Impact of Participating in Volunteer Activities for Residents Living in Long-Term-Care Facilities

Hon Keung Yuen, Peng Huang, Jerry K. Burik, Thomas G. Smith

The purpose of this study was to investigate the effect of a volunteer activity on the perceived well-being of long-term-care (LTC) residents. Residents from five LTC facilities were randomly assigned into either a mentoring or a usual-care control group. Residents in the mentoring group tutored conversational skills to English-as-a-second-language students on a one-on-one basis for 1 hour twice per week for 12 weeks. Well-being, as a global outcome construct, was measured at baseline, after intervention, and at 3-month follow-up using the Geriatric Depression Scale, Life Satisfaction Index–A, and a self-rated health question. After intervention, residents who participated in the mentoring group rated their level of well-being higher ($p = .047$) than those in the usual-care group on the basis of a multivariate nonparametric global statistical test. The positive effect of mentoring on well-being relative to the control was sustained at 3-month follow-up assessment ($p = .029$). Findings provide preliminary support for engaging LTC residents in volunteer mentoring activities to improve their well-being.


Many older adults require long-term care (LTC) because of the effects of deteriorating mental and physical health and insufficient social support or resources (Miller & Weissert, 2000). Most LTC facilities are primarily concerned with meeting residents’ physical needs rather than their psychosocial needs. In environments such as these, residents have limited autonomy and lack control over their daily activities, and they assume little responsibility for themselves (Kane, 2001). As a result, residents often become dependent (Bowsher, 1994). In addition, LTC facilities offer residents a limited range of social activities (Gueldner et al., 1992), further reducing their participation in occupational roles.

One way to counteract role loss among residents of LTC facilities is to assist them in resuming meaningful occupational roles. This proposition is based on the activity theory of aging, which states that adopting a meaningful occupational or social role may improve psychological well-being in elders (Lemon, Bengtson, & Peterson, 1972). According to Lemon and associates (1972), the mechanism underlying the relationship between activity and psychological well-being in the activity theory of aging is as follows: “Activity provides various role-supports…. Role supports are necessary for the maintenance of a positive self-concept, which in turn is associated with [better well-being]” (p. 515). This proposition was later verified in a large-scale study ($N = 1,209$) of three distinct types of retirement communities (Longino & Karr, 1982).

Chambre (1984) suggested that participation in volunteer activities serves as a meaningful way for elders to compensate for role loss. Substantial evidence indicates the physical and psychological benefits of participation in volunteer activities for elders living in the community (Greenfield & Marks, 2004; Lum & Lightfoot, 2004).
2005; Wheeler, Gorey, & Greenblatt, 1998). Few studies, however, have evaluated the benefits of volunteer programs within LTC facilities (Yuen, 2002). It is often assumed that residents in LTC facilities are unable or do not desire to help others because they themselves receive assistance on a daily basis. Yet several qualitative studies found that LTC residents view being helpful to others as an important component of well-being (Aller & Van Ess Coeling, 1995; Geiger & Miko, 1995; Guse & Masear, 1999). Hatter and Nelson (1987) provided evidence that institutionalized elders are indeed willing to participate in activities designed to help others.

Drew (1985) described volunteer programs organized by residents in LTC facilities. These programs provide some evidence that residents can make meaningful contributions to the community despite their dependency on others for care. However, reported positive outcomes were largely anecdotal accounts from the authors’ experience or staff reports (e.g., Richards, 1997) or have been entirely based on the theoretical assumption (without empirical support) that volunteer activities have therapeutic benefits for the residents (e.g., Goodwin, 1985). Clearly, a logical extension of these studies is to evaluate systematically the efficacy of volunteer programs for residents in LTC facilities using a randomized controlled trial.

This study was designed to test the hypothesis that residents in LTC facilities who engage in an innovative volunteer activity (mentoring English conversational skills for English-as-a-second-language [ESL] students) would report higher levels of well-being than those in the usual-care control group at postintervention. Moreover, this study tested the hypothesis that the positive impact of volunteering on residents’ well-being would persist at 3-month follow-up.

Methods

Participants

Criteria for participants included being ages 60 or older, residing in a LTC facility, speaking English as the first language, being able to carry on a conversation appropriately for at least 1 hr, having intelligible speech, and having a Mini-Mental State Examination (MMSE; Folstein, Folstein, & McHugh, 1975) score of 19 or greater. The exclusion criteria were correctable hearing impairments, known maladaptive behavioral patterns, exhibition of overt psychotic symptoms (e.g., presence of hallucinations, delusions, or thought disorders), and terminal illness with a life expectancy of less than 6 months.

