles, H. C. Gift, & M. G. Ory
(Eds.), Aging and quality of life (pp. 216–229). New York: Springer
Publishing Company.
Langer, E. J., & Rodin, J. (1976). The effects of choice and
enhanced personal responsibility for the aged: A field experiment in an
institutional setting. Journal of Personality and Social Psychology, 34,
191–198.
daily life? Psychological Reports, 64, 775–784.
Lee, J., & Carr, M. B. (1993). The empowerment of women resi-
dents in the nursing home. Women and Therapy, 14, 187–203.
York: Oxford Press.
Martin, S., & Smith, R. W. (1993). OBRA legislation and recre-
tional activities: Enhancing personal control in nursing homes.
and community roles among persons with Alzheimer’s disease: A
comparative study of experiences in a residential Alzheimer’s facility and
a traditional nursing home. Qualitative Health Research, 9(1), 65–85.
performance of an art project in adults with mental disabilities.
American Journal of Occupational Therapy, 47, 397–399.
O’Connor, B. P., & Vallerand, R. J. (1994). Motivation, self-deter-
dination, and person-environment fit as predictors of psychological adjus-
tment among nursing home residents. Psychology and Aging, 9,189–194.
Government Printing Office.
relevant intervention with the institutionalized aged. Journal of
Personality and Social Psychology, 35, 897–902.
between volition, activity pattern, and life satisfaction in the elder-
Taft, L. B., & Nehre, M. F. (1990). Reminiscence, life review, and
ego integrity in nursing home residents. International Journal of Aging
and Human Development, 30, 189–196.
Wallhagen, M. I., Strawbridge, W. J., Kaplan, G. A., & Cohen, R.
D. (1994). Impact of internal health locus of control on health out-
comes for older men and women: A longitudinal perspective. The
Gerontologist, 34, 299–306.