## Geriatric Nursing

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FEATURE ARTICLES
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Ya-Chuan Hsu and Kuei-Min Chen

Conducting intervention studies with elderly populations presents many challenges. This article addresses ways in which modifications and strategies can be utilized using the example of a Tai Chi study.

366 Health and Social Care Policy for the Elderly in Belgium
Antonia Arnaert, Bernadette Van Den Heuvel, and Tarsi Windey

Many factors challenge Belgian policy makers and health professionals in restructuring the current health care system to provide integrated holistic health and social care to the elderly of that country.

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Research Review
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Care Guidelines
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Integrative Review of Research Related to Meditation, Spirituality, and the Elderly
Deborah A. Lindberg

Meditation and spiritual practices have the potential to promote significant social and emotional benefits for those in socially isolated situations such as the nursing home environment.

Effects of a Comprehensive Educational Program on Quality of Life and Emotional Issues of Dementia Patient Caregivers
Nevin Kuzu, Nalan Beşer, Mehmet Zencir, Türker Şahiner, Ergin Nesrin, Ergin Ahmet, Çatak Binali, and Erdoğan Çağdaş

A comprehensive education program can be a viable option for Alzheimer's caregiver education programs, especially in an environment with limited respite care options.
Abbreviated instructions for authors appear in each issue. The full instructions for authors appear annually in the July/August issue of the Journal.

OUR GOAL:
Geriatric Nursing is committed to providing timely information on new and innovative programs and practices in clinical care and administration. We also report clinical research findings that are applicable to practice. GN strives to provide pertinent, pragmatic information, newsworthy information, continuing education, resources and guidelines to maximize caregivers’ ability to help elders capitalize on their achievements, prevent or modify ill health, and complete the tasks of late life in ways that add to its enjoyment and meaning. Issues focus around specific themes.

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Geriatric Nursing is a peer-reviewed journal that welcomes original manuscripts, about all aspects of aging. Manuscripts on timely topics of interest to those individuals working directly or indirectly with elders—wherever they are living—whether in the community, acute care situation, or long-term care facility, are encouraged. Although not primarily a research journal, any research reports submitted to GN must have been conducted in accordance with the ethical standards of the Declaration of Helsinki (e.g., un-coerced subjects who have given their informed consent to participate). Prospective authors are encouraged to write or email the editor, before submitting a manuscript for review. Briefly describe the content of your article and the experience and knowledge that qualify you to discuss the subject. Summarize in about 35 words the main points you plan to make.

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**Editorial Office Contact Points through December 31, 2005**

**Editor:**
Priscilla Ebersole, RN, PhD, FAAN
2790 Rollingwood Drive
San Bruno, CA 94066
Phone: 650-583-9623
Fax: 650-502-3155
Email: ebersole@sfsu.edu

**Managing Editor:**
Leslie Flatt
216 Westside Court
Yreka, CA 96097
Phone: 530-842-6068
Fax: 530-842-4466
flatt@nursing.msu.edu

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Geriatric Nursing, Volume 26, Number 6 335
Reflections

My mind has been mired in mud, pondering the vagaries of nature and the human condition, the miseries and the miracles. Yes, dear readers, I cannot depart the editorship of *Geriatric Nursing* without giving you one last dose of the alliteration that I so enjoy. The machinations of the mature mind so overflowing with memories and not fully constrained within the dikes of duty is amazing and to be appreciated. I am learning to appreciate that I can float through much of a day wandering in the fields of memory and quite unaware of daily events that really don’t need my attention.

In January of 1993, Coral Hotchkiss invited me to accompany her on a 5-month tour around the world, visiting mission stations and making documentaries to raise money from United States congregations for missions. I had previously worked with Tom and Coral Hotchkiss in Idaho to produce the film *Geriatric Nurse Practitioners: The New Professionals*. Tom died in 1992. In this new venture, I was to do the still photos and dialogue, she the film, and an affable young man would accompany us to handle the luggage and equipment. I was overwhelmed with indecision, torn between duty and desire.

In the fall of 1991 I had accepted the position as editor of *Geriatric Nursing*, was teaching at San Francisco State University, writing textbooks, and occasionally giving speeches and consulting. The *Geriatric Nursing* journal, newly acquired from AJN Publishers, was then under Mosby Yearbook publishers. Journal publishers for Mosby were Carol Trumbold and Cheryl Smart. My issue editor at Mosby—Kirk Swearingen—encouraged me to go with the travel, a once-in-a-lifetime opportunity. I coerced good friend and fellow geriatric nurse, Helen Moine, to step into my shoes while I would be gone. Our movie-making team departed early in February 1993.

We were in Rwanda 2 months before the holocaust broke out in full force. Already there were thousands—some said half a million—of displaced people camped on hillsides in polyester shelters with “Hands of America” emblazoned on them. Trucks with food and water could be seen along the road at strategic points, some abandoned and full of bullet holes. At the mission station all were working to provide assistance as well as keep up with their regular duties. Churches throughout the countryside were distributing potatoes and cabbages.

Why this long episode in my personal history? Because I became acutely aware of the extreme deprivations of much of the world and the courage and compassion that arise from these conditions. These thoughts returned in full force as I thought of the people of New Orleans in the aftermath of Katrina and the latest hurricane tragedies. Nurses historically have come to the aid of those in distress as they have done in this disaster. Many geriatric nurses stepped beyond their specialty roles and were among the vanguard in New Orleans to offer succor, expertise, and practical assistance to vulnerable individuals and groups.

The past almost-15 years have afforded me the opportunity to be in touch and work with geriatric nurses from around the world. We have shared their ideas, research, observations, and investigations. We thank all of the contributors, our readers, and the publishing teams for the opportunity to participate in this grand adventure that has made our world both larger and smaller.

In 1996, Leslie Flatt came on board *GN* as managing editor and has been with us since then through numerous changes of publishers and production teams. This, the last issue of *Geriatric Nursing* that Leslie Flatt and I will compile together, has been a culmination of effort, but certainly not the highest point the journal has reached. Each issue has held some
special fascination for us. Each author and columnist has made unique contributions. Each member of the Board and the Review Board has ensured the quality and integrity of the issues.

Barbara Resnick, PhD, CRNP, will assume the editorship of Geriatric Nursing beginning with the January 2006 issue. Dr. Resnick comes with an extensive background in teaching, research and publishing. We feel confident that GN will continue to develop in professional stature and that Barbara’s own unique imprint will become visible. Welcome, Barbara!

A Note
From the Managing Editor

As Geriatric Nursing finishes up its 25th year of publication and Dr. Ebersole retires from her position as editor-in-chief of the Journal, I think it only fitting that I end my 25-year-long career with Mosby at the same time. Late in 1996, when my stint as managing editor of the American Heart Journal was ending, then-publisher Cheryl Smart asked about my interest in working with a geriatric nursing journal. Although my forte up to that point had been the world of cardiovascular medicine, I agreed to give it a try, and the rest has been history for Priscilla and me. During the past 9 years, she has served as my editor, colleague, mentor, and, perhaps most importantly, as friend, and although I will undoubtedly miss our daily e-mail contact, she and I will stay in touch as we both have many projects staring us in the face that have long been put on hold.

This past year has seen the redesign of the journal, a change in journal production location and staff, and now, lastly, a change in editors, as Dr. Ebersole retires from the position she has held for quite some time. These many changes have, by their very nature, sometimes created a rather chaotic situation in which to produce a consistently high-quality journal such as Geriatric Nursing. I hope that the dedication and passion that Priscilla and I have both had for the journal these past nine years have translated into a publication that touches people’s lives in a positive way, providing articles that geriatric nurses want to read and that have practical value. Only time will tell whether we have succeeded in that job, but I think the final analysis will show that we have.

I will genuinely miss the contact with our board members and reviewer panelists, as well as the numerous authors with whom I’ve been privileged to work, but I certainly will not miss the monthly deadlines that have driven my life for the past 25 years. To the new editor and her staff, I wish happy editing as they add their imprint to the next evolution of Geriatric Nursing.

In closing, it is fitting that this issue of the journal revolves around the central theme of global issues as they face geriatric specialists. All one has to do is pick up a paper or listen to the nightly news to know that our world is in crisis and that one of the major problems worldwide is addressing the issues of old age. We hope that this issue of the journal will spark your interest to think globally and act locally!

Leslie J. Platt
Managing Editor
Geriatric Nursing, 1996–2005

0197-4572/05/$ - see front matter
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Two Reports Available on Global Aging and Work and Caregiving

The Population Reference Bureau (PRB) has recently released a report titled “Global Aging: The Challenge for Success.” This report includes a section on caregiving and comes to the conclusion that informal care is extremely important but difficult to quantify because many activities may not be recognized by the giver or receiver as “support” or “care.” To download a copy of the report, go to the Web site at http://tinyurl.com/72xhy.

A second report from the PRB, “The Work, Family and Equity Index: Where Does the United States Stand Globally?” includes a focus on how the United States compares with other countries in the adoption of paid family leave and other workplace policies that would enable caregivers to respond to the health needs of older or disabled family members. To download the report, go to the Web site: http://tinyurl.com/3jqoj.

New York University’s Nursing Education Program Moves

New York University’s nursing education program has recently been elevated to the stature of College of Nursing, located at the NYU College of Dentistry, effective September 1, 2005. Dr. Terry Fulmer, appointed dean of the new College of Nursing indicates that the move places NYU nursing at the heart of the New York University health campus, within walking distance from 5 major Manhattan hospitals and promises an excellent opportunity for the growth and development of nursing.

Saving 100,000 Lives

The American Nurses Association (ANA) is helping promote the Institute for Healthcare Improvement’s “Saving 100,000 Lives” campaign, which is aimed at getting hospitals nationwide to implement care changes that have been proven to prevent avoidable deaths. The campaign wants facilities to commit to implement some or all of 6 specific quality improvement changes. For more information on the campaign, go to the institute’s Web site: www.ihi.org.

Illinois Passes Legislation to Protect Consumers of Home Care

In August 2005, Illinois passed legislation that protects seniors and other consumers of privately paid home care by holding all models and providers of home care to high standards, including mandatory background checks for all home-care workers. This bill follows the leads of Indiana and California and helps protect the increasing number of seniors who need assistance and choose to live at home. For more information on this legislation, go to the Web site at www.privatedutyhomecare.org.

Case Management Society Supports Medicare Prescription Drug Coverage Awareness

The Case Management Society of America wants to maximize awareness among seniors, their family members, and their caregivers about the new Medicare prescription drug coverage program that is scheduled to begin in January 2006. Medicare will help pay for prescription drugs for people on Medicare. All Medicare recipients are eligible, regardless of income and resources, health status, or current prescription expenses. For more information about the new Medicare Prescription Drug Coverage or the Centers for Medicare and Medicaid Services, go to their Web site at www.cms.hhs.gov/partnerships or call (800) 633-4227.

Clinical Practice Guidelines May Not Apply to Elderly Patients With Multiple Chronic Illnesses

According to a recently published article in the Journal of the American Medical Association (Boyd CM et al. JAMA 2005;292:716-24), doctors following current clinical practice guidelines when caring for elderly patients with multiple chronic conditions may lead to overly complicated health regimens for the patient or potentially harmful drug interactions. The authors of the study state that because the guide-
lines are designed largely by specialty-dominated committees for managing single diseases, the guidelines provide clinicians little guidance about caring for older patients with multiple chronic diseases. When handling patients with multiple conditions, physicians need to rely on their clinical judgment and create individual treatment plans that account for the individual circumstances and wishes of the patient and family members who contribute to the patient’s care.

**Centers for Medicare and Medicaid Services Announce Medicare Health Support**

The Centers for Medicare and Medicaid Services recently announced the Medicare Health Support—a new initiative designed to help beneficiaries with diabetes and congestive heart failure reduce their health risks and protect their quality of life. Eight pilot programs will be offered this year in various parts of the country. Participation in the program is completely voluntary and will not affect beneficiaries’ Medicare coverage, access to medical services, or ability to choose their own doctors and other health care providers. For more information about the Medicare Health Support initiative, go to the Web site at www.cms.hhs.gov/medicarereform/ccip.

**Acupuncture—More Than Just Placebo Effect**

Researchers in Southampton and London, England, have demonstrated for the first time that the impact of acupuncture extends beyond the acknowledged placebo effect. By monitoring specific responses in the brain during treatment, the researchers were able to show that acupuncture elicits a demonstrable physiological effect over and above the simple skin prick. To read further on the study, the findings were published in the May 1, 2005, edition of the journal *NeuroImage.*

**Collaborative Care Improves Mental Health for African American and Latino Seniors With Depression**

In the April 2005 issue of *Medical Care,* a study found that seniors who were diagnosed with depression and who were either African American or Latino benefited from improvement in both depressive symptoms and physical function, as measured by standard testing, when they received specialized or collaborative care. Collaborative care, also called specialized care, includes provider education, treatment monitoring, and greater utilization of community resources; it is not widely available to patients of any age. By reducing barriers to specialized treatment, older Latinos and African Americans were more likely to make use of mental health services.

**Resources**

**Arthritis en Español.** The National Institute on Aging has posted a free fact sheet in Spanish about treatments for the most common forms of arthritis: osteoarthritis, rheumatoid arthritis, and gout. The fact sheet is available at www.niapublications.org/spnepages/arthritis-sp.asp. Other Spanish language materials are posted at www.niapublications.org/shopdisplayproducts.asp?

**Online Master of Science in Nursing Degree Program.** Sentinel University, a unit of the American Graduate School of Management, has opened enrollment for its accredited online master of science in nursing degree program. For more information, please visit the school’s Web site at www.agsm.edu or call Jeff Benson at (303) 991-1575, ext. 225.

**Online Pain Management Course.** Three leading national providers of health services and information are joining forces to present a free 12-week online program designed to help families and individuals plan ahead and make informed decisions about health care choices and options. “Planning Ahead: Understanding Your Choices before a Health Crisis” is a series of 3 Web-based lessons that are available online 24 hours a day, 7 days a week. The sections cover Advanced Care Planning, Navigating the Care System, and Things to Consider. Also available is a free online CME/CE offering titled “The Last Chance for Comfort: An Update on Pain Management at the End of Life.” Go to the Web site at www.planningahead.webmd.com for additional information and free registration.
CALENDAR

JANUARY 2006

16–17
American Academy of Nursing’s First Annual World Congress Leadership Summit, “Redesigning Patient Care to Maximize Margins and Improve Quality,” Orlando, Florida. For information, visit the Web site at www.worldcongress.com/events/NW523.

FEBRUARY

1–2
International Conference on Aging, Disability and Independence. For further information, check the Web site at www.icadi.phhp.ufl.edu.

9–12
Association for Gerontology in Higher Education’s (AGHE) 32nd Annual Meeting and Educational Leadership Conference: Outcomes of Gerontological and Geriatric Education, Westin Indianapolis, Indianapolis, Indiana. For information call (202) 289-9806; fax (202) 289-9824, e-mail meetings@aghe.org, or visit the Web site at www.aghe.org.

MARCH

16–19

31–April 2

APRIL

19–23
National Kidney Foundation 2006 Clinical Meetings, Hyatt Regency Hotel, Chicago, Illinois. For further information or to register online, visit the Web site at www.kidney.org.

27–29
Annual Convention of the Society for Vascular Nursing (SVN), Stardust Resort and Casino, Las Vegas, Nevada. Information is available at wwwsvnnet.org.

JULY

19–22
Sigma Theta Tau International Honor Society of Nursing 17th International Nursing Research Congress and 4th International Evidence-Based Nursing Preconference, Le Centre Sheraton, Montreal, Quebec, Canada. For information, please go to the Web site at wwwnursingsociety.org.