Recruitment

Recruitment took place after meetings with staff from five LTC facilities (1 skilled nursing, 3 assisted living, and 1 semi-independent living) in Charleston County, South Carolina. The LTC facilities did not maintain organized in-house or community volunteer activities in which the residents could participate. The first author held several group meetings with the residents at each facility to explain the purpose of the study and to invite them to participate. Seventy residents were referred or recruited into the study from the five LTC facilities. Forty-seven residents signed the informed consent and agreed to participate in the study. Among the 47 residents, 7 had an MMSE score of less than 19, and 1 resident was younger than 60; therefore, they were excluded from the study, resulting in a total of 39 residents for randomization.

Students were recruited from three ESL schools during regularly scheduled class meetings or on referral from their English-language teachers. Inclusion criteria for the ESL students were being age 18 to 44, speaking English as a second language, and having demonstrable ability to describe their personal background in a few basic English sentences. The mean age of students who met inclusion criteria was 33.5 (SD = 6.8, range = 20–42). The Institutional Review Board at the Medical University of South Carolina approved this study.

Procedure

Once the residents agreed to participate and signed the informed consent, they were formally evaluated to determine their cognitive status using the MMSE. Two research assistants who were unaware of the purpose of the study received a 1-hr training session in administering the MMSE and evaluated all referred and recruited residents. Eligible residents (i.e., MMSE score ≥19) were then assessed for their depressive symptoms and life satisfaction using the Geriatric Depression Scale (GDS; Yesavage et al., 1983) and Life Satisfaction Index–A (LSI–A; Neugarten, Havighurst, & Tobin, 1961). Demographic information and responses to a self-rated health question were collected. Self-rated health was measured by asking the residents to rate their physical health on a 5-point scale (5 = excellent, 1 = poor; Chandola & Jenkinson, 2000). The research assistants read all the items in the assessments to the residents because this method is thought to be less taxing and elicits more engagement, thereby improving the reliability of responses (Parmelee & Katz, 1990).

After baseline assessment, residents in each facility were assigned randomly into one of two groups: mentoring or usual-care control. Within each facility, pairs of residents
with similar baseline MMSE scores were assigned randomly into either the mentoring or the usual-care group. This randomization strategy was used to reduce the potential impact of facility type as a confounding variable. Residents assigned to the usual-care control group continued to participate in the customary social and recreational activities available at the facility. Residents who chose to discontinue their participation after notification of group assignment were not replaced.

To mitigate the potential disappointment and resentment of residents assigned to the control group, all residents were told before random assignments that there might not be enough students for them to mentor initially, but interaction with students would be offered as soon as enough students became available. Although providing such interaction after the completion of the study was part of the plan, the terrorist attacks of September 11, 2001, and the subsequent stringent student visa immigration policies contributed to a dramatic decline in the number of ESL students enrolled in participating schools. This decline in the ESL student population prevented us from extending the ESL mentoring program beyond the study period.

Residents in the mentoring group were paired with an ESL student, and each resident mentored only one student at a time. The residents were informed that an international student would be visiting them for the purpose of learning English conversational skills at a frequency of two times per week for 12 weeks and that the students would ask them various questions related to pronunciation of words, meanings of American expressions, and correct use of words in different contexts.

During the first session, the two project English-language teachers accompanied the students and introduced them to the mentoring residents. They also provided a brief orientation to the residents that included general guidelines on how to mentor their students. The two teachers maintained close contact with the facilities’ activities directors to monitor any problems encountered between the residents and the students during the first two visits and took appropriate actions when necessary to assist the students and the residents in maintaining the interaction.

Students were instructed to organize learning activities and to prepare a minimum of three questions related to improving their English conversational skills for each meeting, consistent with a self-directed learning strategy. Before each meeting with their resident mentors, students discussed their preparatory activities with the project teachers by either telephone or e-mail. Visitation times and days were arranged between the students and residents. Students were responsible for making up any missed meetings within the 12-week study period. Attempts were made to replace those students who missed more than four sessions within the first 4 weeks.

