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Dedication

The January 2008 issue of Self Care, Dependent Care & Nursing is dedicated to Dorothea E. Orem for her innumerable contributions to nursing. Her commitment to the advancement of nursing as a field of knowledge and a field of practice is reflected in her work related to the development and refinement of the Self-Care Deficit Nursing Theory, in her ideas regarding the form of nursing science, in her bringing together of nurses as communities of scholars, and in her willingness to listen and share with nurses striving to achieve a greater understanding of nursing. Dorothea Orem’s contributions have made a difference and for that we can all be grateful.

Barbara Banfield, President, IOS
Call for Papers

_Self-Care, Dependent-Care, & Nursing (SCDCN)_ is the official journal of the International Orem Society for Nursing Science and Scholarship. The editor welcomes manuscripts that address the mission of the Journal.

**Mission:**
To disseminate information related to the development of nursing science and its articulation with the science of self-care.

**Vision:**
To be the venue of choice for interdisciplinary scholarship regarding self-care.

**Values:**
We value scholarly debate, the exchange of ideas, knowledge utilization, and development of health policy that supports self-care and dependent-care.

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**AUTHOR GUIDELINES**

**MANUSCRIPT PREPARATION**
Use Standard English. The cover page must include the author’s full name, title, mailing address, telephone number, and eMail address. So that we may use masked peer review, _no identifying information is to be found on subsequent pages_. Include a brief abstract (purpose, methods, results, discussion) followed by MeSH key words to facilitate indexing. The use of metric and International Units is encouraged. Titles should be descriptive but short. Full-length articles should not exceed 15 double-spaced pages. Use of the _Publication Manual of the American Psychological Association (5th ed.)_ is strongly encouraged but not mandatory. When required by national legal or ethical regulations, research-based manuscripts should contain a statement regarding protection of human subjects.

**REVIEW PROCESS**
Manuscripts are reviewed anonymously. One author must be clearly identified as the lead, or contact author, who must have eMail access. The lead author will be notified by eMail of the editor’s decision regarding publication.

**INTELLECTUAL PROPERTY**
Authors submit manuscripts for consideration solely by SCDCN. Accepted manuscripts become the property of SCDCN, which retains exclusive rights to articles, their reproduction, and sale. It is the intention of the editor to facilitate the flow of information and ideas. Authors are responsible for checking the accuracy of the final draft.

**SUBMISSION**
Manuscripts are to be submitted in MS Word format as an eMail attachment to the editor, Dr. Violeta Berbiglia at violetaberbiglia@hotmail.com. Submissions will be immediately acknowledged. It is assumed that a manuscript is sent for consideration solely by SCDCN until the editor sends a decision to the lead author.

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**CALL FOR NEW SCHOLAR PAPERS**

The purpose of the _New Scholar Papers_ feature is to foster the advancement of nursing science and scholarship in the area of Orem’s Self-Care Deficit Nursing Theory through the recognition of developing scholars.

**NEW SCHOLAR QUALIFICATIONS**
- Member of the International Orem Society (Contact Dr. Anna Biggs at biggsaj@slu.edu to become a member)
- Enrollment in nursing graduate studies
- Scholarly productivity related to the advancement of nursing science and scholarship in the area of Orem’s Self-Care Deficit Nursing

**RECOGNITION OF NEW SCHOLARS**
- Each _New Scholar_ will be featured in an issue of the _SCDCN_. The IOS will award the scholar a complimentary membership.

**SUBMISSION OF PAPERS**
Papers will be submitted using the _Author Guidelines_.

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Dear readers:

My sincere intent for this issue is to honor Dorothea E. Orem. The legacy she left will live forever through us. I invite you to join with me to continue to support the development and use of the Self-Care Deficit Nursing Theory.

The issue features papers from IOS members, the second IOS New Scholar award, a memorial to an undergraduate nursing student who was on his way to contributing to the SCDNT body of knowledge, and 2 classic contributions by Harre. Also, the IOS is pleased to introduce our most recent advance in Southeast Asia: two MSN students who have selected the SCDNT to guide their theses in Vietnam’s first and only MSN program that began this Fall at the University of Medicine and Pharmacy Ho Chi Minh City.

The IOS Board of Directors has two important announcements:

• Self-care, Dependent-Care & Nursing, the Official Journal of the International Orem Society is now published as online open access. The journal continues to be referenced in EBSCO CINAHL.
• The 10th IOS World-Congress on SCDNT “Reflecting the Past – Conquering the Future” will be held June 26 – 29, 2008 at The University of British Columbia, Vancouver, Canada.

Thank you for your continuing support of the SCDCN.

Vi Berbiglia
Editor, Self-Care, Dependent-Care & Nursing

A Tribute to Honor
Dr. Dorothea E. Orem

I first met Dorothea Orem when she came as a consultant to the newly established School of Nursing at the University of Southern Mississippi in the Fall of 1966. She arrived at our small airport in Hattiesburg and smiled. That was the beginning of an amazing forty-one years for me. I was amazed at the breadth and depth of her ability in structuring nursing as a practice discipline that required a broad spectrum of understanding of the Natural, Applied and Medical Sciences. Dr. Orem identified the medical sciences as Pathology, Pharmacology and Public Health. In addition she advocated medical sciences be taught by the professors in each discipline. Nursing faculty were expected to design systems of nursing using relevant content from the sciences. This was indeed a departure from Nursing faculty teaching medical science content. Thus we had a Pathologist, a Pharmacologist and a Public Health Scientist teaching the three medical science courses.

At the time, Dorothea was writing her first edition of Nursing: Concepts of Practice. We had the honor to have drafts of her work to use as guides in course development. What an honor, and our small group accepted the challenge. We received Reasonable Assurance of Accreditation by the National League for Nursing for our first class that was admitted in the Fall of 1967. We were the first Baccalaureate program to implement her model.

Dr. Orem always came with more material and insight as to what we were trying to accomplish. We were introduced to the philosophical bases for her models and she helped us in so many ways. As a teacher, she was amazing. When a faculty member offered ideas, she would say yes and perhaps—and then fill the blackboard with rationale for our consideration. Naturally
our eyes opened wide and into the curriculum it went.

Dean Harkins quickly established a Continuing Education department and once again Dorothea assisted in doing workshops around the State which legitimized our new and innovative nursing program. In addition, deans from other schools of nursing were invited to seminars and most shook their head at the idea that our nursing courses were not the traditional and that the medical sciences were being taught by non-nursing faculty.

I was invited by Dr. Orem to become a member of the Improvement in Nursing Committee which later became the Nursing Development Conference Group. What an honor. Down thru the ensuing years, her work became internationally known as more nurses from around the world recognized the worth of her endeavors.

Where do we go now? We must continue to use her works in our teaching, research and practice endeavors. It is there for us to continue to expand Nursing Science. Our focus is not competitiveness but excellence in the delivery of care to persons according to their self-care abilities and deficits, using dependent care agents as family and others to meet the self-care needs of individuals, families and groups. These needs range from preventing the development of self-care deficits to overcoming these deficits or learning to live with their limitations.

Dorothea, thank you for your many contributions and all you did to help me so many times with your words of encouragement and support. Thank you most of all for being my friend for forty one years.

Cora S. Balmat, RN, PhD

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**Nursing Theory in Inquiry-Based Education: Formative Experiences for Novice Nursing Students**

Ellen B. Buckner DSN, RN

As we reflect on the legacy of Dorothea Orem, none is more important that leading the next generation of nurses into practice. Although we may be aware of how our own views of nursing have been touched and formed through opportunities to engage in the Self-Care Deficit Nursing Theory, we also recognize that those opportunities are becoming increasingly difficult to obtain. How many curricula are still grounded in a specific theory as were so many in the later part of the 20th Century? How many 21st Century curriculum revisions have taken out introductory material on the nurse theorists and put in more quantitative approaches to developing methods of evidence-based practice (EBP)? Even though most definitions of EBP include components of congruence with the nursing role and scope of practice and appreciation of the patient’s values and preferences, there is the temptation to selectively use statistical reduction to draw conclusions. This is sometimes being touted as “best evidence” without appreciation for meaning-based and theoretically sound approaches to care.