0197-4572/05/$ - see front matter © 2005 Mosby, Inc. All rights reserved. doi:10.1016/j.gerinurse.2005.09.010
Physical activity and nutrition are fundamental to good health at all ages, but we often think of them as separate issues. The 2005 Dietary Guidelines for Americans makes physical activity a dietary recommendation, recognizing that they are 2 sides of the same physiologic coin (see Box 1). To maintain weight, \textit{calories in} (from diet) must equal \textit{calories out} (from activity + basic metabolism). Changes to either side of this equation can upset the balance and cause weight gain or loss, both of which can lead to significant problems for older adults. In recent years, American adults have been gaining weight, contributing to a substantial rise in diabetes cases and deaths. A group of concerned health professionals created the dramatic term \textit{sedentary death syndrome} to describe the life-threatening health problems caused by an inactive lifestyle.

Benefits of Activity

The benefits of physical activity to older people (Box 2) go well beyond maintaining healthy weight. Physical activity adds to quality of life and improves the ability to live independently. It is important for older people to maintain good function because they are likely to have a longer lifespan than previous generations. The Dietary Guidelines report points out that increasing physical activity also has “indirect nutritional benefits.” The more active a person is, the more calories that person can consume without gaining excess weight, making it easier to eat enough food to supply all necessary nutrients.

Arthritis and Activity

About 25% of the adult population is expected to have doctor-diagnosed arthritis by 2030 based on the rate of aging of the U.S. population. Adults tend to become less active as they age, especially women and those with lower incomes and less education. Older adults with arthritis may shy away from activity, thinking it will make their condition worse. Physical activity of the type and amount recommended for health does not cause arthritis. Better yet, specific types of activity have been proven to lessen pain and increase mobility for people with arthritis.

Several evidence-based programs that promote physical activity help people take control of this condition and are also useful for preventing other chronic diseases such as diabetes and heart disease. These include People with Arthritis Can Exercise (PACE), the Arthritis Self-Help Course (ASHC), and the Arthritis Foundation Aquatic Program (AFAP), all from the National Arthritis Foundation. \textit{Physical Activity, The Arthritis Pain Reliever} is a campaign developed by the Centers for Disease Control and Prevention to promote physical activity as a method of arthritis self-management. A new Arthritis Conditions Health Effects Survey from this agency will interview adults over age 44 with arthritis or...
possible arthritis to learn more about their health.

Balance and Fall Prevention

According to the National Safety Council, falls are the leading cause of injury-related deaths in older adults and a significant cause of disability and death. Specifically, strength training exercises can help prevent falls by improving motor skills. The 2001 National Health Interview Survey indicates that only about 12% of people between the ages of 65 to 74 years were meeting the 2010 national health objective for strength training, which is defined as physical activity that enhances and maintains muscular strength and endurance done on 2 days a week.

The National Center on Physical Activity and Disability has a set of photos illustrating training exercises that older adults can use to improve balance titled First Steps to Active Health: Balance and Flexibility Exercises for Older Adults; this resource is available online at http://ncpad.org/index.php. A set of online video clips from the Center provides a visual demonstration of strengthening exercises that can be done while sitting down.

Growing Stronger: Strength Training for Older Adults is an online activity resource that includes a questionnaire to get older adults started, motivational tips, specific exercises, and additional resources. Nurses can use these materials with older adults in their care who may not have computer access by sharing printed versions or using them to guide discussion with older adult clients. This material is available at http://www.cdc.gov/nccdphp/dnpa/ physical/index.htm. See Box 3 for additional resources.

Promoting Activity to Older Adults

Physical activity doesn’t have to be vigorous to offer health benefits. Walking, gardening, and even house cleaning all add up to better health. It isn’t necessary to join a gym or buy expensive equipment, but many people prefer to have a partner or be part of a social activity.

The key is to work with the older adult’s current level of activity (or inactivity) and encourage a gradual increase. Use a simple step counter to record daily steps and increase a few hundred steps at a time. Once people are keeping track of their steps, they may be surprised at their low activity level and might be discouraged if goals are set unreasonably high. Self-consciousness about body size and urinary incontinence (made worse by exercise) may be barriers for increasing older women’s activity levels.2

Size acceptance groups offer resources for addressing the first issue, and health care professionals can help with the second.

References


Box 2. Benefits of Physical Activity for Older Adults

- Helps build and maintain strong bones and muscles
- Improves balance and helps prevent falls
- Reduces feelings of depression and anxiety
- Reduces stress and improves mood
- Improves sleep
- Helps maintain healthy levels of blood sugar, weight, blood cholesterol, and blood pressure
- Reduces risk of premature death from heart disease
- Helps control joint swelling and pain

Box 3. Resources for Increasing Older Adult’s Physical Activity

- Canada’s Physical Activity Guide to Healthy Active Living for Older Adults: http://www.paguide.com
TRIALS AND TRIBULATIONS: A SMALL PILOT TELEHEALTH HOME CARE PROGRAM FOR MEDICARE PATIENTS

Maureen Walsh, RN, BSN, MHA, and John R. Coleman, PhD

This article describes a home care agency’s experience initiating the technology of a telehealth program for a selected view of its home care patients. The goal of the telehealth program was to improve patient outcomes by augmenting patients’ regularly scheduled in-home skilled nursing visits with video-conferencing encounters. Patient selection, costs, projected savings, patient satisfaction, and the technical, clinical, and patient problems with the telehealth system are discussed. (Geriatr Nurs 2005;26:341-346)

Health care spending is predicted to reach 18.4% of the gross national product by 2013, an increase from 14.9% in 2002.1 This is a problem that truly affects us all; hence the need to find tools that will help decrease the escalating costs of health care today and in the future.

Heart disease (HD) is among the largest health problem in the United States today. HD is the leading cause of death for both men and women over age 65. In 2001, HD ranked first in all disease categories in number of discharges from short-term hospitals. The incidence of congestive heart failure (CHF) is estimated to be 10 in 1000 for both men and women over 65.2 The Centers for Medicare and Medicaid Services report that in 2001, there were 3,622,106 discharges from acute care hospitals with a diagnosis associated with CHF. The Medicare reimbursement for this 1 diagnosis was $3,258,989,485, and the average length of stay was 5.3 days.3 The continuum of care for these patients usually involves home care services that have been provided to the patient after discharge from the acute care setting.

This article describes the early success stories in a VNA home care agency in Fairfield County, Connecticut. The findings are not significant; however, they support earlier claims that telehealth technology may demonstrate an overall cost savings to the health care system.4 These findings are well documented by Chetney,5 whose results included an 82% decrease in hospital admissions and a 77% decrease in emergency room visits.

The Agency

Nursing and Home Care is a not-for-profit VNA located in the heart of Fairfield County in Wilton, Connecticut. The service area covers 6 surrounding towns encompassing an approximately 20-mile radius from its main office. The agency has an average daily census of approximately 300 patients. The average number of traditional skilled nursing visits performed weekly is 200. Our primary sources of revenue for services are Medicare and Medicaid. The cost savings for the success of this telehealth program is realized not only by the internal agency, but also by the overall health care system because decreased hospitalizations and trips to the area emergency departments for acute exacerbation of the illness can be avoided.

The telehealth program at the VNA is in its infancy stage of development. Thus far, the program has demonstrated promising results,
which translate to a further resolve of commitment to the program. The agency now has 12 Medicare patients on telehealth monitoring. The return on investment is not measured solely in dollars, but also in improved outcomes for chronic illness management and, perhaps most impressively, a more empowered patient population for those in the program. This outcome has been reported in an earlier study in which some patients described an enhanced sense of control over their health and seemed to become more actively involved in attending to their own health care needs. The patient is taught to utilize the equipment on a daily basis. This includes measuring certain vital statistics including blood pressure, weight, pulse oximetry, and glucose levels as indicated for management of their particular illness. These data are saved on the patients’ units, and then are available to transfer the saved data to the clinician during the next telehealth encounter to assist in assessment. Furthermore, these data may then be printed in graph form and sent to the physician via fax for further interpretation and necessary medication adjustments may be made based on these objective measurements. There is a magnifier included with each video camera, to allow closer inspection of wounds, and snapshots may be taken at various time intervals of the healing process. Other applications for the magnifier include enhanced ability of the clinician to read medication labels.

Initial Selections of Patients

Initial selection criteria for telehealth patients focused on Medicare beneficiaries whose diagnoses were related to heart disease and diabetes. The rationale was to capture commonly known high-volume users of health care, which these patients are. The plan was to demonstrate improved efficiencies with these patients by augmenting the traditional skilled nursing visits with telehealth encounters. We believe a decreased number of “in-person” skilled nursing visits replaced by telehealth encounters as well as improved outcomes would demonstrate the efficiencies. Additional proof of the efficiencies is realized in reduced unplanned encounters with the larger health care system.

Representative Case Examples

The following case examples are of 2 patients admitted to the telehealth program:

Mrs. H is an 82-year-old woman who lives alone in a senior apartment building. She is not homebound and therefore does not meet the qualifying criteria for a Medicare benefit home care episode. She has a history of diabetes and requires insulin administration to achieve normal glucose levels. She also has comorbidities of heart disease and hypertension. Medicaid funds a weekly skilled nursing visit for assessment of blood sugars, cardiopulmonary status, and prefilling of her insulin syringes. Mrs. H was demonstrating extreme difficulty controlling her blood sugar levels mostly because of noncompliance with recommended dietary guidelines. A telehealth monitor was installed in her home in May 2003, and through the interventions and increased encounters with an RN, she has not been hospitalized since that time. Mrs. H consistently demonstrates blood sugar levels below 200 mg/dL. There have been several occasions when the glucose level was elevated, and through this early detection, impending cellulitis was discovered and treated with oral antibiotics. This was accomplished through the combined efforts of the telehealth encounters, the in-person primary care nurse visiting, and frequent telephone communication with the primary care physician.

Mr. E is a 77-year-old man with a history of diabetes, heart disease, and pneumonia. Mr. E had an internal defibrillator implanted in August 2003. He was admitted to home care services on September 18, 2003, and a telehealth unit was installed in his home on September 26, 2003. Since the installation of telehealth unit, Mr. E has had 1 hospitalization (October 2003) for a diagnosis of sepsis, compared with several hospitalizations for his cardiac condition in the months before the installation. Mr. E, with the help of his wife, is now able to monitor his vital signs regularly, primarily because of the equipment associated with the telehealth monitor. Through the education provided by his primary care nurse and reinforced with telehealth encounters, Mr. E was able to recognize potential or early symptoms of disease exacerbations and to act on them. Once these symptoms were recognized, Mr. E was able to contact his pri-
mary care physician as necessary for medication adjustments. These early assessments and interventions have been successful on several occasions.

Cost of Telehealth Equipment

American Telecare was the vendor chosen for our telehealth initiative. The cost for the patient station unit was approximately $5800. This includes a blood pressure cuff, an electronic stethoscope, and a video camera and monitor. Extra peripherals that may be purchased include a pulse oximetry unit (approximately $800), a digital scale (approximately $430), and a glucose monitoring system (approximately $130). A clinician station costs between $12,000 and $14,000 and may store data for an unlimited number of patients.

The current cost for our skilled nursing visit is approximately $121 compared with the cost of a telehealth visit, which is estimated to be $43 per visit. Although the savings ($121 − $43 = $78) projected over time with the telehealth are significant, the depth of savings is immeasurable (see Table). This article illustrates several scenarios in which Medicare patients may have had different outcomes had the use of telehealth technology not been initiated. The empowerment of being able to self-manage a chronic illness that would otherwise erode quality of life is priceless.

Obstacles and Pitfalls

The home health agency faced several obstacles during this pilot program that hindered its growth. First, there were technological glitches, most of which have been resolved. In 1 case, we had to remove the telehealth equipment from a home because the internal telephone wiring structure could not support the minimum baud rate to sustain a quality connection. This was a source of frustration for both the patient and the clinician. Other transient, poor-quality connection problems are corrected by disconnecting with the patient and then calling back. This has been successful in improving the quality of the encounter because video pictures are clearer, and data are transmitted more quickly.

Another major obstacle facing the program is the lack of buy-in from the nursing staff. This has impaired the progress of the program significantly because several units sat idle at the agency waiting for referrals for installation. Although the screening process may begin at the intake level (where referrals to the home care programs are received), it is vitally important to have the home care nurses support the telehealth program. Much to our dismay, we frequently face resistance from the primary care nurses and excuses as to why the program would not work for their patients. The phenomenon of avoiding new technology is not new to the nursing profession, even though it may provide an important tool for providing home care services. Technological advances are relatively new to the home care arena. Computerized charting is still not standard in some organizations. Nursing support is essential to the success of technological advances because nurses’ attitudes play a pivotal role in the success or failure of technological utilization. We are slowly chipping away at this paradigm by emphasizing that telehealth is not intended to replace the in home visits but rather to augment the care patients receive to improve outcomes.

A final obstacle in our piloting process is the

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Table
Projected Savings per 60-Day Certification Period
lack of integrated software to the home care documentation system. American Telecare and Horizon Home Care are working together to resolve this problem. Currently, once a telehealth encounter is completed, the nurse has to record the data and then reenter the information in the documentation system so that it is accessible to all clinicians.

Patient Satisfaction

A telephone survey was administered to all participants in the program. The results were overwhelmingly favorable. All but 1 participant answered yes to the question “Has your health status improved during your experience with the telehealth program?” Furthermore, when asked, “Are you using the equipment to self-monitor your illness between your telehealth visits?” the answer was a unanimous yes. Finally, when asked “Would you use telehealth again?” all participants answered yes.

Conclusion

Although our progress initiating this pilot project was slow, we have demonstrated consistent positive outcomes for all patient participants. Our vision for this program is to have 10% utilization for the general Medicare home care patient population over the next 4 years, with continued growth thereafter. This initiative does not conclude that telehealth technology is a panacea for home care. However, it does offer insight to the potential of telehealth technology as an effective tool to lower costs for the home care industry. It has shown that it can help extend the services that have already been provided by the home health nurse and improve care, meaning that it can help home care agencies to do more with less as PPS demands. Although telehealth is not yet commonplace, it is a welcome tool for the home care industry because it may offer some relief for home care nurses during this period of a national nursing shortage, while continuing to meet the needs of Medicare patients.

References

8. Kinsella A. Telenurses today creating the new picture of home care. Home Health Nurse 2002;20:294-6. MAUREEN WALSH, RN, BSN, MHA, is a clinical coordinator at Nursing and Home Care in Wilton, Connecticut. JOHN R. COLEMAN, PhD, is an associate professor in the Management Department of Ancell School of Business at Western Connecticut State University in Danbury.

0197-4572/05/$ - see front matter
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NGNA Announces Its 2005 Award Recipients

The 2005 NGNA Award and Scholarship recipients were recognized on Saturday, October 22, 2005, at the Gala Event during the NGNA Convention in Myrtle Beach, South Carolina. The evening began with a reception and dinner and culminated with an awards ceremony to recognize the 2005 recipients.

2005 NGNA Board of Directors Lifetime Achievement Award

Marilyn Rantz, PhD, RN, FAAN, is a professor in the School of Nursing at the University of Missouri—Columbia. Dr. Rantz’s accomplishments include scholarly research and publications about developing and implementing quality improvement programs to advance care for nursing home residents. Her work has shown what can be accomplished through partnerships between academic nursing and long-term care institutions. Moreover, her endeavors and the significant outcomes of the work she does have demonstrated the importance of the “frontline” workers of nursing home care—the nursing staff at all care levels.

Dr. Rantz and her research team at Columbia have been recognized by Secretary Tommy Thompson of the U.S. Department of Health and Human Services for the innovative technology they are evaluating to address the complex issues in nursing home care. The Quality Improvement Program for Missouri that was initiated by Dr. Rantz and her outstanding nursing project team received the 2004 Research Utilization Award of Sigma Theta Tau International. Dr. Rantz was nominated by NGNA secretary, Victoria Schirm, PhD, RN, CS.

Distinguished Service

Virginia Burggraf, DNS, RN, FNGNA, FAAN, is the Marcella J. Griggs Distinguished Professor in Gerontology at Radford University School of Nursing, Waldron College of Health and Human Services, Radford, Virginia. Dr. Burggraf has been a member of NGNA from its inception. She is a former 2-term secretary of NGNA and continues to be active in the organization by working with the clinical practice committee to write and publish Innovations in Clinical Practice papers (ICPs).