Postintervention and 3-Month Follow-Up Assessments

At postintervention and 3-month follow-up, all residents were assessed by the same research assistants using the three outcome measures (self-rated health, GDS, and LSI–A), and the MMSE. The residents’ cognitive functioning was reassessed to detect any significant deterioration from various medical or disease conditions. To assess perceptions of their roles, residents in the mentoring group were asked whether they perceived they had assumed a mentoring role and to rate the quality of this role as follows: very positive (+2), positive (+1), neither positive nor negative (0), negative (−1), or very negative (−2) at postintervention assessment.

Data Analysis

Of the 39 residents assigned randomly to the two groups, 11 residents (4 from the mentoring group, 7 from the usual-care group) withdrew before the postintervention assessment. Of those who withdrew, 4 (2 from each group) died, 5 (4 from the usual-care group) transferred to another residence or were lost to follow-up, and 2 (1 from each group) decided not to continue participating in the study. No significant difference (all ps > .10) was found between those residents who withdrew and those who completed the postintervention assessment on baseline scores of the MMSE, self-rated health, GDS, and LSI–A. Data analysis was based on the remaining 28 residents (15 residents from the mentoring group, 13 from the usual-care group). Two additional residents from the mentoring group were lost or dropped out at 3-month follow-up assessment.

To examine the effects of volunteering on the well-being of the residents, a multivariate nonparametric global statistical test (GST) was used in which the change scores at each of the two endpoints (i.e., change scores from baseline to postintervention and change scores from baseline to 3-month follow-up) of the three outcome measures were ranked among all participants; then, for each participant, the sum of the ranks of the endpoints was computed (Huang, Tilley, Woolson, & Lipsitz, 2005; O’Brien, 1984; Pocock, Geller, & Tsiatis, 1987). The GST provided an assessment of treatment effect at postmentoring and 3-month follow-up. The GST was used to test the hypothesis that the treatment was uniformly better than the control based on a global assessment of the performance on multiple outcomes considered as a whole. Tandon (1990) suggested the GST is particularly useful when the sample size is relatively small and when analyzing a construct (e.g., well-being) consisting of multiple
correlated components. The GST is fundamentally different from multivariate analysis of variance (Hotelling’s $T^2$ test), which tests the hypothesis that the treatment is different from the control in at least one outcome measure. The advantage of using the GST is that it not only provides a meaningful interpretation of treatment effect but also combines evidence of treatment benefit from all correlated outcomes jointly and provides a more powerful test than univariate tests when treatment shows benefit in all outcomes considered (Huang et al., 2005). In all analyses, the statistical significance level was set at .05, and all analyses were performed using Splus 7.0 for Windows (Insightful Corporation, Seattle, WA).

Results

Demographics

The mean age of the residents was 83.4 ($SD = 8.8$, range = 64–96); 20 (71.4%) were female, 26 (92.9%) were White, 24 (85.7%) were not married (widowed, never married, or divorced), and most (78.6%) had completed high school or beyond. The mean length of stay in the LTC facilities before the baseline assessment was 27.4 months ($SD = 32.5$ months, range = 1.5–156 months). Table 1 shows the demographic characteristics of the 28 residents in each group. There was no significant difference in the number of residents assigned to the two study groups across the five facilities ($\chi^2 = 0.87$, $p = .929$), nor was there any significant difference between the two groups on the demographic characteristics of age, gender, race, marital status, education, and length of stay in the facility before baseline assessment.

The mean number of student visits was 19.6 ($SD = 7.4$; range = 1–24); 79% of residents mentored the students for 19 or more sessions. Only one resident expressed that her mentoring experience was neither positive nor negative; the remaining residents expressed either positive (9 residents) or very positive (5 residents) responses at postintervention assessment. Only 1 resident indicated that he did not think he had assumed a mentoring role for the student.

No significant difference (all $ps > .30$) was found at baseline for the three outcomes (self-rated health, GDS, and LSI–A) between the mentoring and usual-care groups, nor was there any significant change in the MMSE score across the three time periods (baseline, postintervention, and follow-up). Correlations as calculated using Spearman’s $\rho$ among the three outcome measures were found to be significant at postintervention and 3-month follow-up, respectively (all $ps < .05$).