In addition, novice nurses are often selectively exposed to content, skills and processes of nursing without a framework or even exposure to frameworks that guide them to gain the perspective of the nurse. This is often done under the guise that theoretically based nursing is too abstract for undergraduates and more appropriate to graduate level theory courses.

In stark contrast to these current trends, is the work by students in programs which deliberately seek to both introduce nursing theory early and to develop the students’ competence through its application. One such program is the Honors in Nursing program at the University of Alabama (UAB) School of Nursing. Initiated in 2000, the UAB Nursing Honors program invites outstanding students at the point of entry into undergraduate baccalaureate nursing curriculum as juniors. Their knowledge of nursing is initially based on media, friends and family and personal health experiences. Their reference point for nursing is medicine. In the first Honors course, students write a paper on a topic of their interest related to a nursing theory or conceptual model. Almost without exception, these students have effectively utilized that approach to shift their thinking to nursing, to manage and construct meaning in complex health-care situations and to channel their enthusiasm for practice in ways that keep
their passion and apply it constructively. Honors in Nursing students have raised significant clinical questions, designed cohesive ways to study the phenomena and ultimately contributed to the nursing literature, enhancing practice. Honors students build on the initial introductory content, grounded in nursing theory, to develop and implement a senior inquiry-based clinical honors research project. Honors projects demonstrate undergraduate scholarship and have been based on nursing models and theories including the Roy Adaptation Model, Watson’s Theory of Human Caring, the Neuman Systems Model, Henderson’s Human Needs and Areas of Nursing Care, the Nightingale Environmental Theory and the Orem Self-Care Deficit Nursing Theory. In all these projects, the underlying conceptualization has been based on the formative ideas of nurse theorists. Many students have been published and won awards, including specific awards recognizing contributions to theory development. There is no substitute for such conceptualization, and the outcomes speak to the potential for excellence of our youngest nurse scholars.

This year, an exceptional Honors student completed the Nursing Honors program. Having entered as a “non-traditional” older student, he came to our profession determined to make a difference. Two things distinguished his scholarship of inquiry: his passion for assisting developmentally disabled adults and his use of the Orem Self-Care Deficit Nursing Theory to guide his scholarship. Larry A. Gwin, Jr. completed the Honors in Nursing Program in December 2006, producing a report of the preliminary findings from his honors work which could be submitted to a nursing journal. Larry selected Self-Care, Dependent-Care & Nursing (SCDCN). The report describes findings from two example cases of adults with cerebral palsy transitioning to adult care. Variables studied were functional self-care, self-care agency (measured operationally as self-efficacy) and functional social support. Orem’s theory framed the emphasis on self-care agency and self-care levels in different domains. The study examines the hypothesis that, as self-care agency matures in these young adults, the health care system has not kept pace with them. Gwin strongly suggested that nurses serve as advocates to assist disabled adults during transition so they may make developmentally appropriate changes in their care providers and achieve the highest possible levels of self-care.

The editor of SCDCN has graciously consented to publish this work, in part as a memorial to the author who died tragically while still an undergraduate student, but also to encourage other novice nurses, both students and clinical nurses, to apply the SCDNT to their practice and scholarship. Even more importantly, it is hoped that those whose passion for nursing is so strong, even as beginning nurses, will find in Orem’s conceptualization a model for their own continued development. Orem’s legacy should extend to novice nurses in many settings, confirming ideas relevant to maturing practice and supporting nursing scholarship by guiding nursing practice innovations, curricular revision and nursing advocacy.
In Memoriam
Lawrence A. Gwin, Jr.

Ellen Buckner

Larry Gwin entered the University of Alabama School of Nursing in Spring 2006 after a varied life experience. He graduated from 1986 in Ramsay High School in Birmingham, Alabama. He was gifted academically, a voracious reader, and an accomplished artist receiving a scholarship for art study at Atlanta Art Institute. However, other events took him into the workforce and for over 15 years he worked in the production, design and installation of stained glass windows in Southern rural churches.

Even as a child he had compassion for others, assisting a friend who had rheumatoid arthritis. In 1990 he met a family that would change his life. A young girl age 10, who over the next 15 years grew to adulthood, a woman full of personal empowerment, opened to him the ideas that he could pursue the dream to assist others through nursing to meet their own self-care demands. He volunteered extensively with organizations supporting adults with “disAbilities” such as United Cerebral Palsy, Make-A-Wish Foundation and Full Life Ahead.

I first met Larry when he was selected for the Honors in Nursing Program. His interviewers made numerous comments describing him as highly motivated, having a vast array of interests from bench science to clinical nursing, very articulate, humorous, bright, and charismatic, with a down-to-earth wisdom, engaging personality, and leadership potential. They noted he had street-smarts, confidence, enthusiasm, and “compassion for his fellow students--he’ll be a great classmate!” During his work at the School of Nursing, he realized all of these. Faculty members described him as very enjoyable, hard-working, and good with his patients, with one “difficult” patient even requesting him twice!

When he entered my office to discuss his ideas for the honors experience, I knew that here was a man with passion for a worthy cause. He described his interests in the health needs and care for adults with cerebral palsy. He went on to state that the transition to adult health care was fraught with difficulty of access. He had a depth of care for those individuals developed over the years of knowing the particular individual and her family and he wanted to make a difference in the health care system. He wanted to find a way to make it more responsive to these unmet needs. He worked with the United Cerebral Palsy Center to conduct interviews with adults and their caregivers. Dr. Mark Cohen, Director of Medical Services at UCP, met with Larry and facilitated his recruitment of honors project participants. Dr. Cohen described Larry as having a special commitment to these adults. He recognized Larry’s passion and regarded him highly. He and I both consider it a devastating loss to the nursing profession and in the care of those with cerebral palsy of Larry’s early passing.

Larry’s Honors project was entitled “Fragmentation of Healthcare in the Lives of Transitional Cerebral Palsy Patients.” For that he did extensive work reviewing the literature and planning the study. He found tools appropriate to tapping the frustrations but also the capabilities of these adults. He interviewed several adults with CP and their caregivers and overcame numerous barriers to complete the project. He pursued his dream of graduating from UAB “With Honors in Nursing.” His final paper published here captures his passion, commitment and the extensive work of all the stages of the project. With his family’s permission it was submitted and accepted for publication in Self-Care, Dependent-Care Nursing, the journal which Larry had identified as his first choice, a worthy tribute to his heartfelt love of others.

Larry’s life touched the lives of all his classmates but none more than the honors students who worked with him. As they all struggled with the elements of the work, Larry’s cheer and unquenchable energy bolstered the whole group! One honors classmate stated, “His wit, intelligence and heart for service will be missed.”
Abstract
Cerebral palsy (CP) is a multi-focal disability presenting a variety of obstacles which affect communication and mobility. The person with CP encounters significant social issues in family function and individuation at the time of transition to adulthood. There is a marked deficit of community based resources and few supports to developing self-care agency. The purpose of this study was to examine the relationship between functional social support and self-care agency for obtaining health care in the lives of transitional adults with CP. Institutional Review Board approval and recruitment of participants proved to be challenges in this population. Results show variations in self-care agency associated with special health care deficits in ambulation and communication. Findings for functional support emphasized family; however, the employed participant had higher social support scores. Barriers included lack of dedicated specialists for CP, transportation issues and state requirements. The implication for nursing practice is a call for patient advocacy.

Keywords: Orem Self-Care Deficit Nursing Theory, self-care agency, transitional adults, cerebral palsy, social support

Numerous early-intervention programs exist for the child with cerebral palsy (CP). These programs allow for increased longevity and quality of life; however, as individuals grow in age and transition into independent adulthood, the availability of health care services to serve their special needs diminishes, and they experience difficulty in obtaining routine health care. The purpose of this study was to examine the relationship between functional social support and self-care agency for obtaining health care in the lives of transitional adults with CP; more specifically, the following research questions were proposed:
1. What are the special health care needs of persons with CP as they transition to adulthood?
2. What are the health care resources these patients utilize, and how are those resources financed?
3. What is the functional social support and self-care agency of young adults with CP who demonstrate middle to high levels of function?
4. Is there a relationship between functional social support and self-care agency?
5. How do functional social support and self-care agency impact fragmentation of care and affect the barriers and facilitators to access?