Her scholarly pursuits and research involve caregiver health and social support in rural community dwelling older adults and telehealth. She is widely published and serves on the editorial review boards of the Journal of Gerontological Nursing, Geriatric Nursing, Nursing Made Incredibly Easy, Applied Gerontology, and Nursing Outlook. One can read her monthly column, “Ginger Says”, in the Senior News. Dr. Burggraf was inducted as a fellow in the American Academy of Nursing in 2003 for her laudable career, publications, and research. Virginia was nominated by Robin Remsburg and Neva Crogan.

Excellence in Gerontological Nursing Award

Karen Larrimore, MSN, RN, APRN, is the recipient of the 2005 Excellence in Gerontological Nursing Award—APRN. Karen is employed at the Masonic Home of New Jersey and is a member of the Central Jersey Chapter of NGNA, the New Jersey League for Nursing, and Sigma Theta Tau International. She has been a member of the NGNA Nominating Committee, the chair of the Fundraising and Marketing Committee for the Central Jersey Chapter of NGNA, president of NSNA, member of the Thomas Jefferson Academic Affairs Committee, and a member of numerous committees and activities at the Masonic Home. Karen was nominated by Cindy Shemansky, MEd, RNC, LNHA, FNGNA, who states, “Karen is a shining example of an advanced practice nurse, whose work in our field can be described as outstanding; her work ethic, a model for coworkers and subordinates to aspire to; and her ability to meet each patient’s individual needs, a lesson to strive for.”
Lynn Rodgers, RNC, is the recipient of the 2005 Excellence in Gerontological Nursing Award—RN. Lynn is employed at the Masonic Home of New Jersey and is a member of the Central Jersey Chapter of NGNA. Lynn has served as a member of the Pain Management Task Force Committee of the Masonic Home, worked on the Preceptor Program, and has been a member of the Interdisciplinary Care Team. Lynn was nominated by Gail Sheridan, RNC, and Judy Wood, RNC, who state, “Lynn has an exceptional ability to adjust to new work, grasping and implementing novel ideas quickly.”

Fleta Krebs, LPN, is the recipient of the 2005 Excellence in Gerontological Nursing Award—LPN. Fleta is employed at the Masonic Home of New Jersey and is a member of the Interdisciplinary Care Team Committee and the Falls Committee, past preceptor of the Family Support Group, and a member of the Alzheimer’s Association. Fleta was nominated by Karen Larrimore, MSN, RN, who states, “As her supervisor, I have admired Fleta’s caring perseverance and professionalism in performing her nursing responsibilities.”

Joel White, CNA, is the recipient of the 2005 Excellence in Gerontological Nursing Award—CNA. Joel is employed at the Masonic Home of New Jersey and is a member of the Central Jersey Chapter of NGNA. Joel is a member of the Guardian Angel Program, past member of the Preceptor Program, and past member of the Falls Prevention Committee. Joel was nominated by Kathleen Keller, RNC, who states, “Joel is always ready to go the ‘extra mile’ for his residents.”

Cindy Shemansky Travel Scholarship

Judy Clem, RNC, has been a member of NGNA for 6 years and is a member of her local chapter. Judy is a staff development coordinator at Arcadia Nursing and Rehabilitation Center. Judy promotes NGNA membership by posting information on seminars, sharing news about the organization, and inviting nurses and inter-disciplinary staff to chapter meetings.

Congratulations to all of the 2005 NGNA Award recipients.

NGNA Elects New Members to the Board of Directors

The NGNA Board of Directors is happy to announce that member participation in the 2005 election was at an all time high. Congratulations to the following newly elected members to the board: M. Kay Cresci, PhD, APRN, BC, CCRN, FNGNA, treasurer; Victoria Schirm, PhD, RN, secretary; Susan L. Carlson, RN, CNS, GNP, director-at-large; Barbara Wharton McCabe, PhD, APRN, BC, FNGNA, director-at-large; Shu-li Chen, PhD, RN, nominating committee member; and Janice D. Crist, PhD, RN, nominating committee member.

The NGNA Board of Directors welcomes these new members to the board and would like to extend heartfelt thanks to Anita Siccardi, EdD, APRN, BC, outgoing director-at-large, and Neva L. Crogan, PhD, APRN, BC, FNGNA, outgoing vice-president, for their enthusiasm, dedication, and hard work over the past 2 years. Thanks for serving the organization in such an important and lasting way.

NGNA Annual Meeting Abstracts: New Feature

Over the past several years we have featured research and clinical abstracts from NGNA’s annual meeting. This year the format for the abstracts changed to allow us to publish all of the submitted abstracts in the NGNA section. We begin this annual feature with research abstracts. By publishing these abstracts in GN, we not only recognize the outstanding research NGNA members are accomplishing but also share important findings with gerontological nurses who can use them to improve the quality of clinical care they provide to their patients.

Each year the NGNA Research Committee selects the most promising research abstracts to compete for the prestigious Judith V. Braun Research Award. We are pleased to highlight this year’s finalists for the research award, Lenny Chiang-Hanisko, PhD, RN, from Kent State University; Patricia Coleman, PhD, APRN, BC, from the University of Rochester; and Jean Gaines, PhD, RN, from the Erickson Foundation. Congratulations to all of the finalists. The winner of the 2005 Judith V. Braun Research Award was Patricia Coleman.
Featured Abstracts from the 2005 NGNA Convention

Judith V. Braun Research Award Finalist
A Transnational Perspective: Ethnic Identity and Older Adult Immigrant’s Health Care Decision Making

Lenny Chiang-Hanisko, PhD, RN
Assistant Professor, Kent State University, College of Nursing, Kent, OHIO

The purpose of this study was to examine ethnic identity in the context of assimilation experiences of older adult immigrants and to consider implications for providing culturally competent health care. This study strived to corroborate ethnic identity and assimilation as a paradigm to understand older adult immigrant health care decisions. Consideration of new assimilation concepts included transnationalism, convergence or cultural fusion, selective acculturation, and contemporary multiculturalism as factors that decisively shape immigrants’ life and health decisions.

This study employed a qualitative design using grounded theory methodology. Thirty informants aged 65 to 90 years who were self-reported Asians, European, and Middle Eastern immigrants and could read and write English were recruited using theoretical sampling. Data collected were conducted primarily from face-to-face, tape-recorded interviews and then transcribed verbatim, coded, and analyzed using the constant comparative method.

A substantive theory was identified as the culturally congruent decision-making process in older adult immigrants’ health care decisions. The process included 6 phases: 1) pre-decision making, 2) meeting the reality, 3) comparing cultures, 4) facing the gaps, 5) weighing options and values, and 6) creating a cultural fit. The concept of transnationalism is discussed to show how older adult immigrants maintain a continuous link between their societies of origin and settlement thus creating “a cultural fit” when it comes to making decisions about health care issues. The findings will help health professionals understand the importance of ethnic identity and assimilation by incorporating contemporary assimilation concepts in developing the best strategies to improve quality of life in older adult immigrants.


Resistive Behaviors of Elderly Nursing Home Residents During Oral Care

Patricia Coleman, PhD, RN, APRN, BC
Associate Professor of Clinical Nursing, University of Rochester School of Nursing, Rochester, New York

Purpose: To describe the oral care provided by certified nursing assistants (CNAs) to nursing home (NH) residents and to identify residents’ resistive behaviors to oral care.

Background and Significance: NH residents suffer the worst oral health of any population in the United States. The provision of daily oral care for residents can prevent aspiration pneumonia, improve appetite, and enhance quality of life.

Methods: A descriptive design, using structured, nonparticipant observations in 5 NHs in upstate New York was used to observe 41 CNAs providing morning care for a convenience sample of 67 residents. The sample included residents with natural teeth, aged ≥65 years, who had lived at the NH for at least 3 months and required assistance with oral care. CNAs were blind to the study’s specific focus on oral care. A structured observational tool containing 8 previously validated oral care standards judged appropriate for NH residents was used to record CNA oral care practices, and the Resistiveness-to-Care Scale was used to record resident resistive behaviors during care.

Results: Residents were primarily white women with dementia with a mean age of 83 (range 66–96). Oral hygiene was rated as poor by the NH dentist for 81% (34/42) of residents when NH documentation was available. CNAs were mainly black women with a mean age of 32 (range 19–53). Adherence to the 8 individual standards for all observations was low, ranging from a high of 16% to a low of 0%. Teeth were brushed and mouth rinsed with water in 16% of observations. One resident had her tongue brushed (1.5%). Standards never met were the following: brushing teeth 2 minutes, flossing, oral assessment, rinsing with mouthwash, and wearing clean gloves during oral care. For most observations, oral care supplies were not evident. Most residents who received any oral care assistance were resistive to CNA approaches.

Significance to Nursing: This is the first
observational study of the oral care that is actually provided to residents by CNAs. Current nursing practices are likely insufficient to maintain oral cleanliness, putting frail elderly at risk. Disruptive behaviors during care were common. CNAs need strategies that will allow them to deliver oral care effectively and humanely for residents who resist their efforts.

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Comparison of the Step Activity Monitor and Yale Physical Activity Survey among Older Adults

Jean M. Gaines, PhD, RN
Research Associate, The Erickson Foundation, Baltimore, Maryland

**Purpose:** Assess the physical activity level of older adults living in a continuing care retirement community as measured by Step Activity Monitor (SAM) and the Yale Physical Activity Survey (YPAS).

**Goals:** To examine physical activity as measured by the SAM and the YPAS and to examine changes in physical activity over an 18-month period.

**Background:** People who are physically active continue to be more functionally independent and have higher quality of life than people who are relatively physically inactive. However, accurately measuring physical activity is difficult. The YPAS is a self-report of physical activity. The SAM is a lightweight device that provides data on the frequency and intensity of walking activity measured as number of steps per minute.

**Methodology:** Longitudinal, descriptive, correlational study using the YPAS and the SAM to assess physical activity among the community dwelling older adults (N = 41). Assessments were completed every 6 months for a total of 4 assessments over 18 months.

**Results:** Correlations between the YPAS and the SAM were small to moderate overall with statistical significance found at baseline, 6 months, and 12 months but not at 18 months (possibly because of attrition at 18 months). There was no significant change over time in total steps per day or in low, moderate, or high walking activity.

**Significance to Nursing:** Gerontological nurses should regularly assess physical activity and recommend interventions. The use of an objective measure of walking activity, such as the SAM, can provide necessary information on the amount and intensity of physical activity.


Reduction in High-Risk Medication in the Elderly

Denise L. Lynons, MSN, APRN, BC
Clinical Specialist, Christiana Hospital, Newark, Delaware

An interdisciplinary initiative called We Improve Senior Health (WISH) was established to create a systemwide awareness of the special care needs of elderly patients through training and education of staff at a 1071-bed acute-care facility in the mid-Atlantic region. As part of its design, the program promotes the appropriate use of medications considered high risk in elderly patients. National expert consensus panels have established explicit criteria to identify medications deemed high risk for the geriatric population. This interdisciplinary program set a goal of reducing the use of certain high-risk medications by 10% to 20% in the units where education was focused.

Strategies implemented included educational programs, providing clinical resources, and forming clinical and advisory teams. The key measure was the percent of medical patients aged ≥65 who received specific potentially high-risk medications during their acute-care stay on an established WISH unit. The results demonstrated a reduction in the use of diphenhydramine (eg, Benadryl) by 55%, of meperidine (eg, Demerol) by 29%, and of propoxyphene/acetaminophen (eg, Darvocet) by 66%. WISH-related programs can promote and affect the appropriate use of high-risk medications in the elderly.

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Attitudes About End-of-Life Decision Making in Community-Dwelling Older Adults

Sarah M. Gilbert, MSN, RN
Radford, Virginia

For many older adults, advance directives can be an avenue to maintain control of health care issues at the end of life; however, the literature suggests that older adults are not executing these documents that help to guide families and health care providers in resolving treatment decisions should an older adult become incapacitated.

Community-dwelling older adults (N = 43) were surveyed to determine their attitudes to-
ward end-of-life documents and decision making and to investigate the impact of an educational program about advance directives on the completion of advance directive documents. The study used a convenience sample of residents at 2 assisted living centers and 2 congregate meal sites in the New River Valley of Southwest Virginia in the fall and winter of 2004–5. The purpose of this study was to determine whether an educational program on advance directives would increase the completion of advance directive documents and improve attitudes about advance directives as measured by the Advance Directive Attitude Survey. The results of the study showed no significant difference in the completion of advance directive documents following an educational program. The study also showed no significant change in the score on the Advance Directive Attitude Survey after the educational program. Participants who had completed advance directives before the program did have significantly higher scores on the Advance Directive Attitude Survey.

Understanding the familiarity of this group of older adults with advance directives will have implications for future admission policies and nursing assessments in assisted living centers and in the community. Advance practice nurses have the opportunity and skills to encourage older adults to prepare end-of-life documents so that treatment decisions reflect the older adult’s wishes.


Psychosocial Needs Assessment and Interventions by the Geriatric Advanced Practice Nurse in a Geriatric Referral Clinic

Mary E. Hujer, MSN, APRN, BC
Geriatric Clinical Nurse Specialist, Cleveland Clinic Foundation, Cleveland, Ohio

Purpose and Goals: 1) To characterize the psychosocial needs of elders presenting to a geriatric referral clinic and 2) to determine adherence and satisfaction with interventions.

Background: Optimizing function of community-dwelling elders requires identification of psychosocial needs. Geriatric Advanced Practice Nurses (GAPNs) have the education, training, and opportunity to identify these needs and to direct elders toward appropriate community resources.

Methods: Baseline interview with telephone follow-up 2-4 weeks later.

Design: Descriptive pilot study.

Setting: Urban, tertiary care hospital geriatric referral clinic.

Subjects: Convenience sample of 100 adults aged 65 and older seen by the GAPN.

Results: Mean age was 82 years: 79% female, 51% African American. Most lived at home or in an apartment (97%); 29% lived alone. Nearly half (46%) had a caregiver, with family (63%) providing care. Dementia was the most common diag-
nosis. Needs identified were 36% social (ie, adult day care); 30% physical (ie, nutrition); 20% cognitive (ie, memory); and 14% functional (ie, activities of daily living [ADLs]/instrumental ADLs).

Types of interventions were fairly matched with needs. Telephone follow-up was completed for 67% of participants. Of those, adherence and satisfaction were nearly 50%.

Significance to Nursing: Social and physical needs predominate in the GAPN assessment and intervention with community-dwelling elders. Despite matching of intervention with need, only half adhere to recommendations and are satisfied. Descriptive responses suggest that “just in time” referrals to specific community resources may be better than comprehensive guides. Further studies on the impact of the GAPN in meeting the needs of community-dwelling older adults would optimize the referral process and improve adherence and satisfaction.


Spiritual Well-Being and Caregiver Burden in Primary Family Caregivers of Community-Dwelling Relatives With Alzheimer’s Disease and Related Disorders

Wanda Spurlock, DNS, RN, BC, CNS
Assistant Professor, Graduate Nursing Programs, Southern University and A&M College School of Nursing, Baton Rouge, Louisiana

A plethora of research exists on caregiving outcomes, in particular, on caregiver burden. However, a holistic approach to the study of this phenomenon is lacking, evidenced by the relative absence of empirical data on the spiritual dimension of Alzheimer’s caregiving. Utilizing a cross-sectional correlational research design, this study examined the relationship between spiritual well-being and caregiver burden in family caregivers of persons with Alzheimer’s disease (AD). Theoretical underpinnings that formed the overall conceptual framework for this study were drawn from Lazarus and Folkman’s (1984) stress and coping framework.

The caregiver’s perception of burden was measured by the Zarit Burden Interview Scale (Zarit, Reever, and Bach-Peterson, 1980). Caregiver’s perception of spiritual well-being was measured by the Spiritual Well-Being Scale (Paloutzian and Ellison, 1982). A Caregiver Information Form, developed by the researcher, elicited information concerning caregiver demographics, the care receiver, and caregiving situation.