Main Results

The means and standard deviations for the three outcome measures at each of the three time periods are shown in Table 2. Using the GST, significant differences in well-being between the mentoring and control groups were observed from baseline to postintervention ($p = .047$) and from baseline to 3-month follow-up ($p = .029$). On the basis of the mean rank scores, the mentoring group showed a higher level of well-being at both postintervention and 3-month follow-up compared with those residents who were in the usual-care control group. No significant differences in well-being between the mentoring and control groups were observed from postintervention to 3-month follow-up ($p = .340$).

Discussion

Results from the GST support the hypothesis that residents in LTC facilities who participate in a volunteer activity (mentoring) will report higher levels of well-being than those residents who receive usual care. In addition, those effects persisted at 3 months following termination of the program. Findings preliminarily support the activity theory of aging and validate the beneficial effects of volunteer mentoring programs for LTC residents.

Inspecting the mean scores of the three outcome measures across the three time periods indicated that residents’ well-being deteriorated across time; the rate of deterioration for the residents in the usual-care group occurred more quickly than for those in the mentoring group. This deterioration was especially pronounced in self-rated health. It
Table 2. Comparison of the Three Outcome Measures

<table>
<thead>
<tr>
<th>Measure</th>
<th>Mentoring Group</th>
<th>Usual-Care Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Baseline (n = 15)</td>
<td>Postintervention (n = 15)</td>
</tr>
<tr>
<td></td>
<td>M  SD</td>
<td>M  SD</td>
</tr>
<tr>
<td>Self-rated health</td>
<td>2.47 ± 0.99</td>
<td>2.73 ± 0.80</td>
</tr>
<tr>
<td>Geriatric Depression Scale</td>
<td>5.07 ± 2.79</td>
<td>5.27 ± 3.58</td>
</tr>
</tbody>
</table>

appears that participating in a volunteer mentoring program of conversation skills served as a protective factor against health deterioration among residents living in LTC facilities. The protective effect of volunteering on health also has been demonstrated in community-dwelling elder volunteers in several nationally representative longitudinal studies (Greenfield & Marks, 2004; Lum & Lightfoot, 2005; Luoh & Herzog, 2002).

A high dropout rate (28.2%) resulted in a dramatic reduction in sample size, which is the major limitation of this study. Most residents who withdrew (90.9%) had resided in the LTC facilities for less than 1 year. In the future, it is recommended that inclusion criteria include only those residents who have resided in LTC facilities for a minimum of 1 year.

Given the beneficial effect of volunteering on LTC residents’ well-being, it is recommended that LTC facilities offer opportunities for residents to engage in volunteer activities in addition to the social and recreational activities typically offered. Occupational therapists practicing in LTC facilities can be instrumental in identifying residents who have previously volunteered or who may have an interest in participating in volunteer opportunities through careful elicitation and analysis of the occupational profile during the evaluation process. Likewise, occupational therapists can be instrumental in identifying community-based organizations that could benefit from residents’ participation in volunteering. One such possibility is the recruitment of resident volunteers for participating in activities designed to enhance health professions students’ learning. It has been the authors’ experience that occupational therapy students have benefited greatly from interacting with LTC residents who volunteered to participate in a variety of preclinical learning activities including interviewing and practicing basic evaluation skills such as goniometry, manual muscle testing, sensory testing, and cognitive–perceptual testing.

On the basis of this pilot study, several recommendations are suggested for future research. First, the protective effect of volunteering (mentoring) against morbidity or mortality in the LTC resident population should be investigated through a longitudinal, multisite, randomized controlled trial, which is essential to validate the present findings. Second, previous studies (e.g., Reinke, Holmes, & Denney, 1981) have shown the benefit of casual visitation to LTC residents; the addition of a casual visitation group to this study design might clarify the relative value of opportunities for volunteer mentoring roles compared with casual visitation. Finally, creating similar programs for older adults who are homebound may improve their physical and mental health. In some respects, homebound elders are similar to residents in LTC facilities because they too often experience lack of socialization and role loss because of their frailty.

Acknowledgments

The authors express thanks and appreciation to all the residents and ESL students who participated in this study; the staff from the five LTC facilities for referring appropriate residents; the English-language teachers from the three ESL programs for referring appropriate students; the two project English-language teachers, Christine Bowman and Melissa Pluta; the project coordinator, Larissa Morgan; and the two research assistants, Jessica Eppinette and Jena Wozniak. This study was supported by Grant 1 R03 AG21786-01 from the National Institute on Aging. Preliminary results of this study were presented at the American Occupational Therapy Association’s 86th Annual Conference & Expo, Charlotte, NC.

References