Theoretical Background
Orem’s Self-Care Deficit Nursing Theory (SCDNT) provided the theoretical basis of the study. Self-care and self-care agency were defined as consisting of a) foundational capabilities and dispositions necessary for deliberate self-care action, b) power components necessary for general self-care operations and c) capabilities for specific self-care (estimative, transitional, productive) operations (Orem, 2001). The foundational capabilities of the transitional adult with CP are based on dependent-care agency in childhood and adolescence. The parent or guardian, also known as a legally authorized representative (LAR), assumes responsibility for obtaining care during the early years of the individual’s life. The therapeutic self-care demands (TSCDs) are high for the individual in the physical, educational, psychosocial and developmental domains. As individuals reach adulthood, the TSCDs are legally met through their own self-care agency. The adult is legally empowered to assume responsibility for self-care. Dependence on one’s own capabilities, (especially cognitive abilities) when physical abilities are limited, sets up a tension that can be a positive force for development. Maturing transitional adults must assume personal power with respect to general self-care and the implementation of specific health-related capabilities. The community-dwelling transitional adult with CP functions on multiple self-care levels, from wholly compensatory to partially compensatory and educative-supportive in others.

As the transitional adult acquires increased knowledge and capability in self-care, changes occur in self-care agency. The self-care operations framework developed by the Nursing Development
Conference group provides a definitive way to view this transition (2004). During the transition, the young adult may move from undeveloped to developing, to developed (but not stabilized) in self-care agency. Estimative operations at this stage include knowing self-care requisites and means of meeting these. Areas of TSCRs include mobility and transportation, use of social support networks, and obtaining health care. Transitional operations include assuming direct responsibility for decisions as inputs into provision of care. Production operations include specific actions to meet TSCRs, such as monitoring.

Orem defined self-care agency with particular emphasis on its importance in maturing persons. She stated that self-care agency is “…the complex, acquired ability of mature and maturing persons to know and meet their continuing requirements for deliberate, purposive action to regulate their own human functioning and development” (Orem, 2001, p. 254). This study sought to identify how transitional adults with CP engaged self-care agency to meet therapeutic self-care demands.

Review of Literature

Although there have been national initiatives encouraging transitional planning for adults with special health needs, several studies show that these have not yet produced widespread impact in care availability. Key studies described below highlight the need for further work. These studies also served to guide the development of the current study in selection of setting and measurement strategies.

Betz (1998) described the transition of adolescents with chronic conditions from pediatric to adult health care settings. The process she outlined mirrors the child’s progression through the educational system for the implementation of programs provided for by the Americans with Disabilities Act (1990). All schools are required to provide an Individualized Education Program (IEP) with the implementation of an Individualized Transition Program (ITP) at age 14 that can help the adolescent achieve goals such as college, vocational training, or independent living. Betz found that the role of the school nurse and primary care provider (nurse practitioner) was critical in this changeover. Special needs children and adolescents are also eligible for transition planning under Section 504 of the Rehabilitation Act of 1973, even if they do not qualify as special education students. Betz identified needs for patient education on the intricacies of navigating an HMO, referral considerations, and on the difference between primary and preventative health needs. Betz viewed planning for transition as a lifelong process and included a “checklist” for transitional health care assessment. Her work was foundational to understanding the challenges and opportunities for nurses assisting with transition to adult care.

The research of Darrah, Magill-Evans, and Adkins (2002) evaluated transitional services in the areas of health, education, recreation, employment, housing and transportation. The experiences of those with special needs and their families were compared to families without such special needs. Four themes identified were: disability awareness, communication information, caring and supportive people, and lastly fighting and fatigue (Darrah, et al., 2002). The researchers concluded that those with special needs and their families are still faced with many difficulties in service provision despite an increase in disability awareness. Dissemination of information about services and resources was inadequate and piecemeal, and misconceptions about those with CP contributed to the marginalization of this group.

Caring and supportive people emerged as an important theme as these patients and families navigated the labyrinth of the health care system and added, oddly, to another common problem in transitional planning for those with CP: once a resource or service was identified (for example a physician or clinic), families and patients become reluctant to abandon that resource to search for other services that might better meet the individual’s developing needs. It was noted that the community network followed by traditional families outstripped the smaller association of special needs families and that often, providers to meet the specific concerns of the latter were simply absent. Cost and insurance issues exacerbated pre-existing problems. Darrah and colleagues urged the adoption of the concept of special needs patient as a consumer, one whose current service needs go unmet (2002). The work was further useful in that it utilized direct observations from families and persons with special needs to illustrate identified themes (Darrah, et al., 2002). This first hand perspective was used in selecting and drafting instruments for the current study. These authors also highlighted the deficit of community resources with which to deal with the transition and thus contributed to the choice of a community setting for the current study.

Transition planning was established as a criterion for the Healthy People 2010 (USDHHS, 2000) and was emphasized in the New Freedom Initiative initiated by the The White House in 2001 (The White House, 2007). In the study by Lotstein, McPhearson, Strickland, & Newacheck (2005), data obtained from a national database, the 2001 National Survey of Children with Special Health Care Needs (USDHHS-MCHB, 2004), transition
planning was discussed strictly within the context of health care. The purpose of their study was to establish baseline results for comparison when future versions of the national survey are administered. One of the more disturbing findings pertinent to the current research study was that "... youth more severely impacted by their condition were not any more likely to receive transition planning than youth with milder conditions" (Lotstein, et al., 2005, p. 1566). Although providing a wealth of statistical data, the research lacked insight into psychosocial issues that are critical to keep in mind when exploring transition. The examination of progress from pediatric to adult health care is vital, however these authors’ approach to the subject aligned more closely with the institutional model of rehabilitation and support and ignored community based approaches where social support is integral and the emotional and psychological needs of the patient might be more thoroughly addressed.

Marn and Koch (1999) described the major tasks of adolescence and how they influence transition planning. They were particularly successful in establishing the complexity and wide range of disabilities that accompany a diagnosis of CP. Their stepwise approach discussed how the otherwise typical transition through adolescence was markedly more difficult when viewed through the filter of that diagnosis. Their exhaustive analysis of the psychosocial and emotional ramifications of each task and the implications for the future of youths with CP and their families demonstrated the necessity of a strong social support network. For each developmental task, potential crises and solutions were provided by the authors. Their exclusive focus on the non-physiological aspects of transition fits firmly in the community based model of rehabilitation and support. The understanding that new networks must be developed was clearly communicated. Those new relationships with peers and community can enhance more established familial ones and help to ease caregiver anxiety and stress while allowing these youths to realize their full developmental potential. These developmental processes support acquisition of self-care agency as a key component in maturing to adulthood.

Although few studies have been done with the population of transitional adults with CP, those that have focused on this group reveal key processes and provide a basis for continued work. The current study addresses these processes through measurement of factors directly via interviews of persons with CP, in settings based in the community and with instruments specifically chosen to capture the maturing self-care agency of these young adults.

Methodology

Study participants.

The purpose of this study was to examine the relationship between functional social support and self-care agency for obtaining health care in the lives of transitional adults with CP. Participants were between 21-29 years old and single, having a primary (before age 2) developmental diagnosis of CP. They had attended an early intervention program, secondary educational program, and/or vocational program. Participants were able to communicate in some form, had health insurance and had sought health care within the previous 12 months. Individuals were excluded if they had a diagnosis of severe mental retardation, psychiatric disorder, or a history of alcoholism or chemical dependency. Recruitment occurred through a community agency and personal network sampling.

Cognitive impairments and developmental delays are often present in persons with CP, making them a vulnerable population. Care was taken to modify instruments, and to explain and administer them in a fashion that was compatible with the subjects’ ability and skill levels. After consultation with the medical director of the community agency, an amendment was made to the protocol to read all questions to the participants. Participants were interviewed with their LAR or another support person of their choosing.

Instruments.