A descriptive, correlational research design was used. A convenience sample of 150 caregivers was surveyed (71 African Americans, 77 Caucasians, and 2 caregivers of other race/ethnicities). Statistical analysis included bivariate correlations using Pearson’s product-moment coefficient correlation, chi-square tests, and independent t tests.

A statistically significant inverse relationship between spiritual well-being and caregiver burden (r = -.493, P ≤ .01) was found. Additional findings revealed significant differences between mean spiritual well-being (P = .001) and caregiver burden (P ≤ .001) scores of African American and Caucasian caregivers. Caregivers also reported frequent use of spiritual behaviors or practices such as prayer and attendance at church.

Expansion of nurses’ substantive knowledge base concerning the spiritual dimension of caregiving is critical in establishing a holistic body of scientific knowledge concerning caregiver outcomes. Findings from this investigation support the significance of spirituality in the caregiving process and its impact on caregiving outcomes.


Development and Testing Usability of Theory-Based, Hip Fracture Prevention Online Learning Modules

Eun-Shim Nahm, PhD, RN
Assistant Professor, University of Maryland School of Nursing, Baltimore, Maryland

Background and Purpose: Hip fracture is an important public health problem among older adults with approximately 340,000 hip fractures yearly. With rapidly increasing numbers of older adult internet users, the Web can serve as an alternative medium to educate elders on techniques to prevent hip fractures and to promote healthy behaviors. The primary aims of this study were to 1) develop theory-based, hip fracture prevention (HFP) Web learning modules and 2) assess module usability.

Design: Web HFP modules were developed employing social-cognitive theory. Then usability testing was conducted employing the thinking-aloud method and a user survey.

Methods: Upon the development of the 4 Web modules (Osteoporosis, Falls and Hip Frac-
tures, Calcium Intake, and Exercise), volunteer older adult online users evaluated their usability over a 2-week period using the thinking-aloud method as they were audio taped. Perceived usability was assessed using a questionnaire. The data were analyzed using descriptive statistics and content analysis.

Findings: Eight subjects with a mean age of 77.5 participated. Each module took 20 to 35 minutes. All participants expressed their interest in the information and favored the overall Web design. Participants made recommendations to simplify the design and to reword several instructions. The findings from the subscales of the perceived usability questionnaire showed the following: Satisfaction, mean = 34 (range 4–35); Ease of Use, 19 (3–21); Usefulness, 20 (3–21).

Significance to Nursing: The findings from this study indicated that online health learning modules, designed to be older-adult friendly, are a viable option to disseminate health information to older adults.

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Depression: A Nursing Challenge for Diabetes Management in the Home
Elizabeth Tanner, PhD, RN
Faculty, The Johns Hopkins University School of Nursing, Baltimore, Maryland

Problem: Depression contributes to management problems in older adults with type 2 diabetes, yet its incidence is significantly underestimated.

Purpose and Goals: The purpose of this study was to examine the rate of depression in homebound older adults with type 2 diabetes and determine predictors of depression.

Background and Significance: Type 2 diabetes is increasing epidemically, and older adults are the most significantly affected. This population is not adequately screened for depression, nor is it treated sufficiently. The magnitude and precipitating factors need to be understood so that nurses in community settings can address it.

Methodology: Participants aged ≥60 with type 2 diabetes who were homebound and had medical management problems were assessed for depression, chronic illnesses, medication use, and family support. The sample (N = 170) was primarily female (81%) and Caucasian (65%), with a mean age of 75.

Results: The rate of depression was 44.5%, 54% lived alone, and 79% expressed feeling loneliness; 91% reported 3 or more chronic illnesses, and 91% required some assistance with activities of daily living (ADLs). Factors associated with depression were loneliness (P < .002), lacking someone to call for help (P < .05), and satisfaction with family support (P < .0001). The odds of depression increased significantly as satisfaction with support decreased and as loneliness and functional limitations increased.

Significance: Depression is 3 to 4 times higher in older adults with type 2 diabetes. Limited ADLs and lower perceived family support are associated with increased depressive symptoms. Nurses should screen for depression and determine client satisfaction with the social support available to them when caring for older patients with diabetes who require family assistance.


Specificity and Sensitivity of the Morse Fall Scale on Three Medical Surgical Units
Deborah M. Conley, MSN, APRN, BC, CS
Certified Gerontological CNS, Nebraska Methodist Hospital & College, Omaha, Nebraska

Objectives: Falls are a major safety concern for hospitalized patients. Not every patient is at risk for sustaining a fall while hospitalized; however, nurses need evidence-based tools to assess those who are at greatest risk. The purpose of this quantitative correlational research study was to determine the specificity and sensitivity of the Morse Fall Scale (MFS) for 3 patient units (telemetry, general medical, and pulmonary/vascular surgery). The Morse Fall Scale is the risk assessment tool used at both hospitals. The MFS was selected because of its ease of use and established reliability and validity and because it offers the opportunity to determine our own score.

Methods: Subjects included all patients admitted to the general medical unit and a pulmonary/vascular unit at 1 hospital and a telemetry unit at a satellite hospital for 3-month period (August 2003 to November 2003). The MFS was used for these units until 20 falls were reported among the units. More than 1000 patients were assessed. Age range was from 16 to 100, with the majority of patients aged between 66 to 95 years of age.

Implications for Nursing Practice: Research-based standardized assessment of pa-
Patients at hospital admission may target those at greatest risk for falling. Nurses can focus their time and hospital resources on patients who are most likely to fall. Data from this research indicate that there is a significant sex difference between those who fell and those who did not. Fall prevention strategies can be initiated on any patient; however, having a tool that is sensitive and specific to the patients served will assist in prompt interventions to prevent falls and promote positive patient outcomes. Implementation of the MFS and descriptive statistics and data from this research are described. Gerontological nurses play a vital role in identifying those at greatest risk for falls and to intervene with evidence-based practice tools.

Motivating Factors in Health Promotion in the Oldest-Old: Pilot Testing of 4 Instruments
Mary Ann Pascucci, PhD, APRN, Nancy L. Chu, PhD, APRN
Assistant Professor of Nursing, College of Nursing, University of Oklahoma, Tulsa, Oklahoma

Background: The aim of this study was to establish the reliability of the Health Promoting Lifestyle Profile II (HPLP II), Incentive-Health Promotion Scale, Self Motivation Inventory, and Barriers to Health Promoting Activities for Disabled Persons Scale in the ≥80 years age group.

Design: A methodological (instrument testing) design was used.

Sample and Setting: Quota sampling (N = 52) of study subjects was obtained through investigator-made and locally recruited volunteer contacts with management staff of senior centers, assisted living centers, churches, and the Centenarian Club of Oklahoma.

Conceptual Framework: The Health Promotion Model (1996) was used.

Methods: Descriptive statistics were performed. Coefficient alpha and internal consistency reliability coefficients were computed. Two-week test-retest reliability was determined.

Findings: The HPLP II was the only tool found to have reliabilities >.8 in the oldest-old, which is the minimum acceptable reliability for established tools. Further comparisons of the 2 age groups revealed that the 4 tools are much more reliable in the 80- to 90-year age group. The reliabilities of the 80- to 90-year-old subjects more closely approximate the reliabilities in the literature.

Implication: With the exponential growth of older Americans, the pendulum is swinging from a focus on management of chronic illness to examination of the impact of health promotion for the oldest-old.

Conclusion: To evaluate the outcomes of health promotion interventions targeted at this rapidly growing group, reliable measures must be used; for those that are less reliable, modifications of the tools can be made and shared.


Uncertainty of Degenerating Illness in Older Adults
Anita H. Siccardi, EdD, RN, APRN, BC
Director Graduate Program, University of Indianapolis, Indianapolis, IN

Problem and Goal: Knowledge about meeting the needs of the older adult who is facing mortality or dying is good; however, research needs to be expanded to yield a greater understanding of morbidity for the older person who has received a diagnosis of progressively degenerative disease.

Purpose: The purpose of this study was to discover the perceptions of the older adult with a progressively degenerating illness to expand the understanding in effectual care and to conduct an analysis of the cases in the study based on previous work using Wilson's (1963) steps for concept analysis.

Methodology: This inquiry was a pilot study following the precepts of qualitative Heideggerian phenomenological research (Heidegger, 1927/1962). Data collection and measurement (Colaizzi, 1978) included unstructured interviews of older adults with chronic illness and a more recent diagnosis of a progressively degenerating disease. Concept analysis was conducted to assess how well the cases met the attributes of the concept of uncertainty as established by McCormick (2002).

Results: The results included a strong sense of spirituality (Carson, 1989) and preferences for support relationships based on type (Myers and McCaulley, 1989).

Implications and Significance: The important position of faith and personality type will give guidance in supporting older adults with degenerating illness. Understanding the value of these relationships will provide the support needed to maintain a sense of control in the lives of older adults and to guide the plan of care.

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Fluarix, a new influenza vaccine, has just been approved by the U.S. Food and Drug Association (FDA). This should ease the supply problems we felt last flu season, when 2 of the flu vaccine makers lost their license to produce the vaccine. The producer, Chiron, is taking steps to make their vaccine available, which will be helpful to having available the amount of vaccine needed for public health. Another producer, Medimmune, has developed a nasal spray vaccine.

Prioritizing Parkinson’s Management

First Line Management—Dopaminergics

- Carbidopa plus levodopa, (Sinemet immediate release): Starting dose: 25 mg carbidopa, 100 mg levodopa ½ tablet three times daily (tid); slowly increase to 1 to 2 tablets tid.
- Controlled release carbidopa plus levodopa (Sinemet CR) 25 mg carbidopa, 100 mg levodopa, dosage 1 tablet tid; slowly increase to 50 mg carbidopa, 200 mg levodopa starting ½ tablet tid increasing to 1 tablet tid.
- Carbidopa plus levodopa plus entacapone (Stalevo) starting 12.5 mg carbidopa, 50 mg levodopa, 200 mg entacapone: 1 tablet tid. This drug can be increased (slowly) to 25 mg carbidopa, 100 mg levodopa, 200 mg entacapone; and to 27.5 carbidopa, 150 mg levodopa, 200 mg entacapone.
- Dopamine agonists are less effective than levodopa, but they are alternatives to the first-line drugs. Levodopa needs to be added within a few years to control advancing symptoms. The dopamine agonists are not used in patients with dementia because they are known to produce hallucinations.
- Nonergot dopamine agonists: pramipexole (Mirapex) starting 0.125 mg tid slowly increasing to 0.5 to 1.5 mg tid.
- Ergot dopamine agonists: pergolide (Permax) starting 0.05 mg tid slowly increasing to 1 mg tid.

Second Line Management

Anticholinergics (Artane) are occasionally added to the first-line drugs if tremors are severe and not relieved by other medications. They are contraindicated in elders with dementia. Monoamine oxidase (MAO)-B inhibitors such as selegiline (Eldepryl) and amantadine (Symmetrel) have fewer adverse effects but are not adequate for single therapy for PD management.

References


ANN SCHMIDT LUGGEN, PhD, GNP, CNAA, is a professor of nursing at Northern Kentucky University in Highland Heights and a geriatric nurse practitioner at Evercare. She serves as NCGNP section editor for Geriatric Nursing.
considered to be safe and well tolerated with less than 20% discontinuation due to adverse events.

Duloxetine is particularly interesting as a treatment option for pain because it is also indicated for use in the treatment of depression and has demonstrated effectiveness in multiple studies with older adults.2,3 The benefits of duloxetine do not end there for some individuals. Duloxetine has also shown some benefit for women with stress incontinence, particularly when combined with behavioral intervention.4 New drug options such as duloxetine that are useful across many interrelated clinical problems (eg, pain, depression, and incontinence) should clearly be considered and combined with the appropriate behavioral interventions.

References


BARBARA RESNICK, PhD, CRN, FAAN, FAANP, is a professor at the University of Maryland School of Nursing and a nurse practitioner at Roland Park Place in Baltimore.
thickness measured at the beginning of the study. C-reactive proteins were also measured. This easily obtained laboratory test is thought to be predictive of developing heart disease. It is reported to be elevated in those with periodontal disease. In this study, the C-reactive protein was not associated with the other variables, which suggests that C-reactive protein is related to heart disease in another pathway.2

**Implications for Nurse Practitioners**

Many older adults in our care did not have the advantages of dental care and fluorides that younger adults have today. Many have toothlessness, broken teeth, severe plaque development, and periodontal disease. The oral cavity is often not well assessed or managed. Tooth brushing and dental appointments are often forgotten, especially in older frail elders who need significant or total care in their ADLs (basic activities of daily living). Areas on which the nurse practitioner can focus include 1) basic professional dental care appointments; 2) advocating for tooth brushing and flossing, especially among institutionalized elders; 3) avoidance of tobacco (in any form), which increases the risk of periodontal disease 7 times (as well as oral fungal infections and oral and throat cancers); 4) use of fluoridated toothpaste and fluoridated water for drinking; 5) limitation of alcohol to minimal and moderate use (excessive alcohol use is a risk factor for oral and throat cancers, further increased if tobacco is used); 6) if radiation therapy is used for cancer management, professional dental care is essential; 7) management of dry mouth (xerostomia).3 The last of these will be further discussed.

**Stimulating Saliva**

This is a first-line defense against periodontal disease.3 In a routine examination of the mouth, the nurse practitioner should see small pools of saliva at the bottom of the mouth under the tongue. If it is not present, xerostomia is a problem. If dentition permits, it is helpful to eat fibrous foods such as apples and carrots. These foods cut plaque on teeth and “sweep” bacteria off the plaque.4 Drink minimal amounts of alcohol; it dries the mouth.

Mouthwashes (and flossing) are very important. However, many well-known mouthwashes contain alcohol (eg, Listerine), and although it may kill bacteria, it dries the mouth.3 Nonalcohol mouthwashes such as ACT and Biotene are good choices.

Examine medication use, whether prescribed, over-the-counter, or available for residents in the nursing facilities. Many drugs are anticholinergic or have some anticholinergic activities. Some examples are benzodiazepines such as flurazepam and alprazolam, alcohol, diphenhydramine, oxybutynin, meperidine (very anticholinergic), phenytoin, levodopa/carbidopa, bromocriptine, amantadine, ranitidine, and cinetidine.

Medications can stimulate salivary gland production. This treatment is reserved for severe dry mouth. Pilocarpine is used in severe cases; however, cevimeline (Evoxac) seems to be a better choice because it has fewer side effects.

Water is wonderful, but in addition to missing many benefits of saliva, some bottled water is acidic and enhances tooth decay. Saliva substitutes are of benefit: glycerin and water (Moi-Stir), carboxymethyl cellulose gels (Salivart), and mucopolysaccharide ointments (MouthKote).

There are special treatments from dental professionals that can help further. The dentist can coat teeth with protective substances. The dentist can also fill cavities with a time-release substance containing fluoride that is absorbed slowly by the tooth.

**References**


ANN SCHMIDT LUGGEN, PhD, GNP, CNAA, is a professor at Northern Kentucky University in Highland Heights, and a geriatric nurse practitioner at Evercare. She serves as NCGNP section editor for Geriatric Nursing.
The purpose of this article is to address the challenges of conducting intervention research with an elderly population by using the example of a tai chi intervention study. Various difficulties can arise while conducting interventions with the elderly; these can involve factors related to long-term care facilities, health care providers, and the research team, as well as the institutionalized elders themselves. Any difficulty may influence research results. As a consequence, challenges must be dealt with in a positive manner to conduct a valid geriatric study. Modifications and strategies that the research team engaged to manage the challenges in this study are discussed. (Geriatr Nurs 2005;26:358-365)

Background

Nursing researchers who are conducting intervention research with older adults can anticipate various difficulties. The number of diseases, the severity of illness, the level of disability, and the type of intervention may create various problems during research. For instance, using older adults as research subjects may occasion difficulties and unpredictable events because of physical and functional decline and cognitive impairment. Ethical dilemmas that affect autonomy and ethical care may be encountered. Strategies need to be put in place to develop an effective study and promote the well-being of elderly subjects. It is essential to establish a reliable intervention program with older adults by identifying the challenges in conducting such research.