The Norbeck Social Support Scale Questionnaire (NSSQ) (Norbeck, 1982) was used to measure functional properties of social support (e.g. emotional and tangible support). Size and duration of social network and types of support (affect, affirmation and aid) were scored.

The Craig Inventory of Environmental Hospital Factors (CHIEF) obtained from the Center for Outcomes Measurement in Brain Injury (Harrison-Felix, C., 2001) measured functional support. The CHIEF assesses barriers to participation in social, civic, recreational and other community activities. Scoring of each CHIEF item is the product of the frequency score (from never 0 to daily 4) and the magnitude of impact score (from no problem 0 to big problem 2) and the total item score ranged from 0 to 8. The maximum score for the 25 items is 200. Higher scores indicate a greater frequency and/or magnitude of environmental barriers.

The Self-Efficacy Scale by Sherer and colleagues (1982) was used to measure self-care agency. The scale has two components: the concept of self-efficacy expectancy (the belief that one can successfully perform the behavior in...
question) and the concept of social self-efficacy (a measure of self-efficacy in the social domain).

Additional open-ended questions were directed to the participant and LAR regarding issues of health care utilization. Questions were investigator designed and reviewed for content validity by three nurse educators with experience in research.

**Implementation constraints.**

After consultation with the community center’s medical director, an amendment was filed to address two points and include a larger and more accurately represented target study population. The initial inclusion criterion of early intervention program participation was stricken due to the scarcity of these programs when possible participants in the target age range of 21-29 were diagnosed with CP. Also addressed was clarification of the consent process to include possible participants who were their own LAR. Identification of persons who met the specific study inclusion criteria as well as access to these individuals proved more complex than anticipated. Study participants who used communication devices had difficulty with answering the open-ended questions. The Likert-type questions were easier for both participants. Future modification of the response range for possible answers from five to three should be considered to facilitate easier administration of questionnaires, but such modification would sacrifice nuance in the resulting scores.

**Results**

**Sample characteristics.**

Preliminary findings are reported from two cases. Both participants were female and 2 years of age; one was employed part time and the other unemployed. One resided with family, the other in a group home. Both had Medicaid, Social Security disability, and private insurance. Both paid some living expenses and stated that the majority of their assistive devices and therapies are covered by insurance (e.g. power wheelchairs). One participant used a communication device for speech.

**Special health needs.**

The special health care needs of the preliminary sample were multiple: both participants had significant impairments in ambulation, one had considerable impairment with communication skills, the other was legally blind but communicated well. Both met the criteria for high functioning CP but had delays that placed them behind their peers who were not disabled in achievement of appropriate developmental tasks. Aside from routine health care, they identified the need for physical, occupational, and vocational therapies.

**Health care resources.**

Barriers to health care included: a lack of specialists to treat CP patients, the refusal of some providers to treat CP patients, transportation issues and the fact that in order to maintain Medicaid coverage they must be examined at a state run hospital once a year. Examples of quotes from participants and their LAR are shown in Table 1. Surprisingly, no significant insurance or financial issues were mentioned in the preliminary sample.

**Functional support and self-care agency.**

Results from the NSSQ revealed that the participants had well developed networks of 16-24 members. Social network members had been known for approximately 5 years and were contacted weekly to monthly. Subscales of affect, affirmation and aid for the two participants are displayed in Table 2. Participant 1 had fewer resources for emotional and tangible social support than did Participant 2.

The CHIEF measures barriers to participation in social and other activities, with higher scores indicating more barriers. The total score for the CHIEF was 28 for Participant 1 and 104 for Participant 2.

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**Table 1. Problems with health care availability identified by participants and their legally authorized representative.**

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<th>Quote</th>
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<td>“The only specialists are at the [local children’s medical center]. I had a doctor tell me ‘I can fix stomachs, I can fix hearts, I can fix anything else. I know nothing about CP’.”</td>
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<tr>
<td>“The doctor expects me to be the expert. I have to go in and every time it’s a new doctor, I give her entire medical history. I have to tell him what’s needed.”</td>
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<tr>
<td>“There are no doctors or facilities that I am aware of that specialize in adults with CP.”</td>
</tr>
<tr>
<td>“She gets good health care because I make sure of it. I go in there and I’m determined.”</td>
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Participant 2, lower and higher than average scores in 40’s reported for a sample of 400 persons with spinal cord injury, traumatic brain injury, or other disabilities (Harrison-Felix, C., 2001). Barriers reported by Participant 1 were layout of buildings in schools, workplace or community and attitudes at home. Participant 2 reported more extensive barriers with 19 of 25 items being big problems, including policies, physical/structural, work/school and services/assistance (see Table 2).

General and social self-efficacy were reported to be moderately high (3.5-4.1 out of a maximum 5) in both participants. Participant 1 reported a larger network, higher self-efficacy, and fewer barriers. Participant 2 also reported a large network, but slightly lower self-efficacy and more barriers (see Table 2).

Relationship between functional support, self-care agency and access to health care.

Although both participants indicated high levels of self-efficacy and social support, differences were noted. The employed participant indicated a smaller network but one that could provide more aid in emotional and functional areas. She also identified many more functional barriers. Thus, exposure outside the home could have resulted in more positive self-care, through better utilization of resources to manage a more substantial perceived functional deficit. Conversely, as the individual possibly capable of more self-care, she could have been able to achieve more progress in transition, self-care agency, and developmental tasks.

Discussion

The wide range and complexity of CP disability confound simple health care solutions. As a result, there is a deficit of providers who choose CP as a specialty. The traditional network of community health care resources is absent, and the caregivers receive an informal but comprehensive medical education in the special needs of their child or ward as they piece together solutions to each aspect of disability. Social support is strong but largely limited to the immediate family and friends who provide the primary impetus for these individuals to seek health care. There is a definite need to address persons with CP as consumers and develop services to meet their health care needs, implemented in a fashion that is accessible to the newly independent young adults. Transition to self-care is essential and oftentimes dependent on developing self-care agency, generally and specifically, for health care service acquisition.

One of the ideas behind the design of this study was that the inclusion and exclusion criteria constitute a "best case scenario" for someone who has CP. Realistically, however, the participants who meet these criteria represent only a small fraction of the population with CP, limiting the applicability of study results. The recruitment of study participants from an established community center also has potential implications. The center has recently added health care services in conjunction with private physicians and the local university medical center to allow consumers with CP who participate in their programs to receive their entire routine health care (general medical, dental, and optometric) at the center. The center has physical, occupational, and vocational therapy services as well. These attributes establish the center as the gold standard for care of persons with CP. Clearly, the individuals who have access to these services would be less likely to identify problems with obtaining health care, possibly skewing study results.

The nurse can utilize professional networks and contacts to more comprehensively compile resources and facilitate delivery of information for the person with CP. Emerging technologies such as computer chips or flash drives that contain a patient’s entire medical history can also be useful tools. What is clear is that nurses in their professional roles can fill in the gaps experienced by persons with CP as they seek to maintain their health and can allow them to enjoy the independence and potential that they and their families have worked so hard to achieve. The implication for nursing practice is a call for patient advocacy.

Further research is warranted in the area of transitional adults with CP. Studies should begin

<table>
<thead>
<tr>
<th>Participant</th>
<th>Employed</th>
<th>Network Number a</th>
<th>Affect a</th>
<th>Affirmation a</th>
<th>Aid a</th>
<th>Self-efficacy c</th>
<th>Functional Support Barriers c</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>No</td>
<td>24</td>
<td>3.11</td>
<td>2.2</td>
<td>Not completed</td>
<td>4.1</td>
<td>28</td>
</tr>
<tr>
<td>2</td>
<td>Yes</td>
<td>16</td>
<td>3.94</td>
<td>3.81</td>
<td>3.60</td>
<td>3.6</td>
<td>104</td>
</tr>
</tbody>
</table>

Notes:  
aMeasured by subscales of the Norbeck Social Support Questionnaire (Norbeck, 1982).  
bMeasured by The Self-efficacy Scale (Sherer, et al., 1982).
with a thorough analysis of case examples since functional support, self-care agency and outcome are inextricably bound together and unique to each individual. In the care of the person with CP, every case is different. A thorough examination of the multiple factors affecting self-care and a clearer understanding of the interrelationships is possible. As the individual with CP makes the transition from dependent care to self-care and strengthens self-agency, the transitioning adult needs new strategies to achieve highest outcomes. In a recent study, Moore and Beckwith (2006) detailed self-agency, the transitioning adult needs new strategies. From dependent care to self-care and strengthens from dependent care to self-care and strengthens. They need nurses prepared to be champions of their care.

Acknowledgments

Lawrence A. “Larry” Gwin, Jr. died April 9, 2007, at the age of 39. His death was unexpected and shocked the School of Nursing. Larry’s passion was for adults with CP. This paper reports his senior Honors in Nursing project, edited by Drs. Buckner and Berbiglia for publication. It is hoped that the great potential he had will be echoed in another champion for the needs and rights of this population. Larry would have wanted to thank the many people whom he knew and loved who have CP and/or who care for those with special needs. I thank Dr. Mark Cohen, medical director of the community-based center, for assisting to bring this project to reality by making subject recruitment possible Fall semester 2006.

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Bibliography


The Health Deviation of Post-Breast Cancer Lymphedema: Symptom Assessment and Impact on Self-Care Agency

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Abstract

Breast cancer is the leading cancer among women world-wide, affecting 1 of 8 women during their lifetimes. In the US alone, some 2 million breast cancer survivors comprise 20% of all cancer survivors. Conservatively, it is estimated that some 20-40% of all breast cancer survivors will develop the health deviation of lymphedema or treatment-related limb swelling over their lifetimes. This chronic accumulation of protein-rich fluid predisposes to infection, leads to difficulties in fitting clothing and carrying out activities of daily living, and impacts self-esteem, self-concept, and quality of life. Lymphedema is associated with self-care deficits (SCD) and negatively impacts self-care agency (SCA) and physiological and psychosocial well-being. Objectives of this report are two-fold: (1) to explore four approaches of assessing and diagnosing breast cancer lymphedema, including self-report of symptoms and the impact of health deviations on SCA; and (2) to propose the development of a clinical research program for lymphedema based on the concepts of Self-Care Deficit Nursing Theory (SCDNT). Anthropometric and symptom data from a National-Institutes-of-Health-funded prospective longitudinal study were examined using survival analysis to compare four definitions of lymphedema over 24 months post-breast cancer surgery among 140 of 300 participants (all who had passed the 24-month measurement). The four definitions included differences of 200 ml, 10% volume, and 2 cm circumference between pre-op baseline and/or contralateral limbs, and symptom self-report of limb heaviness and swelling. Symptoms, SCA, and SCD were assessed by interviews using a validated tool. Estimates of lymphedema occurrence varied by definition and time since surgery. The 2 cm girth change provided the highest estimation of lymphedema (82% at 24 months), followed by 200 ml volume change (5% at 24 months). The 10% limb volume change converged with symptom report of heaviness and swelling at 24 months (38-39% lymphedema occurrence), with symptom report being the earliest predictor of lymphedema occurrence than any other measurement. Findings verify the importance of subjective assessment by symptom report of limb changes and SCD following breast cancer treatment as an essential tool in early detection and treatment of lymphedema. Findings also support the importance of pre-operative baseline measurements, symptom history, and SCA for later post-op comparisons. These preliminary findings underscore the importance of strengthening SCA by educating breast cancer survivors. Self assessment, early detection, and early treatment hold the best promise for optimal management of this chronic condition, limiting detrimental effects on SCA, and improving quality of life and physiological and psychosocial well-being. These findings lay the foundation for a clinical research program in breast cancer lymphedema based on SCDNT in which education in and awareness for self-report of lymphedema-associated symptoms is a first step in screening. Increasing patient knowledge through education will increase SCA by identifying and providing information to meet self-care requisites (SCR) related to the health deviation of lymphedema. The nurse has the opportunity to assist patients in developing self-care actions as needed to meet universal and health deviation therapeutic requisites to address self-care demands following breast cancer treatment.

Key words: breast cancer, lymphedema, self-care agency, self-care deficit, Orem
Over the last decade, major advances have been made in the prevention and treatment of breast cancer with minimal attention being given to the treatment side effect of lymphedema. More than 2 million U.S. breast cancer survivors are at a lifetime risk of developing lymphedema (LE), a chronic condition which can cause debilitating side effects and diminish self-care agency (SCA) (ACS, 2007; Armer, 2006).

According to the Self-Care Deficit Nursing Theory (SCDNT) of nursing, developed by the late Dorothea Orem (1980, 2001)..., "self-care requires both learning and use of knowledge as well as enduring motivation and skill. The learning process includes the individual's gradual development of a repertoire of self-care practices and related skills" (p. 271). She emphasized that:

...if a nurse sees only movements toward health, toward more effective living, without seeing the demands and burdens that injury, illness, and health care place upon a patient, the basis for nursing diagnosis and prescription is incomplete. The nursing perspective will be inaccurate, and the nurse will not have a sound basis for proceeding toward the nursing goal of assisting the patient in responsible action in matters of self-care (Orem, 1980, p. 167).

The purpose of this report is to explore four approaches of assessing and diagnosing breast cancer LE occurrence. This includes self-report of symptoms (being aware of and taking care of the effect of LE) and the impact of health deviations on self-care agency. The second goal is to propose the development of a clinical research program for LE based on the SCDNT. This involves assessing the patient’s universal, developmental and health deviation related requisites, determining the patient’s therapeutic self-care demands (TSCD) related to these requisites, and assisting the patient as required in a supportive-educative and partially compensatory nurse role.

**Defining Lymphedema**

*Lymphedema is the accumulation of protein-rich fluid in the interstitial space in the affected area.*

The lymphatic system normally returns 10% of the extracellular fluids and plasma proteins from the interstitial spaces to the heart. Secondary LE results when protein-rich lymph fluid becomes trapped in the extracellular spaces due to identifiable external damage to this system. This is inherently where the problem lies as the ineffective function and/or damaged structure of the lymphatic system impairs movement of the protein-rich lymph fluid from the interstitial space into the lymphatic system for re-distribution into the arterio-venous system at the subclavian vein (Lasinski, 2007). The condition lends itself to infection, sometimes life-threatening when spreading systemically, leads to difficulties in clothing fit and activities of daily living, and also affects self-esteem, self-identity, and quality of life (Armer, 2006; Radina & Armer, 2004). Potential contributing factors to this condition include surgical removal of lymph nodes, traumatic injury, radiation, infection, underlying or pre-existing impaired lymphatic structure and function, and/or individual predisposition(s) and basic conditioning factors yet to be fully understood (Földi, 2003).

Types of lymphedema include primary and secondary and these may exist as acute or chronic conditions (American Cancer Society, 2007). LE may exist in mild, moderate, or severe states. Földi (2003) identifies these stages (phases) of LE. Secondary lymphedema may affect the arm, breast, and chest in the person treated for breast cancer, while most commonly affecting the ipsilateral arm.

Breast cancer treatment is the leading cause of secondary (acquired) lymphedema in developed countries of the world (ACS, 2003; Lymphedema in the developing and developed world: Contrasts and prospects, 1998). Scientific literature reports 3-87% of the breast cancer population may experience lymphedema (Coen, Taghian, Kachnic, Assaad & Powell, 2003; Deutsch & Flickinger, 2003; Ozaslan & Kuru, 2003; Voogd et al., 2003) while medical literature estimates 15-20% LE occurrence in breast cancer survivors (Disa & Petrek, 2001). Recent figures indicate an estimation of 20-40% overall (Armer & Whitman, 2002; Armer & Stewart, 2005). Reported incidence of LE varies greatly among each patient group at risk for LE (Armer & Stewart, 2005; Armer, 2005; Armer, Fu et al., 2004). Discrepancies in LE occurrence are due to inconsistent definitions of lymphedema, lack of definitive subjective and objective measurement, medical procedures (e.g. sentinel lymph node biopsy/axillary node dissection, radiation and surgery) that are not always accounted for in analyses and research findings, and varying periods of follow-up. These discrepancies often lead to inaccurate or incomplete reports, overlooked diagnosis, and under-treatment of LE in the health care setting.