Currently, the most commonly used alternative therapies by older persons are prayer, chiropractic care, dietary supplements, herbal medicine, acupuncture, touch therapies, massage therapy, and tai chi.1-3 Tai chi has become increasingly popular in North America and Asia.4 A traditional Chinese martial art, it is a mind-body, low-intensity exercise and relaxation technique.5 The beneficial effects of tai chi for elders include improved balance and posture, fall prevention, improved physical and mental health status, and reduced stress and mood disturbance.6 Encouragement from others such as friends, neighbors, tai chi masters, and doctors was the most important factor in promoting elders to start the practice of tai chi. Positive health outcomes were the reason to continue practicing it.7 Barriers to elders’ practice of tai chi included feeling too weak to practice, having no time, and inconvenient practice locations.7 Regardless of the type of physical activity or exercise intervention used in a study, barriers to collaboration need to be overcome. The purpose of this article is to address the challenges of doing intervention research with an elderly population using tai chi as an intervention and to describe the strategies used to manage those challenges.

Study Design and Population

A longitudinal, time-series, quasi-experimental design was used to examine the effects of tai chi on the physical and psychological well-being of elders residing in 2 long-term care facilities. This sample of 28 people (11 men, 17 women) included only individuals who could stand alone without assistance, were more than 65 years old, and were cognitively alert. The Yang style of tai chi, which consists of 18 simple, slow, large movements, was taught by a tai chi master and practiced twice weekly for 1 hour for 6 months. Participants volunteered to attend sessions after the purpose of the study was explained by research assistants. Twenty-one participants completed the study; 7 subjects withdrew from the study (withdrawal rate = 25%) because of death or declining physical health status.
Instruments

The SF-36 Health Survey developed by Ware and colleagues\(^8\) was used to measure the subjects' physical and mental health status. The questionnaire consisted of 36 questions with scoring done on a 5-point Likert scale ranging from *strongly agree* to *strongly disagree*. The participants were asked to self-rate quality of sleep and fear of falling using a range from 0 (*extremely bad*) to 10 (*excellent*). Participants reported the frequency of falling in the past month. All data on the individuals' physical and mental health status were measured in one-on-one face-to-face interviews using a structured questionnaire.

Procedure

Research assistants checked the test participants' blood pressure after they agreed to participate in the study. The structured questionnaires were administered to pretest the status of the subjects' physical and mental well-being. The outcome expectancy was measured again after they had practiced tai chi for 1 month, 2 months, 3 months, and 6 months. The tai chi master demonstrated the movements in front of the group in the lounge. The research assistants from the nursing college participated in the entire process as observers, directors, and helpers.\(^9\)

Challenges Encountered in Intervention Research

Facility

Perceptions of Staff Members About the Activity. Most of the staff members were willing to help with the activity, but they did not completely understand the procedure or the activity. If there was insufficient preparation and no rational explanation for the changes, staff members engaging in a new activity may become obstacles to conducting the research in long-term care facilities. Intervention research usually consumes a great deal of manpower. To promote a collaborative spirit and staff involvement in the study, it is necessary to facilitate ongoing communication between the research team and the staff members.\(^10\) In addition, the participants who attend the intervention in the practice lounge need constant assistance from staff members because of their frailty. This developed a closer relationship with the staff members than with the research assistants.

To motivate staff members and gain optimum cooperation and assistance, it is essential to provide them with an understanding of the goals, purposes, and procedures of the intervention study. Conducting a prior conference or focus group with staff members may offer an opportunity to understand their perceptions about the intervention and to promote recruitment once their interest has been elicited. Staff participation in tai chi may help, for example. In this study, the research team visited the facility and the unit supervisors several times to explain the proposal in the pre-intervention phase. While conducting the research, the research team consulted the staff about any visible changes, both positive and negative, or particular needs that they noted in participants after each tai chi practice. This information seemed to motivate the staff to become more involved in conducting the intervention. In fact, the unit staff members were the most valuable observers, transmitters, and supervisors in the intervention study.

Patterns of the Relationship Between the Research Team and the Unit. It is imperative that a collaborative relationship be established at the pre-intervention phase. To establish a positive working environment, the research team presented both directors and unit supervisors with gifts at the warm-up meetings. This gesture facilitated willingness to conduct intervention research at the 2 long-term care facilities. The staff members also expressed their desire to improve the physical ability of the residents. Beginning with a positive attitude, the research team was able to make the intervention protocol easier.

During the intervention phase, staff members, either registered nurses or nurses’ aides, helped research assistants invite the residents to participate in the activity. Appropriate appreciation should be shown to each contributor. Staff at the facility should not have the feeling of being “used and discarded.” In the Chinese culture, appreciative words are as important as suitable presents when expressing appreciation for a person’s contribution. Sometimes a present is more acceptable than words. Out of respect for cultural customs in this study, the researcher always brought holiday presents, such as moon cakes for the Moon Festival, to express appre-
ciation to the staff members. The various customs and rituals of a culture should be taken into consideration when choosing a suitable expression of appreciation. At the end of the study, the researchers also sent thank you cards to the unit and to the facility.

A shared vision of achieving similar goals, a willingness to contribute time and effort to the new project, a regularly scheduled meeting time to review progress and barriers to progress, and time spent getting to know each other on a personal level are essential in establishing an effective partnership. Therefore, regular meetings with the unit staff members are essential. After realizing the advantages from the project, the clinical health providers began to contribute to the intervention more willingly. Scheduled and informal meetings did not occur regularly in this study. However, it is recommended that they be held in future studies. Not only can these meetings discuss the progress and difficulties in the participants’ performance, but the researcher can also develop a personal relationship with the on-site health care providers.

Scheduling. Arranging a time to gather all participants depends on the type of setting. In this study, practice time was arranged according to the schedule of recreational activities and the lifestyle of the elderly. One of the study sites was an assisted living nursing home where the elderly residents lived independently with limited assistance in daily activities. These older adults usually got up early in the morning with nothing to do except wait for breakfast. After eating, they said that they felt more energetic and decided to practice tai chi in the morning. Another setting was at a skilled nursing home where the residents required more supervision with daily activities and lacked total independence. Therefore, the intervention needed to be adjusted according to their daily schedule to avoid interfering with routine tasks of nursing care. In this study, tai chi activity was scheduled from 2 to 3 P.M., which was the time that most of the residents had woken from their afternoon naps. Because of time pressures on the unit and the residents’ decision-making capabilities and differing durations of nap times, waking residents to attend a physical activity presented an ethical dilemma for the research team. The elderly subjects were reminded about the scheduled tai chi activity before they went to take a nap and were asked whether they would like to be woken up to attend the activity if they overslept.

Taiwanese Elderly Participants

Physical Changes Related to Aging. According to a survey done by the Taiwan Department of Statistics in 2002, of Taiwanese elders 65 and older, 32.98% reported their health to be good, 22.98% fair, and 22.1% poor. The top 3 chronic illnesses were related to the circulation system, the musculoskeletal system, and the endocrine system. Pain, mobility, and sensory impairments may be significant barriers to participation in physical activities among chronically ill elderly individuals. The research team had to modify the learning environment and use appropriate assistive devices. Modification included using written material with large black words on white paper to help the participants understand more easily and to remember the context. Using simple demonstrative pictures instead of long verbal sentences helped the participants to remember the information. These materials enabled participants to practice by themselves without instruction from the master. In addition, an experienced research assistant performed tai chi in the middle of the practice lounge to provide a model for the participants. If the participant missed the movement lesson with the master, the participant could follow the experienced RA and have an opportunity to catch up.

Participants were allowed to use any devices related to mobility and transfer such as wheelchairs, canes, crutches, and working frames during the practice sessions. These devices could be used to compensate for disabilities or to increase safety and efficiency. In this study, participants who could stand alone without assistance were recruited, but it did not mean that they did not need assistive devices to reduce the incidence of falling. Fortunately, the presence of assistive devices placed within reach of the participants established a feeling of security, and there were no falls during practice sessions. Starting and ending the program on time was one of the strategies used to retain elderly participation in programs.

The master used an amplifier with adequate volume and lower pitch in the practice lounge to communicate more effectively with the participants. Although the inclusion criteria for this study required that subjects had to stand alone without assistance, a complete assessment of
the limitations of physical mobility, health problems, assistive devices, and the degree of activity tolerance for each subject was documented for reference by the research assistants at the recruiting phase. The research team set up special equipment in accordance with individual needs.

In this study, the tai chi program lasted 6 months and was practiced twice a week for 60 minutes. It consisted of 3 phases: a 10-minute warm-up, 30 minutes of exercise, and a 10-minute cool-down. In addition, 2 breaks of 5 minutes each allowed the subjects to take a short rest during the practice. Because tai chi consists of low-intensity movement modules, it is generally practiced as a daily exercise routine to accumulate positive changes in physical and psychological well-being rather than further the activity level. All subjects were encouraged to practice daily by themselves as much as they desired. Most subjects expressed enjoyment of the group intervention.

Physician advocacy can promote greater effort to integrate exercise into an individual’s daily routine and may reinforce compliance with a variety of exercises.15 In Eastern culture, physicians possess great authority and respectability. Care recipients may more readily accept a physician’s recommendation than one from other health care providers. Unfortunately, in this study, no geriatric or family physician was available at either long-term care facility. For future intervention studies, obtaining a physician’s prescription for activity is highly recommended.

Motivation

Past experiences with tai chi, an understanding of its efficacy, and the influence of other participants motivated these participants to learn tai chi. Recruiting participants who had practiced a similar physical activity and encouraging them to share positive past experiences were helpful motivators. In this study, there were 2 participants who had practiced chi gong, a kind of energy therapy. They gained improvements in their health status and well-being because of the prior therapy. When other participants wanted to withdraw from exercise, the experienced participants would encouragingly approach them to provide support by being their practice partner.

Creating a pleasant atmosphere increased interest in the activity. Constant encouragement, immediate feedback, and positive reinforcement were given throughout the intervention. Providing a environment for socializing may be another motivator.16 In this group intervention study, a small dessert bar was set up beside the practice lounge, and it created an attractive place for subjects to congregate after the exercise program. The friendly, open environment of the dessert bar encouraged participants to socialize with other participants and share their experiences with the intervention. Finding a way to facilitate participants’ discussion of the benefits of exercise, including those related to health status, appearance, and well-being, can be powerful motivators.17 In this study, the researchers gained an understanding of the individuals’ gradual progress and their enjoyment of the program at the dessert bar gatherings.

Encouragement and praise of the participants’ performance were offered throughout the program. Additionally, the experienced research assistants stayed in the practice lounge to engage in conversation with participants and help them share their feelings with each other after each practice. A close relationship was established through this interaction. It also helped participants advance in their practice. The experienced research assistants then summarized participants’ concerns and reported these to the tai chi master and researchers either face-to-face or by phone. After both the researchers and the master received the message, they solved the problems and made the necessary modifications together.

Participant Fears and Safety Concerns

The elders were sometimes afraid that they could not reach the goal of the intervention and would interfere with the progress of the group as a whole. Some individuals were also embarrassed to ask questions of the master in front of the group, a cultural artifact. Confucius taught the ideals of cooperation with others and respect for the wisdom of teachers, which may have influenced these feelings that characterize the Oriental population. Therefore, encouragement and leaving some time to allow participants to ask questions provided the necessary assurance during practices. Hiring an experienced tai chi research assistant helped the in-
tvention keep on track. If the participants had difficulty understanding the directions or missed some of the movements, the research assistant could immediately assist by explaining the steps or demonstrating the movement.

The safety issue is an important factor when choosing appropriate exercise. Age-related changes in physical abilities must be taken into consideration. Improving balance and reducing the risk of falls are part of the benefits of tai chi.6,18,19 Removing any environmental and personal factors that could contribute to a fall should build confidence for the participants before the begin exercising. For instance, unstable furniture, a highly polished floor, lighting that is too dim or too bright, and inappropriate footwear will jeopardize the participant safety and should be avoided. Offering a safe practice place with limited obstacles and specialized equipment (as necessary) may improve negative attitudes toward exercise and become a strategy for retaining subjects.20 Furthermore, the environment where exercises are performed should be an open area without excessive furniture, away from disturbances and distractions, close to washrooms, and with natural light instead of artificial lighting. These conditions are important for preventing potential injuries.

Before inviting the participants to attend the exercise program, the research assistants arranged for a safe environment with stabilized armchairs surrounding the practice square where participants could rest. The research assistants also ensured that the floor was dry and not highly waxed, that the indoor light was adequate, that the glare from the windows was controlled with shades, and that participants wore comfortable shoes. They also made sure that no furniture blocked the entryways. Moreover, the research assistants promised that they would join in the exercise program, stay with the participants, observe their physical activities, detect significant changes in their physical conditions, and be prepared to assist them to prevent falls and injuries if necessary.

Research Team and Research Instruments

Intervention Mentor

The criteria for hiring a master took age and reputation into consideration. Hiring a master similar in age to the participants meant the master would communicate more easily with the participants because he could describe and demonstrate at their level. Another consideration was to hire a nationally known expert in tai chi. Selecting a competent instructor plays a vital role in an intervention study.

Research Assistants

Mentes and Tripp-Reimer10 suggested that research assistant turnover was a barrier in nurs-
ing home intervention studies. In the event that turnover occurred during any phase of the study, they were required to complete an assessment on age-related changes and needs, including vision, hearing, and mobility, for each participant and then document the results. The research assistants also consistently recorded any reasons or excuses if a subject was absent and any significant events that occurred between or during practices. This documentation became a reference for the research team. When research assistant turnover occurred, documentation assisted the incoming research assistant in getting to know all the subjects, avoided repetitive assessments, and diminished inconvenience for the participants. This allowed a new research assistant to establish a relationship with the participants in a shorter period of time.

The competence and interests of the research assistant was another consideration to reduce turnover. In this study, research assistants, who were nursing college students experienced in tai chi or staff members of the nursing homes, were assigned to invite the subjects to attend the practice a half hour before the intervention began and assisted with ongoing intervention. The other research assistants, who were college nursing lecturers with a specialty in geriatric nursing, were assigned to collect data and interview participants. All research assistants exhibited high interest in working with older adults and had strong motivation to improve the well-being of this population. As a result, research consistency was maintained.

Research Instruments

Shortened questionnaires focused on questions that required a shorter attention span were used to minimize response time. The research

<table>
<thead>
<tr>
<th>Challenges</th>
<th>Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Physical changes of aging</td>
<td>1. Use written material with large, black words on white paper</td>
</tr>
<tr>
<td></td>
<td>2. Use simple demonstrative pictures instead of long verbal sentences</td>
</tr>
<tr>
<td></td>
<td>3. Hire an experienced research assistant to perform the activity as a model for the participants</td>
</tr>
<tr>
<td></td>
<td>4. Use assistive devices such as wheelchairs, canes, crutches, and working frames to establish security for participants</td>
</tr>
<tr>
<td></td>
<td>5. Take advantage of an amplifier with adequate volume and low pitch during intervention</td>
</tr>
<tr>
<td></td>
<td>6. Gain a suitable activity prescription from physician</td>
</tr>
<tr>
<td>2. Poor motivation</td>
<td>1. Assist participants to understand the efficacy of the intervention</td>
</tr>
<tr>
<td></td>
<td>2. Recruit participants who have practiced a similar activity and allow for sharing of positive experiences and benefits</td>
</tr>
<tr>
<td></td>
<td>3. Create a pleasant atmosphere and social environment</td>
</tr>
<tr>
<td></td>
<td>4. Encourage and praise of participants’ performance</td>
</tr>
<tr>
<td></td>
<td>5. Engage in conversation with participants and discuss their feelings after each practice</td>
</tr>
<tr>
<td>3. Fear and safety concerns</td>
<td>1. Remove any environmental and personal factors that might contribute to a fall</td>
</tr>
<tr>
<td></td>
<td>2. Provide an open area without excessive furniture, disturbance, or distractions that is close to washrooms and with natural sunshine</td>
</tr>
<tr>
<td></td>
<td>3. Ensure that there is a dry floor and adequate indoor light; ensure that participants have comfortable shoes</td>
</tr>
<tr>
<td></td>
<td>4. Promise the participants to join in the activity, stay with them, observe their physical activities, detect significant changes, and assist them to prevent falls or injuries</td>
</tr>
</tbody>
</table>
assistants read the questions to the subjects to avoid their having to read small print. It was important that questions were read slowly, in a loud voice, and with clear pronunciation. To ensure that data collection was consistent among all participants, the investigator followed the wording of the questions and did not offer spontaneous explanations of what the questions meant. If the subjects did not understand the questions, the investigator would simply repeat the questions to them. A visual card displaying all options for the answers was used to allow participants to make a choice; this helped minimize the possibility that participants simply chose the last answer that the investigator provided verbally. Additionally, when the research assistants asked the range of physical and mental health status, participants often experienced difficulty verbalizing their thoughts. By contrast, the research assistants always obtained the answers easily by using a picture of a visual ladder because participants needed only to point out the answers of physical and mental health status on the SF-36 Health Survey questionnaire. Allowing for a visual measurement instead of a strictly verbal response helps participants to express their opinions.

Conclusion

Curing physical disabilities through traditional medical treatment may not be the only or optimal consideration for older adults; promoting quality of life rather than curing impairment is often more important to them. Most elders prefer improved quality of life with less assistance in activities of daily living to maintenance of a longer life through various forms of life support assistance. Thus, implementing intervention through viable activities is more beneficial because it improves physical limitations and assists elders in living a better life. Conducting an intervention study with elderly populations presents many challenges because the researcher must deal with both predictable and unforeseen situations. Summarized tables of possible challenges and coping strategies determined from our study are provided in Tables 1–3. Anticipated considerations include manipulation of the environment and physical impairment of participants. It might also include the internal environment, such as the need for a harmonious research team, a suitable instructor, an effective communication channel, and creative, open minds. These are essential components that must be established. The research team should consider modifications throughout the study. To improve the quality of research, awareness of and adaptation to the challenges arising from the study are essential.

References


Table 3.
Challenges and Coping Strategies for Intervention Studies With Older Adults: Research Team and Instruments

<table>
<thead>
<tr>
<th>Challenges</th>
<th>Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competent mentor</td>
<td>1. Hire an expert instructor of similar age to participants and with an excellent reputation in the activity</td>
</tr>
<tr>
<td></td>
<td>2. Hire a nationally known expert</td>
</tr>
<tr>
<td>Research assistant turnover</td>
<td>1. Require a complete assessment on age-related changes and needs for each participant at preintervention and throughout intervention</td>
</tr>
<tr>
<td></td>
<td>2. Record reasons or excuses if a subject was absent and any significant events that occur between practices</td>
</tr>
<tr>
<td></td>
<td>3. Hire a competent research assistant who is interested in the activity</td>
</tr>
<tr>
<td>Research instruments</td>
<td>1. Use shortened questionnaires</td>
</tr>
<tr>
<td></td>
<td>2. Read the questions slowly, in a loud voice, and with clear pronunciation</td>
</tr>
<tr>
<td></td>
<td>3. Use a visual analogue scale instead of verbal expression</td>
</tr>
</tbody>
</table>


YA-CHUAN HSU, RN, is a doctoral student at the College of Nursing at the University of Arizona, Tucson; KUEI-MIN CHEN, RN, PhD, is associate professor in the Department of Nursing, Fooyin University, Taiwan.

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Health and Social Care Policy for the Elderly in Belgium

Antonia Arnaert, PhD, MPA, RN, Bernadette Van Den Heuvel, RN, and Tarsi Windey, RN

Current Belgian health care policy for the elderly can be classified broadly into institutional care, community care, and home care. Economic restrictions, smaller families, increased employment among women, geographic distances between family members, and the preference of the elderly to remain at home are factors challenging Belgian policy makers and health professionals to restructure the current health care system and provide integrated holistic health and social care to the elderly. These challenges are being addressed through initiatives to customize care for the elderly at home, in the community, or in care environments by improving coordination of care, programs of support for geriatric care and dementia, and research into new accommodation and health solutions. (Geriatr Nurs 2005;26:366-371)

Health Care System

Health Insurance System

The Belgian social security system is based on a "solidarity principle." Payments by people who are employed cover those who are unemployed or retired. The Belgian compulsory health insurance system, an integral part of the Belgian social security system, covers almost the entire population.

Health Care Responsibilities

The government plays a crucial role in the health care regulation process through financing structure. However, since 1980, the responsibilities have been shared between the government and the Dutch-, French-, and German-speaking communities. For instance, the federal minister of health and social affairs is responsible for sickness and disability insurance, financing, and determination of accreditation criteria for hospitals and heavy medical care units, and construction of new hospitals. The minister also determines the planning and accreditation criteria for the nursing homes (in the Dutch community, the Rust-en Verzorgingstehuis), and the daily reimbursement cost allocated by RIZIV/INAMI (Rijksinstituut voor Ziekte/en Invaliditeitsverzekering) for each patient residing in nursing homes and rest homes (in the Dutch community, Rustoord voor Bejaarden). The federal minister of economic affairs is responsible for the pricing policy, the minister of internal affairs for fire safety, and the minister of public health for food inspection in the various elderly care facilities.

Communities are accountable for preventive medicine and health promotion, the application of hospital accreditation standards and planning measures, and coordinating home care. Nursing homes and psychiatric nursing homes (in the Dutch community, the Psycho-Geriatrisch Verzorgingstehuis) have the same responsibilities as hospitals and are therefore in charge of planning, accreditation criteria, and financing for the rest homes.

This distribution of responsibilities relevant to elderly care across various policy domains and health care infrastructure levels is a complicating factor in the continuity and consistency of a person-centered policy of care for the elderly in Belgium. Protocol agreements are made by policy makers in various domains and at various levels to support a more integrated elderly care policy. These agreements allow communities and regions the autonomy to develop their own care policies customized to the needs of their aging population, thus taking into account local demographic needs. As a result, however, there are considerable differences in the quality and organization of elderly care among communities. For example, home care services are well developed in the Flemish community compared with the French-speaking community in Belgium.

Elderly Care System

Care Infrastructure Overview

The elderly care infrastructure comprises hospital care, short- and long-term residential care, and home care and community services.
Hospital Care. Geriatric patients admitted to a hospital, most frequently through the emergency department, are admitted by various hospital units in Belgium, according to their medical need, as categorized by an index: geriatric medicine (Index G), general internal medicine (Index D), general surgery (Index C), psychiatric medicine in a general (Index A) or psychiatric hospital (Index T), and revalidation (Index Sp). In Belgium, the geriatric ward was distinguished as a separate entity in 1984, and in 1986 geriatric medicine was recognized as a new medical specialty. These steps recognized the need for comprehensive geriatric assessment, evaluation, and management of frail older patients to reduce morbidity and mortality, prevent hospital admission, and delay or postpone institutionalization. With the reduction of hospital beds, the number of geriatric beds has fallen since 1994. Pacolet and colleagues estimate, however, that elderly aged 85 and older will account for more than 40% of hospital admissions in 2050. In addition, considering the growing number of elderly people, the number of geriatricians is relatively low. In July 2002, out of a total of 22,107 specialists in Belgium, only 277 were geriatricians.

Residential Care. Residential care, short and long term, is still an essential part of the care process for elderly people in Belgium. Table 1 shows the use of residential care in 2002 for different age cohorts. Eighty-three percent of the elderly 95 years and older were institutionalized. People >60 years of age may be cared for in either rest homes or nursing homes. Rest homes are residential centers where housing, family care, and household services are provided collectively. Medical characteristics of people living in nursing homes differentiate them from people living in rest homes. Residents of nursing homes are in need of care and suffer from long-term diseases requiring medical and paramedical care. Eligibility for admission to a nursing home rests on 3 criteria:

1. The elderly person has undergone all necessary treatment but has not regained full competency in activities of daily living (ADLs), although daily medical supervision or specialized treatment is not required.
2. All possibilities for at-home care have been examined, and admission to a nursing home is needed.
3. The elderly person’s general health condition demands that apart from medical care by a general practitioner, nursing, paramedical care, and help with ADLs are required.

In 2000, there were 1,875 rest homes and 896 nursing homes in Belgium. These centers took care of 81,813 and 44,604 people, respectively, in 2002. A shortage of nursing homes has developed over the last years because elderly people try to postpone leaving their own homes until the level of dependency and need for care is high. This results in a surplus of rest homes and a shortage of nursing homes. In June 1997, an agreement declaring a moratorium for the approval of new nursing homes and an overall replanning of the sector was negotiated. Two protocol agreements currently determine the maximum capacity per region for nursing homes, rest homes, and day-care centers. The planning does not reflect reality, however. In Flanders, a shortage of 643 accommodations was reported in 2004. The projected need for nursing homes is 1.7 beds per 100 inhabitants aged 65 and older.

Rest homes and nursing homes in Belgium can be public, private nonprofit, or private for-profit organizations. For example, in January 2005 in the Flemish community, 48% of the rest homes (n = 745) were private not for profit, whereas in Walloon, the majority (65%) of the rest homes (n = 744) are private for-profit organizations.

The preference of the elderly to live in housing where they can continue to live their own lives is a well-known phenomenon. Service flats and service housing complexes are 2 housing-care facilities for the elderly that have devel-

Table 1. Percentage of Elderly Who Used Rest Homes in Flanders, 2002

<table>
<thead>
<tr>
<th>Age Group</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>≥60 and &lt;70 years</td>
<td>1.43</td>
</tr>
<tr>
<td>≥75 and &lt;80 years</td>
<td>5.22</td>
</tr>
<tr>
<td>≥80 and &lt;85 years</td>
<td>13.67</td>
</tr>
<tr>
<td>≥85 and &lt;90 years</td>
<td>27.34</td>
</tr>
<tr>
<td>≥90 and &lt;95 years</td>
<td>51.53</td>
</tr>
<tr>
<td>≥95 years</td>
<td>83.05</td>
</tr>
</tbody>
</table>

Data from Vandenbroucke F.
The concept of sheltered housing for the elderly is described as "One or more building(s) which, regardless of their name, are a functional whole, consisting of individual housing areas inhabited by pensioners and provide common service facilities, which may be used by them." The service flat program aims to have 2 apartment units per 100 elderly aged 60 years and older. A service flat building must be connected to a rest home, nursing home, or another care service. Today the concept of service flats is gaining increased interest. In theory, elderly who live in a service flat must be able to manage their own lives with a minimum of assistance. In practice, elderly who need more care over time stay in their flats, and service flats become "care flats," combining the housing qualities of a service flat with the care qualities of residential care.

Home Care and Community Services. To accommodate the preference of senior citizens to remain in their own homes, Belgium has developed a wide range of home assistance and personal care services to help the elderly live independently. Service tasks include, for example, cleaning and laundry services, help with shopping, post office and bank services, and preparation of meals. Personal care can include assistance with meals, getting dressed, personal hygiene, and mobility. For those in need, subsidized security alarms are available. These are linked to family members, general practitioners, or to the nearest special housing or call center, where a nurse responds and attends to alarms. The use of these alarm systems has increased annually. Other social care services such as sit-in services, are offered when a caregiver is temporarily absent. Informal care still plays an important role in Belgium, with the government promoting family care and establishing a number of financial incentives to families.

The most important organization providing community nursing is the White and Yellow Cross, which provides 50% of the home nursing care in Belgium. Some nursing care is also provided by self-employed nurses. Home nursing can mean qualified care and highly specialized medical care, as well as 24-hour terminal care. If the nurse or the nursing organization is registered with the RIZIV/INAMI, costs are reimbursed either as a fee-for-service or on a daily rate, which is paid by the mutualities for each dependent person.

Day-care centers provide day nursing care to elderly people without overnight facilities. This is a valuable option for elderly who do not wish to move to a residential setting permanently but who require nursing care during the day; 0.3% of people aged 65 to 74 years and 0.7% of those over 75 years used day care in 2001. Transportation to and from the day-care center is arranged. Night centers offer overnight accommodation only, but without nursing care. Another option is to stay in a short-stay-unit nursing home for a shorter period. These units are dedicated to elderly patients who suffer a sudden health crisis or who need care while family caregivers are away. Community care centers, called local service centers, are meeting places for people over age 55 and for anyone in need of home care. The goal is to prevent people from becoming isolated and to make professional care more accessible.

Finance and Expenditure

Income is not a criterion; however, residential elderly care is expensive in Belgium. The cost for staying in a rest or nursing home is split into "hotel costs," which include, for example, food, administration, and maintenance costs, and "care-costs." The care costs are financed by health insurance through a so-called envelope funding system. A daily rate is allocated to rest and nursing homes by RIZIV/INAMI for each resident. A modified version of the original Katz index is used to assess the elderly patient’s degree of dependence and care requirements. There are 5 categories (O, A, B, C, and C dementia) of charges, from an elderly person who is completely independent in all ADL (category O) to a dependent person who has a heavy care profile (category C). Elderly who are categorized as “C dementia” are also disoriented with regard to time and place. Since January 2005, the Mini Mental State Examination is used if discussion exists regarding a patient’s level of disorientation. A higher care profile acquires more funding.

Quality elderly care depends on the number, qualifications, abilities, motivation, and attitudes of those who do the work. Therefore, investment in human potential is important. RIZIV/INAMI mandates how many personnel with various kinds of training are required by
law. This ratio of workers to the number of elderly persons served is expressed as full-time equivalences per 30 residents. For example, in a rest home there is a requirement of a minimum ratio of 0.25 full-time nurses per 30 residents classified in category O. These minimum staffing ratios per category and type of institution are typically not enough to perform all the care tasks and to achieve quality of care. In Table 2, the actual number of care workers in Flanders rest homes is compared with the legal staff member ratio as stipulated by RIZIV/INAMI. The difference of 10.056 of various personnel is not subsidized by health insurance and is paid by each institution. As a consequence, 1 in 3 rest homes in the Flemish-speaking part of the country operates at a loss.

Policy Challenges

Aging has changed in modern times. Today a more optimistic perspective about the elderly is emerging, emphasizing an older person with remarkable physical and mental fitness and living in satisfying housing with adequate income. However, Belgium is confronted with the problem of how to best address the needs of the frail, vulnerable elderly. The Belgium health system requires change to create and sustain an effective integrated system of care, which is obviously easier to design than to implement—reality shows this requires complex financial, organizational, service delivery, and clinical arrangements. Integrated systems of care demand uniform rules, common strategies and tools, and funding to shape the way services are organized, delivered, and managed. A whole-person-centered approach is the key philosophy. Evidence shows that a continuum of integrated care has a positive impact in terms of quality outcomes, consumer satisfaction, convenience, and cost.

New initiatives in the field are developed to expand home and community care in Belgium. The Belgian government and health care system are addressing these challenges through a number of strategies, including expanding customized home and community care, creating initiatives to improve coordination for support, customizing care levels in living and care centers, researching potential small-scale and group-living opportunities, providing homelike nursing environments, establishing specialized centers for dementia, developing a geriatric care program, and researching potential applications of information and telecommunication technologies.

The classical perception of a “rest home” in Belgium is under pressure to attain a higher standard in housing efficiency. The tendency is to convert rest homes into “living and care centers,” which offer integrated, customized care and support to meet the complex needs of the elderly in a flexible and holistic way. A modular approach is used, meaning that various services—for example day care, night care, short stay, and so on—depending on the needs of the elderly at a certain time, are delivered in a network characterized by communication, collaboration, cooperation, and consultation among all stakeholders.

Recently new types of dwellings have been investigated and implemented where possible, such as small-scale living, care flats, social service flats, and so on. Group living is gaining attention today; this situation is not institutional
but a house with a homelike environment and atmosphere. Currently, nursing homes are providing care in environments where people have the feeling of being at home. Together with its housing policy, the Belgium government is developing a geriatric care program and clinical pathways for geriatric patients to ensure the unification and continuity of care services at home or elsewhere.