**Research in Lymphedema**

Dr. Jane Armer, PhD, RN, and her multidisciplinary team at the University of Missouri-Columbia are currently addressing this problem by leading a National-Institutes-of-Health-funded prospective study, the first of its kind, and one which builds upon a series of studies of increasing sophistication and rigor (Table 1).
**Lymphedema Measurement**

The Lymphedema and Breast Cancer Questionnaire (LBCQ), an assessment tool for LE signs and symptoms, is a 57-item questionnaire examining 19 signs and symptoms of LE (Armer et al., 2003). This tool was developed following a comprehensive literature review and with the participation of expert oncology nursing clinicians and the multidisciplinary lymphedema research team. It was piloted with patients with known breast cancer lymphedema and healthy women with no history of breast cancer or lymphedema. The LBCQ in its present form has been used in more than six studies at the University of Missouri-Columbia and is in use at multiple sites in the US and internationally. The tool has 2-hour test-retest reliability with healthy women (0.98), with two less stable items (~0.75): self reported weight and report of repetitive movement in daily activity.

**Using LBCQ Symptom Report to Predict LE**

In a secondary analysis designed to test the predictive validity of the LBCQ, data from two samples were utilized. The first sample (Sample A) was comprised of 2 distinct groups of women, 40 of whom were healthy women with no breast cancer or LE history. The other 40 women had known post-breast cancer LE of one upper extremity. The second (Sample B) consisted of 100 breast cancer survivors with and without LE, with data collected cross-sectionally from survivors less than one year to more than 20 years after treatment. Hierarchical multiple regression was used to assess the contribution of the 19 symptoms of the LBCQ to a prediction of lymphedema occurrence, defined as 2 cm or greater difference between limbs at matched anatomical points, in the absence of the preferred pre-op baseline comparisons. Symptoms were clustered and entered based on theoretical and clinical best judgments by the PI and team (Table 2).

In Study A, three self-reported symptoms predicted lymphedema in the model of best fit (c = .952):

- “Heaviness in the past year,”
- “Swelling now,” and
- “Numbness in the past year.”

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**Table 1: Post-Breast Cancer Lymphedema Research Chronology at University of Missouri-Columbia (1998-present)**

- Incidence and Prevalence Study (1999-2000) University of Missouri (MU) Research Council (Armer, Fu et al., 2004; Armer, Culbertson et al, 2003)
- Prospective Longitudinal Limb Volume Study (2001-2008) NIH-funded R01 and MU PRIME (Armer & Stewart, 2005; Armer, 2007)
- Pilot of Risk- Reduction Intervention (2006-present) Lance Armstrong Foundation (data collection in progress)
- Long-Term Breast Cancer Treatment Effects: Limb Volume Changes (2001-2008) NIH-funded R01 and MU PRIME (data collection in progress)

**Table 2: LBCQ Symptom Report to Predict LE using Hierarchical Regression (Armer et al., 2003)**

<table>
<thead>
<tr>
<th>Sample A: LE-nonLE (n=80)</th>
<th>Sample B: BrCA+-LE (n=100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group#1 – Heaviness</td>
<td>→</td>
</tr>
<tr>
<td>Group#2 – Swelling (general)</td>
<td>→ Heaviness and Swelling (general)</td>
</tr>
<tr>
<td>Group#3,4,5 – Swelling (trunk), Infection-related, Aching</td>
<td>→ Heaviness and Swelling (general)</td>
</tr>
<tr>
<td>Group#6 – Numbness, Neurological-type</td>
<td>→ Heaviness, Swelling (general)</td>
</tr>
<tr>
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<td></td>
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</tr>
</tbody>
</table>

(c=0.775) p<0.0001
(c=0.919) p<0.0001
(c=0.919) p<0.0001
(c=0.952) p=0.0080
In Study B, prediction of absolute maximal circumferential limb difference (i.e., ≥ 2 cm differences) revealed two symptoms: “Heaviness in the past year” (p = .029) and “Swelling now” (p = .0007) were predictive of lymphedema. “Numbness in the past year” was not predictive of lymphedema. However, interestingly, those with lesser limb differences reported the symptom of numbness more often.

Thus, “heaviness in the past year” and “swelling now” were found to be most predictive of limb swelling at the 2 cm bilateral comparison criteria, and numbness and other symptoms did not significantly improve the prediction of LE.

Aims of the Parent Study

The primary aim of the parent study was to compare reliability of two limb volume (LV) measurement methods in assessing lymphedema. The secondary aim involved exploring psychosocial aspects of coping and social support; LV and LE management on adjustment, functional health, and QOL. The study design included 200 persons newly-diagnosed with breast cancer who consented and were enrolled and assessed at pre-op, post-op, and every 3-6 months through 30 months after diagnosis. One hundred additional persons enrolled within 3 months post-op, and were followed for 30 months using the internal research match money at the University of Missouri. At the time of this analysis, 287 individuals were actively enrolled and followed, with 143 participants at 24 months data completion.

Methods

At each lab visit, anthropometric (circumferences and perometer) assessment of the limb and limb volume were completed, as follows:

- Anthropometric Measurements – each visit
  Circumferences
  Perometry
- Interview – each visit
  Signs and symptoms (LBCQ)
  Symptom management
- Mail Back Survey – post-op, 12 months, 24 months
  Problem-solving (PSI)
  Social support (SPS)
  Adjustment to chronic illness (PAIS-SR)
  Quality of life (FLIC)
  Functional status (SF-36)
  Symptom distress (BSI)

Survival Analysis

Survival analysis was chosen as the analytic technique to support the examination of data for the occurrence of LE at selected time points (Machin, Cheung & Parmar, 2006). Survival curves were estimated using the LIFETEST procedure in SAS (SAS Institute Inc., Cary, NC, USA). With this approach, these conditions were accepted:

- There are different follow-up times for different people, since participants are enrolled over time.
- We measure time until LE is diagnosed.
- If no LE is diagnosed, time is used as a censored observation, (that is, time until LE is at least as long as has been observed, but actual time to LE is unknown).
- Time points for LE are estimations with limb volume measured every 3 months (for one year) and every six months (to 30 months), not daily.

Definitions of LE

The four definitions of LE selected from the literature and clinical practice are:

- 200 ml LV difference from baseline or other limb
- 10% LV difference from baseline or other limb
- 2 cm circumference difference from baseline or other limb
- Symptom report of swelling or heaviness in affected limb

Results

The range of occurrence at 6 to 24 months with the 4 definitions is from 7% to 82% (Table 3), depending on time and definition. Figures 1 and 2 demonstrate the relative stability of the trends in the preliminary analyses at 12 and 24 months.

Table 3. Comparison of 4 Methods: Defining Lymphedema at 6, 12, 18, and 24 months (CI = 95)

<table>
<thead>
<tr>
<th>Definition</th>
<th>6 months</th>
<th>12 months</th>
<th>18 months</th>
<th>24 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>200 ml difference</td>
<td>25% (19-34)</td>
<td>41% (32-50)</td>
<td>50% (40-60)</td>
<td>57% (46-68)</td>
</tr>
<tr>
<td>10% volume change</td>
<td>7% (4-13)</td>
<td>21% (15-31)</td>
<td>26% (19-36)</td>
<td>38% (28-51)</td>
</tr>
<tr>
<td>2 cm difference</td>
<td>46% (37-56)</td>
<td>71% (62-80)</td>
<td>78% (69-86)</td>
<td>82% (74-89)</td>
</tr>
<tr>
<td>Symptom report of heaviness and swelling</td>
<td>18% (13-26)</td>
<td>35% (27-45)</td>
<td>39% (31-49)</td>
<td>39% (31-49)</td>
</tr>
</tbody>
</table>

The First 24 Months: Preliminary Analysis of Lymphedema Occurrence 24 Months Following Breast Cancer Surgery
Figure 1. Comparison of 4 Methods: 12 Month Trends (n=118)

Figure 2. Comparison of 4 Methods: 24 Month Trends (n=143)

Armer & Stewart, 2005

Armer, unpublished data
Preliminary Conclusions

Preliminary Anthropometric Conclusions
Based on this preliminary analysis, the following conclusions were drawn:
- Discrepancies in literature reports of LE are due to definition and measurement issues.
- Post-surgical LV changes are assessable by circumferences and perometry.
- Baseline (preferably pre-op) bilateral LV assessments are essential for evaluation of LV change over time.
- Self-report of symptoms is an important source of data in evaluating limb volume changes, LE, and treatment effects.

Orem’s Self Care Deficit Nursing Theory
As a foundational step in the development of a clinical nursing research program in lymphedema, universal self-care requisites were reviewed for relevance to the imbalance associated with lymphedema occurrence (Orem, 2001, p. 225). Health deviation self-care requirements and self-care limitations in lymphedema were identified (Table 4) and universal health deviation self-care requisites were reviewed for relevance (Table 5) as applied to lymphedema (Orem, 2001, 6th edition, p. 235). Nursing and patient actions to maintain or return the patient with LE to optimal well-being are outlined (Table 7).

Discussion
The foundations of Orem’s nursing theory will help to identify crucial factors in the prevention, early detection, and treatment of lymphedema. A prospective longitudinal intervention study for women preparing for breast cancer treatment (with a pre-operative LV baseline) focuses upon preventive intervention through self-care, self-care agency, and self-care deficits. By understanding the demands placed upon a patient (e.g., resources, injury, illness, environment), the nurse can then better understand factors influencing early LE detection. This is critical in optimal management and treatment of lymphedema. By committing to (1) the evaluation of the efficacy of preventive behaviors and treatment interventions; and (2) the understanding of the psychosocial impact of breast cancer LE, the nurse can greatly improve upon goals of earlier and more effective LE treatment. In order to accomplish these goals, a single site Risk Reduction Intervention (funded by the Lance Armstrong Foundation), is in process, to be followed by a multi-site study. Multi-Site National LE Clinical Trials (e.g. CALGB 0305) are currently underway. The parent grant for this research report has now received funding through the National Institutes of Health for continued follow-up to 7 years for study participants.

Table 4. Selected Universal Self-Care Requisites as Related to Lymphedema

<table>
<thead>
<tr>
<th>Maintain Balance Between Activity and Rest</th>
<th>Prevent Hazards to Life, Functioning, and Well-Being</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Activity / Lifestyle</td>
<td>• Skin Care - Avoid trauma/injury and reduce infection risk</td>
</tr>
<tr>
<td>• Gradually build up the duration and intensity of any activity or exercise</td>
<td>• Keep extremity clean and dry</td>
</tr>
<tr>
<td>• Take frequent rest periods during activity to allow for limb recovery</td>
<td>• Apply moisturizer daily to prevent chapping/chaffing of skin</td>
</tr>
<tr>
<td>• Monitor the extremity during and after activity for any change in size, shape, tissue, texture, soreness, heaviness or firmness</td>
<td>• Attention to nail care; do not cut cuticles</td>
</tr>
<tr>
<td>• Maintain optimal weight</td>
<td>• Protect exposed skin with sunscreen and insect repellent</td>
</tr>
</tbody>
</table>

National Lymphedema Network [NLN], 2005

NLN, 2005
Table 5. Health Deviation Self-Care Requisites

Be Aware and Take Care of Effects of Pathological Conditions
- Extremes of Temperature
  - Avoid exposure to extreme cold, which can be associated with rebound swelling, or chapping of skin
  - Avoid prolonged (> 15 minutes) exposure to heat, particularly hot tubs and saunas
  - Avoid immersing limb in water temperatures above 102° F
NLN, 2005

Effectively Carry Out Prescribed Diagnostic, Therapeutic, or Rehabilitative Measures
- Compression Garments
  - Should be well-fitting
  - Support at-risk limb with a compression garment for strenuous activity (i.e., weight lifting, prolonged standing, running)
  - Wear a well-fitting compression garment for air travel
NLN, 2005
- Complete intensive course of Comprehensive Decongestive Physiotherapy (CDP) and carry out self-care in the form of Manual Lymphatic Drainage (MLD)

Learn to Live with Effects of Pathological Conditions and Medical Care Measures
- Avoid limb constriction
  - If possible, avoid having blood pressure taken on at-risk arm
  - Wear loose-fitting jewelry and clothing
NLN, 2005

Opportunities for Growth due to Patient Self-Care Limitations Secondary to LE
Self-care limitations in lymphedema are opportunities for both the nurse and patient. It is an opportunity for the nurse to provide and for the patient to seek information regarding the pathological condition and how to manage self-care of the condition through development of the patient’s personal self-care practices and individualized skills (Orem, 2001, p. 270).

Table 6. Areas of Personalized Self-Care Practices and Skills in Lymphedema

- Knowing
  - Pathogenesis
  - Risk reduction and risk management
  - Integration of self-care activities in daily life
- Making judgments and decisions
  - Seeking medical evaluation, services as needed
- Engaging in result-achieving courses of action
  - Self-manual lymph drainage, complete decongestive physiotherapy, preventing infection

The nurse supportive-educative role offers a great opportunity to guide patient requirements for assistance by assessing the level of patient assistance needed and by guiding the self-care regimen through nurse-patient interaction. In this way, (depending upon patient self-care limitations), the patient would optimally be able to identify personal self-care requisites and to develop their own abilities in managing self-care or guide a caregiver to assist them in this activity (Orem, 2001, p. 350-355).

Table 7. Nursing and Patient Actions in the Presence of Lymphedema

- Nurse actions:
  - Partly compensatory
    - Performs some self-care measures for patient (i.e., manual lymphatic drainage)
  - Supportive-educative
    - Guides and supports the exercise and development of SCA
- Patient actions:
  - Partly compensatory
    - Accepts care and assistance; performs some self-care measures
Table 7. Nursing and Patient Actions in the Presence of Lymphedema (continued)

- Supportive-educative
- Accomplishes self-care (i.e., managing self-MLD, monitoring for signs of infection)

Research Findings and SCDNT

Findings from this report confirm the importance of nursing assessment of patient-reported symptom experience in determining occurrence of LE and designing a plan of care to maximize SCA. It is important to note that symptoms preceded changes in objective anthropometric measurement in confirmation of LE.

Rationale for Nursing Concern about LE Impact on Self-Care Agency

A nursing focus is unrealistic if it does not take into account how the patient views and is personally affected by his illness. The nurse’s acceptance of the patient’s point of view is essential if the patient is to be assisted through nursing to live with his illness and disability, to cooperate with those who assist him, and above all to be motivated to direct his energies toward recovering a normal or near-normal state of health. (Orem, 2001, 6th edition, p. 194)

References


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Thinking with Models
Rom Harré

Instruments for Thinking
It may be true that some thinking is done by means of abstract, methods, but for the most part people use various instruments for many of the cognitive tasks they encounter in everyday life, as well as in working in more technical fields such as doing scientific research. Even if abstract thinking processes were common only if they took on some concrete form could we study them to any effect. People use all sorts of instruments with which to think, words and other arbitrary signs, pictures, models, diagrams and so on.

However, this list comprises two very different kinds of instruments for thinking. Words are related to what they signify by arbitrary conventions. To see this consider the great variety of words in different languages for the same object. Take the familiar four legged animal, with a swishy tail and a fine mane: we have 'horse', 'cheval', 'caballo', and so on, all used by different people to talk about the same kind of thing. I will call the signifiand (signifier) a symbol for the signifié (signified). Pictures, on the other hand, are related to what they signify by relations of similarity and difference between material things. A portrait is a thing, and so is a sitter. There may be conventions of portraiture, but in the end it is the physical likeness that counts. I shall call this iconic meaning. To summarize the distinction between symbolic and iconic meaning, think of the distinction between the symbol (30) on a road sign and the icon (→). In the UK for example, the number means 'Thirty miles per hour', while in Germany it means 'Thirty kilometres per hour', and this relation is quite arbitrary. Somewhere in space there might be such a sign for Star trekkers meaning 'Thirty light years per hour'. But wherever '→' appears it means 'Go to the right'.