Health policy makers and health professionals recognize the strategic significance of information and communication technologies, such as the videophone to provide “e-health care” to frail elderly people at home. The future housing and care policy will, without doubt, be based on socialization, normalization, integration, and small-scale approaches. Creative solutions must be found to control the increasing costs of elderly care and to protect funding feasibility and accessibility. The need for a coherent policy, streamlining the various competencies and the flow of subsidies is a huge challenge for all health policy makers at various levels in Belgium.

Conclusion

The number and proportion of older people in Belgium is rising sharply. This increase is projected to continue into at least the middle of the 21st century and will have a huge impact on developments in the health care system. Older adults receive health and related social services along the continuum of care in outpatient, in-home, community-based, and institutional settings. Fragmentation between services and poor communication among health professionals are still commonplace, however. Also, the distribution of responsibility among 3 authorities acting at various levels hinders the continuity of a client-centered policy of care for the elderly in Belgium. The challenge for the Belgian policy makers and health care professionals is to deliver integrated, holistic, and customized care, acknowledging that older adults are unique people and striving to provide assessments, services, and care in ways that are consistent with their personal preferences. The system faces the simultaneous challenge of providing quality customized care that can be seamlessly upgraded with financial viability. The Belgian government and health care system are addressing these challenges through a number of strategies.

References


ANTONIA ARNAERT, PhD, MPA, RN, is an assistant professor at McGill University School of Nursing in Montreal, Canada. BERNADETTE VAN DEN HEUVEL, RN, is the coordinator for Elderly Care at GasthuisZusters in Wilrijk, Belgium. TARSI WINDEY, RN, is the sector coordinator for Elderly Care at the VVI in Brussels, Belgium.

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Recently, increased attention has been given to meditation–relaxation strategies to improve physical health, reduce pain, enhance immune response, improve emotional well-being, and foster spiritual growth. This article reviews research conducted in the last 25 years about meditation and spirituality, in particular as it relates to the health of the elderly. This review supports the hypothesis that meditation can be taught to the elderly, even those with dementia. The results also support the hypothesis that meditation and spiritual practices could promote significant social and emotional benefits for those in social isolation. Specific treatment plan interventions for nursing homes are discussed. Future research should investigate the effectiveness of various types of meditative and spiritual practices to nursing home residents. (Geriatr Nurs 2005;26:372-377)

Meditation and other complementary approaches have become more widely used in the management of chronic health conditions. For example, the National Institutes of Health now recommend meditation and relaxation practices as 1 of the first interventions in the treatment of mild to moderate hypertension. Clinicians are giving increased attention to meditation and its relationship to improved physical health, pain management, enhanced immune response, improved emotional well-being, and spiritual growth. As the elderly population increases, nurses and other clinicians need to understand whether alternative approaches to disease management are effective for, and readily used by, the elderly.

Life satisfaction in older adults has been linked to a sense of mastery, defined as having adequate, effective skills to meet the stressors of everyday life. The elderly face increasing numbers of stressors as they age. Increasing agreement exists among those who work with the elderly that there is a positive association between spiritual experiences, meditative practices, and physical health.

Many studies have investigated the efficacy of meditation on physical health. Barrett describes early research conducted by Benson and other pioneers related to the relaxation response and resulting physiologic changes. Meditation has been shown to decrease the response of the sympathetic nervous system, to improve cellular immune response, to have a positive influence on cardiovascular and muscular diseases in the elderly, and to improve symptoms associated with fibromyalgia. Researchers have demonstrated that Transcendental Meditation (TM) improves cardiovascular health in the elderly. Beneficial responses to practicing TM are decreased blood pressure, reversal of atherosclerosis, and other cardiac-related body symptoms.

Early research by Wallace and colleagues evidenced slowing of the aging process in a cross-sectional group of subjects who practiced TM. This finding is supported by additional studies.

This article examines the potential benefits of meditation for nursing home residents in response to the multiple studies that support the use of TM in clinical medicine. Furthermore, the article reviews how the elderly cope with the many losses associated with aging and declining health status.

Review of the Literature

This literature and research review evaluates 3 concepts. First, can the elderly, especially those individuals in a nursing home, be easily taught meditation-relaxation strategies? Second, do meditative experiences and practices promote a sense of hope, integrity, and connectedness in an environment that threatens one’s sense of control, self-esteem, and relatedness to others? Third, do meditative practices foster
Methods

The literature was searched to identify studies and articles published since 1978 related to learning among the elderly, nursing home interventions, meditative experience training and education strategies, outcomes associated with meditative experiences, and spirituality at the end of life. Five electronic databases were searched through the Maine InfoNet Research Data Base: Alt HealthWatch, Health Source: Nursing & Academic Edition, MEDLINE, Psychology and Behavioral Sciences Collection, and the Religion and Philosophy Collection. The author identified published studies that met the previously noted criteria and also examined reference lists for additional published research articles. Thirty-six articles were identified as pertinent to this inquiry, and these were carefully reviewed.

Terms used in this article are defined in the following manner. *Mindfulness meditation*, stemming from Buddhist philosophy, is a method of self-inquiry that leads to increased awareness of one’s thoughts, sensations, and feelings.9 *Transcendental Meditation* includes a Hindu mantra method of mindfulness meditation.10 *Meditative prayer technique* repeats a mantra leading to an awakening of a deeper sense of reality.20 *Imagery*, another form of relaxation-based meditation, allows the imagination to stimulate several or all of the senses and has been used for ages in shaman healing rituals.6 For the purposes of this literature review, the term *meditative experiences* is used to include formal mindfulness meditation, other mindfulness practices, guided imagery, and meditative prayer. Boxes 1 and 2 provide additional information and resources on meditation and relaxation techniques.

Findings

Meditative Experience: Education and Training

Many studies reviewed describe the ease of learning meditative practices. Schneider and colleagues18 summarized previous clinical reports indicating that TM is easily learned, regardless of age, level of education, occupation, or cultural background. Experts describe meditative prayer as simple and readily practiced, regardless of age, intellectual background, faith, or race.20 *Qi Gong*, a series of gentle exercise that integrate breath and body, are simple practices that can also be learned at any age.21 Zahourek22 notes that guided imagery can be learned even if there is memory impairment because imagery is not dependent on stored memory.

A number of studies in this review describe the process of teaching elderly persons meditation or relaxation strategies. None of the studies included a quantification of learning rates or a comparison of different teaching methods. Meditation-relaxation was successfully taught to older subjects.3,6,13,14 Similar reports are noted
by other researchers.\textsuperscript{17,22-26} Many of the tested education programs were 8 to 10 weeks in duration, meeting weekly in group sessions.

**Meditative Experience: Emotional Outcomes**

Several studies have shown that education and training in meditative experiences reduces psychosocial stress in the elderly.\textsuperscript{3,21,27} The positive effects include reduced anxiety,\textsuperscript{3} decreased anxiety in female patients with heart disease,\textsuperscript{28} and increased self-esteem in patients with chronic pain.\textsuperscript{29} Other psychosocial outcomes associated with meditative practice include increased restfulness and alertness and decreased impatience.\textsuperscript{23} Deberry and colleagues\textsuperscript{3} found that beneficial results of relaxation-meditation are evident more quickly that those acquired with cognitive restructuring or psychotherapy.

Other researchers have examined the impact of meditation, guided imagery, and relaxation on disruptive behavior among nursing home residents with dementia. Results include decreased agitated behavior, increased group participation, improved self-control,\textsuperscript{30} and increased relaxation.\textsuperscript{31} Those with dementia were able to remain in a relaxed state and tolerate meditative experiences longer than those who were cognitively intact.\textsuperscript{30} The positive effects of meditative experiences persisted 2 or more hours after completion of the meditative practice.\textsuperscript{31}

**Meditative Experience: Spirituality**

Three studies investigated spirituality, relaxation, and their impact on health. One study suggests a correlation between core spiritual experiences and positive psychological attitudes following training in relaxation.\textsuperscript{32} The researchers reported a statistically significant correlation between religiousness/spirituality and psychological well-being for those living in an institution, despite the fact that institutionalized elders have less optimal physical and psychosocial well-being compared with community-dwelling elderly.\textsuperscript{4} The author did not specifically investigate variations in one’s sense of well-being in relation to participation in meditation.

Private religious activity (activities other than “public” church going) including prayer and meditation appears to protect against physical health decline and death. This is especially true for those who initiate or continue religious activity before any loss of functional skills for daily activities.\textsuperscript{33} This protective function was not evident for those who had already experienced substantial functional impairments in ordinary daily activities before religious activity was initiated.

**Discussion**

More than 2 decades of research provide evidence of remarkable physiologic changes associated with regular meditative experiences. Changes reported include improvement in immune response,\textsuperscript{7} decreased response of sympathetic nervous system,\textsuperscript{6} modification of cardiac symptoms,\textsuperscript{23,28} reduction of pain,\textsuperscript{29} reversal of heart disease,\textsuperscript{14} and slowing of the aging process.\textsuperscript{16,17} The purpose of this review was to evaluate learning potential and inquire at the psychosocial benefits associated with beginning a meditative practice for the elderly, with particular attention to the institutionalized elderly. Outside the scope of this inquiry is the suggestion of increased longevity among elders who regularly practice meditative techniques.\textsuperscript{16-18}

An analysis of the literature demonstrates that the elderly are able to learn meditative experiences. Although none of the reviewed studies measured learning rates or scientifically compared approaches to teaching meditation to the elderly, all studies demonstrated that the aged are fully capable of understanding, learning, and practicing various meditative techniques. Populations of elderly meditative students included those living in the community and in institutions and included those with a wide range of physical health or illness. The ability to learn these practices does not, therefore, appear to be directly affected by one’s physical health condition or living situation.

Among the elderly students who demonstrated the capacity to learn and practice meditative experiences were patients with advanced dementia.\textsuperscript{30,31} The fact that those with profound cognitive impairment can be instructed in meditative experiences, can practice them with support and guidance, and can benefit from these practices, was an unexpected and significant finding. Considering the progressive debilitating effects of dementia, it is noteworthy that patients with impaired mental functioning are still able to learn simple practices and derive calming behavioral and emotional outcomes.
Strategies for teaching meditative experiences often employed group information giving, practice, and support. Most programs were 8 to 12 weeks in duration. Supplemental techniques included taped audiocassettes, which were found to be instrumental in promoting continued, independent practice following completion of formal training. Group formats for education are efficient in deployment of teaching and support resources and also promote relationships, an essential aspect of life at any age or in any circumstance. Group sessions meet both individual learning needs and interpersonal relationship needs.

There is a risk that symptoms of depression may temporarily exacerbate with the increased inner reflection and awareness that occurs during meditative experiences. This is related to the emergence or release of previously suppressed emotions characteristic of the emotional state of depression. This caution is relevant to consider in applying concepts of meditative experiences to the depressed, especially the elderly.

There appears to be a strong link between religiosity and successful adaptation to the challenges of aging. Private religious activity is shown to protect against physical health decline and death among the relatively healthy. This protective advantage was not evident for those who are already physically debilitated when religious activity is initiated. One hypothesis for this difference is that private religious activity for some may be initiated in response to stress (eg, physical debility, physical health decline), and therefore be too late to show the protective effect. The implication for nursing home residents may be no change in health decline or longevity, although positive effects in self-esteem, emotional states, and preparation for death are likely. Private religious activities (eg, prayer circles, meditation, Bible study, private prayer) would be easy to support in group or individual activities in a nursing home.

Participation in meditative experiences or spiritual practices in which one is fully active and directive, not a receiver of another's preformatted routine, promotes relational, emotional, and spiritual well-being. Group sessions provide effective strategies in reducing social isolation. Guided imagery practices diminish a sense of isolation through creative use of the senses. Audiocassette tapes support continuing meditative practices when the elderly are unable to attend groups, are weak or sick, or simply wish to practice in solitude. Even with decreased hearing, vision, and mobility, the elderly can practice meditative experiences and derive benefits.

Conclusion

This integrative review indicates that meditation is beneficial for reducing acute anxiety and diminishing despair among the elderly. Beginning participants (ie, elderly new to meditative experiences) reported a sense of calm, well-being, and peace within a particular session, lasting for up to several hours after a session. Studies by Deberry indicate that improvements in symptoms of anxiety and depression can be demonstrated with 30 minutes of daily meditative practice. Long-term practice was shown to be related to the most significant reduction in overall levels of anxiety and in maintaining this outcome. With anxiety and depression frequent among institutionalized elderly, participation in easy, effective experiences that reduce symptoms promises to improve overall quality of life.

Participating in meditative experiences was shown to reduce anxiety and depression, enhance one’s sense of ability to cope, and positively affect physical, emotional, and spiritual health for elders. Institutionalized elderly individuals are more likely than community-based elders to experience severe decline in overall well-being because of multiple losses and are at greater risk for continued health decline.

Institutionalized elders may benefit even more than community-based elders from the psychosocial benefits associated with meditative practices, even if practiced for only brief periods of time each day. These practices enhance a sense of control in an environment of limited control and within a physical experience of limitation. Emotional and spiritual benefits of meditative practices are evident far more quickly than changes associated with cognitive restructuring or psychotherapy. Additionally, elders will likely experience enhanced self-esteem from practices that they are able to do independently and at times of their own discretion, compared with interventions that foster a sense of dependence on others viewed as “experts.”
The process of learning also offers benefits to the spirit. Learning and practicing meditative experiences opens the possibility of true empowerment for the elderly. For example, independently or in groups, nursing home residents could effectively improve their quality of life as they experience it, regardless of circumstances. Empowerment would also be evidenced by a deepened understanding of how and when to act on their own behalf. An approach such as this could play an important part in protecting the integrity and esteem of the elderly.\textsuperscript{23}

A spiritual model of aging has roots in history and culture. The process of aging is a curriculum for the soul that is directed toward inner contemplation and service to others.\textsuperscript{36} Religion and spirituality are assumed to provide hope and courage in difficult situations. Even among socially isolated elderly in institutions, personal meaning, individual value of religion, and access to spiritual resources are important components of well-being.\textsuperscript{4}

There are limitations to this review. Reports and research articles were selected and reviewed by this author alone. Furthermore, the author did not locate any research that showed meditative experiences to have negative health implications or to have even no impact on subjects’ subjective or objective indicators of health. Although many research papers were publicized in well-established, peer-reviewed journals, not all were similarly scrutinized by peers for validity and reliability.

Recommendations for Further Research

Results of this review are encouraging for those providing care to elders living in a nursing home. Health care providers can reinforce ego integrity\textsuperscript{37} of elders by involving them in the decision making and planning of a program for learning and practicing meditative experiences. Assisting them to integrate newly learned behaviors into established patterns of daily life will also promote a sense of power. Additional research related to the impact of learning a new, effective practice and an elder’s sense of mastery could provide valuable information. More research exploring the outcome of learning and regularly practicing meditative activities based on different teaching styles and methods is needed. Further research exploring meditative practices in those with dementia is especially vital.

References


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The aim of this community-based pre-post interventional study was to investigate the effectiveness of a comprehensive educational program reinforced by an individualized component (CEPRIC) on problems likely to be experienced by caregivers of persons with Alzheimer’s disease, as defined by the North American Nursing Diagnosis Association (NANDA). The Beck Depression Scale, Beck Anxiety Inventory, and the Duke scales were used to measure depression, anxiety, and quality of life, respectively. Sixty-four participants (32 caregiver-patient pairs) took part in the program. This study suggests that caregiver problems (disturbed sleep and eating patterns, trauma risk, anxiety) were reduced and caregiver depression and anxiety scores were diminished; quality of life of caregivers was increased by the intervention. In conclusion, the CEPRIC is a viable option for Alzheimer’s caregivers’ education programs, particularly in an environment with limited respite care options. (Geriatr Nurs 2005;26:378-386)

Methods

Participants

All patients from the Denizli (Turkey) Alzheimer’s Association and from the outpatient Alzheimer’s clinics of 3 large hospitals in the area were considered for the study. In addition, volunteers from the association started a program in the community to identify and invite all dementia patients and their caregivers to the association and to distribute the information about this study using word of mouth and local media. With these comprehensive methods, we were able to identify 80 dementia patients and their caregivers. The sample comprised caregivers of patients diagnosed with Alzheimer’s-type dementia using criteria from the Diagnostic and Statistical Manual (DSM-IV).6

Of the 80 potential participants, 39 were unavailable for contact; 18 were located in remote towns and counties, 13 could not be reached, 6
refused to participate, and 2 were deceased. Of the remaining 41 patients and their primary caregivers, 9 were unable to participate in the research orientation for various reasons. Therefore, 64 participants (32 primary caregiver-patient pairs) were available for this study. Table 1 summarizes the demographic characteristics of the participants. The study population consisted of 32 patients (24 women, 8 men), with a mean (SD) age of 70.6 (9.68) years. The mean (SD) Mini Mental State Examination of the patients was 11.6 (9.4). Of the 32 patients, 19 had an additional chronic disease such as cardiovascular disease or diabetes. The primary caregivers of the patients were mainly their children or spouse (or both); usually only 1 person, generally a woman with a mean age of 49.6 (12.9) years, provided the care.

Medical histories were gathered and clinical examinations were conducted, and patient diagnoses were verified by examination and laboratory studies. The study was approved and supported by the Denizli Alzheimer’s Association. A face-to-face interview was conducted only after the caregiver understood the purpose of the study and gave verbal consent.

### Table 1.
Demographic Characteristics of Alzheimer’s Patients and Their Primary Caregivers

<table>
<thead>
<tr>
<th></th>
<th>Patients (n = 32) n (%)</th>
<th>Primary Caregivers (n = 32) n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age, mean (SD)</td>
<td>70.6 (9.68), range 48–85</td>
<td>49.6 (12.9), range 22–74</td>
</tr>
<tr>
<td>MMSE, mean (SD)</td>
<td>11.6 (9.4), range 0–29</td>
<td>NA</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>24 (75.0)</td>
<td>21 (65.6)</td>
</tr>
<tr>
<td>Male</td>
<td>8 (25.0)</td>
<td>11 (34.4)</td>
</tr>
<tr>
<td>Marital status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>14 (43.7)</td>
<td>30 (93.7)</td>
</tr>
<tr>
<td>Divorced</td>
<td>18 (56.3)</td>
<td>2 (6.3)</td>
</tr>
<tr>
<td>Occupation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Businessperson</td>
<td>4 (12.5)</td>
<td>1 (3.1)</td>
</tr>
<tr>
<td>Professional (doctor, engineer, lawyer, etc.)</td>
<td>1 (3.1)</td>
<td>(—)</td>
</tr>
<tr>
<td>White collar (teacher, nurse, police)</td>
<td>3 (9.4)</td>
<td>10 (31.3)</td>
</tr>
<tr>
<td>Blue collar (industrial worker, etc.)</td>
<td>3 (9.4)</td>
<td>7 (21.9)</td>
</tr>
<tr>
<td>Homemaker</td>
<td>21 (65.6)</td>
<td>14 (43.7)</td>
</tr>
<tr>
<td>Educational status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Illiterate</td>
<td>12 (37.5)</td>
<td>1 (3.1)</td>
</tr>
<tr>
<td>Primary school</td>
<td>11 (34.4)</td>
<td>15 (46.9)</td>
</tr>
<tr>
<td>Secondary school and higher</td>
<td>9 (28.1)</td>
<td>16 (50.0)</td>
</tr>
</tbody>
</table>

MMSE = Mini Mental State Exam.

### Definitions

Primary caregivers were defined as unpaid persons who had the primary responsibility of helping a patient with activities of daily living and instrumental activities of daily living.

### Comprehensive Educational Program Reinforced by an Individualized Component (CEPRIC)

The CEPRIC was created by the investigators and comprised 3 sections: a general information session on AD, an individualized educational component tailored to accommodate previously detected problem areas of patients and caregivers, and an educational booklet. **General Information Session.** Topics include a presentation of the disease and discussions of how to deal with associated behavioral disorders, arrange the home, and organize daily life. **Individualized Educational Component.** In conjunction with the NANDA criteria, specific problem areas for Alzheimer’s patients and their caregivers were detected with a questionnaire. This approach enabled us to do a nursing assessment on patient and caregiver prob-
lems using a standardized format. Therefore, we were able to modify the educational component to individualize it for the patients’ and primary caregivers’ needs. Sample solution strategies for each NANDA diagnosis are presented in Table 2.

**Educational Booklet.** A colorful and large-font educational booklet was developed for this research. Solution methodologies for all the problems mentioned in Table 2 were presented in this booklet.

**Data Forms**

**Questionnaire.** A questionnaire with 100 questions was used to collect the sociodemographic information and patient and caregiver problem areas, as defined by NANDA. The patients’ and caregivers’ problems were then reduced to 21 NANDA diagnoses using a checklist (see Table 2).

Several scales were used for the evaluation of the caregivers’ quality of life, anxiety, and depression scores.

- **Duke Scale:** The Duke is a 17-item questionnaire in which the respondent reports current health-related quality of life (HRQOL) within a 1-week time frame. It is scored with 11 scales, 6 of which measure function and 5 of which measure dysfunction. The Duke was selected because it has fewer items and may be easier to use than other general quality of life instruments and because it collects information about both normal and abnormal function. A Turkish edition of this scale is available.

- **Beck Anxiety Inventory and Beck Depression Scale:** The presence of anxiety and depression symptoms was evaluated using the Beck Anxiety Inventory and Beck Depression Scale. Scores range from 0 to 63, with higher values indicating more anxiety and depression symptoms.

- **MMSE:** The MMSE provides clinicians and researchers with a rapid and easy evaluation of various aspects of cognitive status and is easy to use. Turkish editions of this test are available for the less educated and well-educated participants.

**Procedure and Intervention**

Baseline data were collected between April and July 2003. All identified caregivers were contacted by phone and asked to participate in the study. Several professionals saw the AD patients and their caregivers in the Alzheimer’s Association office or in the patient’s home. A neurologist interviewed the patient, obtained clinical information to verify the DSM-IV diagnosis of dementia, and administered the MMSE. A research assistant applied the questionnaire to the caregivers to collect information on sociodemographics and their health conditions. A nurse evaluated the patients’ and caregivers’ problems with regard to the NANDA criteria. Finally, the Duke Scale, Beck Depression Scale, and Beck Anxiety Inventory were completed during this interview.

Two weeks after the initial interview, a 50-minute educational session led by a nurse trained in AD was administered. The session had 3 main parts. After providing general information on AD, the individualized educational component tailored according to the nursing diagnoses as classified by the NANDA criteria during the first interview was administered. The educational booklet was given to the caregivers at the end of the interview for further use.

A one-on-one discussion method was used to educate the patients and their caregivers. Information was given in an informal manner, allowing patients and their caregivers to ask questions or share concerns during the interview. Finally, participants were informed about the Alzheimer Association’s activities and the available support mechanisms.

Four weeks after the educational meeting, a final evaluation was set up to investigate preexisting and new problems in both patients and caregivers. The Duke, Beck Anxiety Inventory, and Beck Depression Scale were administered again to the primary caregivers.

**Data Analysis**

Paired sample t tests for continuous variables and McNemar chi-square tests for discrete variables were used to evaluate preexisting and new problems in patients and their caregivers, as well as quality of life, anxiety, and depression scores for caregivers. All data were analyzed in SPSS for Windows.

**Results**

Table 2 summarizes nursing diagnoses of the Alzheimer’s patients and their primary caregivers before and after the intervention. Of the 21
Table 2. Nursing Diagnosis of Alzheimer Patients and Their Primary Caregivers Before and After the Intervention

<table>
<thead>
<tr>
<th>Actual/Potential Nursing Diagnosis (n = 32)</th>
<th>Intervention</th>
<th>P value</th>
<th>Solution Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problems of patients</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Altered sensory-perceptual processes</td>
<td>30 (93.8)</td>
<td>24 (75.0)</td>
<td>0.031</td>
</tr>
<tr>
<td>Alteration in nutrition</td>
<td>28 (87.5)</td>
<td>5 (15.6)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Powerlessness</td>
<td>22 (68.7)</td>
<td>7 (21.8)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Altered thought processes</td>
<td>15 (46.8)</td>
<td>10 (31.3)</td>
<td>0.125</td>
</tr>
<tr>
<td>Disturbed sleep pattern</td>
<td>14 (43.8)</td>
<td>4 (12.5)</td>
<td>0.006</td>
</tr>
<tr>
<td>Alteration in elimination</td>
<td>14 (43.8)</td>
<td>10 (31.3)</td>
<td>0.219</td>
</tr>
<tr>
<td>Risk for trauma</td>
<td>13 (40.6)</td>
<td>2 (6.2)</td>
<td>0.003</td>
</tr>
<tr>
<td>Actual/Potential Nursing Diagnosis (n = 32)</td>
<td>Intervention</td>
<td>P value</td>
<td>Solution strategies</td>
</tr>
<tr>
<td>-----------------------------------------</td>
<td>--------------</td>
<td>---------</td>
<td>---------------------</td>
</tr>
<tr>
<td></td>
<td>Before n (%)</td>
<td>After n (%)</td>
<td></td>
</tr>
<tr>
<td>Anxiety</td>
<td>12 (37.5)</td>
<td>4 (12.5)</td>
<td>0.008</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Empathize with your patient; define the factors causing anxiety in your patients; reduce the levels of anxious factors, etc.</td>
</tr>
<tr>
<td>Self-care deficit</td>
<td>9 (28.1)</td>
<td>2 (6.2)</td>
<td>0.039</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Encourage independence; assist and supervise only when necessary, ie, showers; suggest clothing that slips on easily, avoid zippers, buttons, and ties, etc.</td>
</tr>
<tr>
<td>Impaired physical mobility</td>
<td>8 (25.0)</td>
<td>5 (15.6)</td>
<td>0.375</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Allow enough space for safe walking activities; encourage walks with an attendant; provide passive exercise for those confined to bed, etc.</td>
</tr>
<tr>
<td>Impaired verbal communication</td>
<td>8 (25.0)</td>
<td>4 (12.5)</td>
<td>0.219</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Show that you are listening and trying to understand what is being said; maintain eye contact; encourage the person to continue to express thoughts even if he or she is having difficulty, etc.</td>
</tr>
<tr>
<td>Activity intolerance</td>
<td>5 (15.6)</td>
<td>3 (9.4)</td>
<td>0.625</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Choose the type of suitable activities with the help of your doctor; count the number of pulsebeats and respirations and compare them to the numbers when the patient is at rest; check edemas, etc.</td>
</tr>
<tr>
<td>Impairment skin integrity</td>
<td>3 (9.4)</td>
<td>2 (6.2)</td>
<td>1.000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Clean the pressure points; apply massage around the area of affected skin; use medication on decubitus wounds according to instructions, etc.</td>
</tr>
<tr>
<td>Ineffective breathing pattern</td>
<td>2 (6.2)</td>
<td>2 (6.2)</td>
<td>1.000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>If bedridden, change the position every 2 hr; make the patient cough after positional change; humidify room air if necessary, etc.</td>
</tr>
<tr>
<td>Risk for infection</td>
<td>2 (6.2)</td>
<td>1 (3.1)</td>
<td>1.000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Observe for signs of infection; check body temperature frequently; keep the patient’s body hygiene in a good condition, etc.</td>
</tr>
<tr>
<td>Altered role performance</td>
<td>2 (6.2)</td>
<td>2 (6.2)</td>
<td>1.000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Encourage the patient to evaluate their feelings about their role loss and to put these feelings into words; together with your patient, determine what role and responsibilities the patient is able to and wants to have; and ensure that the patient is able to cope with the problems related to their new roles, etc.</td>
</tr>
<tr>
<td>Problems of primary caregivers</td>
<td>Actual/Potential Nursing Diagnosis (n = 32)</td>
<td>Intervention</td>
<td>P value</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>---------------------------------------------</td>
<td>--------------</td>
<td>---------</td>
</tr>
<tr>
<td></td>
<td>Before n (%)</td>
<td>After n (%)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Impaired social interaction</td>
<td>15 (46.8)</td>
<td>4 (12.5)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Caregiver role strain</td>
<td>15 (46.8)</td>
<td>1 (12.5)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Ineffective individual coping</td>
<td>14 (43.8)</td>
<td>1 (3.1)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Ineffective family coping</td>
<td>14 (43.8)</td>
<td>1 (3.1)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Altered family processes/ risk</td>
<td>6 (18.7)</td>
<td>1 (12.5)</td>
<td>0.063</td>
</tr>
</tbody>
</table>
existing nursing diagnoses for the patients and their primary caregivers, only 2 presented no change, and the rest showed improvement. The 2 problems of patients presenting no change were ineffective breathing patterns and altered role performance. After the intervention, a reduction was reported on the number of patients experiencing disturbed sleep and eating patterns, trauma risk, self-care deficit, powerlessness, altered sensory-perceptual processes and anxiety. Even though there was a reduction in the number of patients who experienced impaired skin integrity and physical mobility, activity intolerance, risk of infection, altered elimination, altered thought processes, and impaired verbal communication, these were not statistically significant. We observed that primary caregivers’ problems such as inability (of the individual or family) to cope, impaired social interaction, and caregiver role strain improved significantly.

According to the Duke Scales, primary caregivers’ dysfunctional health-related scores decreased and all functional health-related scores increased after the intervention. The decrease in depression and anxiety scores for the primary caregivers after the intervention was statistically significant (Table 3).

Discussion

This study showed reduction in problems of AD patients and their primary caregivers in addition to an increase in the quality of life and decreased anxiety and depression scores among caregivers after the CEPRIC. We believe that the individualized component in the CEPRIC is the main factor to have positively influenced this outcome. Although the study was not designed to detect the effect of each individual component of the comprehensive education program, we collected some qualitative data after the study. Most of the caregivers considered the most helpful parts of the program to be the suggestions for alleviating the patients’ immediate problems, which were defined by NANDA criteria and tailored to each patient on an individual basis. Receiving assurance that they were not alone helped

<table>
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<tr>
<td><strong>Functional Health</strong></td>
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<tr>
<td>Duke Scales* (n = 32)</td>
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<tr>
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<td>Mental health</td>
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<td>General health</td>
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<td><strong>Dysfunctional Health</strong></td>
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<td>Anxiety</td>
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<td>Depression</td>
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<td>Beck Depression Scale</td>
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<td>Beck Anxiety Inventory</td>
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</tbody>
</table>

*Scale = 0–100, with high health-related quality of life indicated by high functional health scores and low dysfunctional health scores.
them to cope with the situation, as did receiving written educational materials, suggesting that booklets had the advantage of allowing patients to assimilate information at their own pace. Our findings are comparable to the results of several studies. A number of comprehensive group education programs for caregivers have been shown to improve caregiver knowledge, decrease family burden, improve coping skills, and delay institutionalization and were rated as helpful by participants.21,22

In this study, all caregivers were the immediate relatives of AD patients. Generally, the participants indicated that they had problems because they had not received sufficient information about the disease, felt burdened by it, and had lost social contact due to caregiving responsibilities. Our findings indicating the need for caregiver interventions were previously noted in several earlier studies from Turkey. These studies showed that caregivers of patients with chronic diseases display symptoms of chronic fatigue and depression, feel overwhelmed, have a diminished social life, and lack personal time.23,24

The relatively small sample size and the lack of a control group are the main limitations of this study. Another possible limitation is that we have reported only the early results of the intervention. After these encouraging results, we are planning not only to continue to collect information on long-term follow-up but also to repeat the same intervention regularly. In the future, we expect to reach a sufficient number of participants to allow evaluation of each component of the intervention. Our use of the NANDA criteria to determine caregiver problems is the main strength of the study. This approach provided us with an objective and holistic way to identify individual caregiver problems.

We conclude that the CEPRIC significantly reduced problems among caregivers of Alzheimer’s patients, especially in an environment with limited respite care options. Additionally, this intervention improved the quality of life of primary caregivers while reducing anxiety and depression levels.

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Urinary tract infections in the elderly: a survey of physicians and nurses (Midthun et al.). 2005;26:245-51

Urine dipsticks
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