In psychological terms we distinguish between symbolic thinking and iconic thinking, bearing in mind that there may be a fuzzy area between paradigm cases of each type of cognition.

There rules for correct and fruitful ways for doing both kinds of thinking. If we are interested in maintaining truth through some stretch of reasoning and avoiding falsity and contradiction, there are the rules of logic. Meaning is maintained by other kinds of rules, such as syntax and rules of good style. Thinking iconically too has its rules, though only recently have they been the subject of systematic studies. An outline of the rules for good, fruitful for symbolic thinking is the topic of this discussion. We might call these the rules of analogic.

There are many kinds of devices used in iconic thinking. In this paper we will narrow them down to one important kind only, models.

What is a model?
There are many uses of the word 'model'. Broadly these fall into two groups. Sometimes by 'model' is meant an ideal form of something, such as a model answer, a model pupil or a fashion model. There are debates about whether the ideality of fashion models ought to define the proper shapes for men and women! Sometimes the word is used to denote an analogue of something, such as a model plane, or an architectural model. This is the sense of most importance in understanding scientific thinking. Recently the word 'model' has taken on a third use. Psychologists often talk of 'my model' when they mean their schema or even their concept for something. I believe that this is an unfortunate development, since it cuts across some very important distinctions. One cannot stoop the growth of language, of course. All one say is 'take care that in using "model" in that sense one does not import some of the meaning of the other senses'.

Why do we make or imagine an analogue model of some subject? This technique is brought into use when there is some difficulty in studying the subject itself. For example, the universe is too big, so Einstein, distinguished son of Ulm, imagined it as a kind of sphere, thought 4-dimensional. It may be too far away to study directly. It may be too hot, such as the interior of the sun. It may too small such as the molecular
structure of sugar. It may too ephemeral such as the dynamics of small scale human interactions, and so on.

Let us look at some familiar examples. Television weather forecasters display the state of the atmosphere in their weather chart. They show areas of high and low pressure, with lines representing isobars, and arrows representing winds. The chart is a representation of iconic model of the atmosphere, simplified and greatly reduced in scale. Forecasters not only show the public the state of the weather but use similar charts to make predictions.

Aircraft manufacturers do not build full scale versions of new airliners and then try to fly them. They make dozens of models at different scales, to explore how their designs would fare in reality. Model airliners are studied in a wind tunnel. These tunnels are themselves analogues of the atmosphere and of the conditions encountered by a plane in flight.

The chart is an analogue of the atmosphere, and the model place an analogue of an airliner. To go deeper into the way analogues work in cognition we need to sketch the rules for using them effectively (Harré, 2004).

**Analogic: The Logic for Analogues**

1. The formal requirements for something A to be an analogue of something else, B, can be summarized in three desiderata:

   - A is like B in some respects (positive analogy)
   - A is unlike B in some respects (negative analogy)
   - A and B are like and unlike in ways that have not yet been investigated (neutral analogy)

   If A, the model, were exactly like its subject, it would not be a model but a copy. So there must be respects in which the model and its subject differ. What these are will depend on the topic, the use to which the model is put, practical matters like the feasibility of constructing the model in a usable form, and so on. Usually, there are aspects of the model and its subject that are not initially represented in the working analogy. These aspects are the growing points for the model. They remain as open possibilities for later exploration. Creative use of models depends heavily on the ability of the model maker to exploit the neutral analogy.

   In deciding on the design of a new building both the architects and the clients make use of architectural models. The Maritim Hotel and Conference Centre is a striking building, and the choice of design must have been a matter of concern to Burgomeister and the Councillors of the city of Ulm. We can be sure that they did not wait until the building was finished alongside the banks of the Danube before they thought about how it looked. They would have been presented not only with blueprints, plans, but also with one or models, 3-dimensional representations of the building as it would look when finished.

   To be effective such a model must satisfy the three desiderata with which we defined the notion of a model above.

   - Positive analogy: at least the spatial proportions of the proposed building would be represented at a certain scale in the model, and perhaps too its external colours.
   - Negative analogy: Architectural models are made of different materials from full size buildings, usually cardboard and balsa wood. In learning to think with the help of an architectural model the makers and the users know very well to discount the materials. No one is so naive as to worry about a conference centre actually made of cardboard.
   - Neutral analogy: It is usual to leave the interior of the model unfinished, so that the details of the décor are not represented. The system of air conditioning and other matters will be left out of the model.

2. The strength of analogy of analogy is an important criterion for taking the results of think out the three relations between analogue and subject seriously. We could define the strength of an analogy as the balance of weights of positive, negative neutral analogy relative to the uses to which the model is to be put. As long as the shape of the new conference centre is clearly represented the thousands of ways that the model and the finished building will differ do not matter to the town planners. The overall strength of the analogy will be overwhelmingly a matter of the positive analogy. In science it is often the neutral analogy that is the most important aspect. The fruitfulness of a model is a reflection of how much more can be extracted from the neutral analogy, enriching both the positive and negative aspects of it.

   At my school we had all sorts of anatomical models of various organs. The structure and function of the different parts of the eye were represented in detachment components of a huge model eye, at least ten times the size of a real eye. The fact that when the lens was removed no aqueous humour drained out was not taken to be a fatal defect. Given the use to which the model was put, showing the parts of an eye, it was based on strong analogy.

   Suppose with plenty of money is furnishing a house with bespoke, custom made furniture.
Arriving at the carpenter’s workshop the client says ‘I want you to make me a table like a horse’. The carpenter is taken aback, but the client points out that a horse is a good model for a table because it has four legs. However, the carpenter reminds the client, its back is curved, and the dinner dishes will tend to slide into a heap in the middle. Horse as a model for a table is a weak analogy, since the negative aspects outweigh the positive for this purpose.

It would be impossible to offer strict formal rules or a numerical index for strength of an analogy. Assessing the balance between positive, negative and neutral aspects of the relation between a model and its subject seems to be a matter for skilled judgement based on a good deal of experience.

### Kinds of Models

In iconic thinking there are two main kinds of models. The distinction between them depends on how the source of the model and its subject are related.

- **The source of model is what it is modelled on.**
- **The subject of model is what it is of.**

Source and subject can be either the same, as when a map is modelled on a city and is a model of that very same city. They may be different, as when a model of the universe is modelled on the geometry of a sphere.

This is the most important distinction for understanding how models work, and at the same time for managing one’s own model building. Here are some more examples. In training obstetricians the beginning student is not allowed to play with real babies and real mothers but with dolls. In designing and using an obstetric doll the source is the same as the subject. The doll is modelled on a baby and is a model of baby. Incidentally in the couvades, still practised among the Basques the baby that the husband ‘gives birth to’ is a model baby made of straw.

For psychologists these days the focus of a good deal research is defined by computational models of the person thinking. In this case the source, the computer, is different from subject, the brain. Computers are made of silicon and brains are made of protoplasm. In this case the functional similarities highlight the positive analogy and the anatomical differences the negative analogy. The neutral analogy is very large. For example a central question is whether a computer can be so set up and programmed to simulate reasoning by analogy. The answer is not yet in.

Turing’s original conjecture can be diagrammed like this:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Model</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brain</td>
<td>Computer</td>
<td>Abstract</td>
</tr>
<tr>
<td>Thinking</td>
<td>Thinking</td>
<td>Mathematical</td>
</tr>
<tr>
<td>‘Machine’</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

This schema opens up two questions raised by the neutral analogy, those aspects of brains and computers and of thinking and computing we are initially unable to compare, seeking to know whether they belong in the positive or negative analogy. Two research programs have developed from this starting point. One has been directed to studying brain architecture and processes more closely, and to trying to design computers that are structured and function like real brains, while at the same time using what we know about computers to search for any corresponding aspects of the brain and its ways of working. Parallel to this program, researchers have also begun to examine the relation between thinking and computing. In this area several important negative aspects or likenesses have shown up. For example, the situation specificity of the meanings of words is difficult, if not impossible to render into computational terms. Real situations are incredibly complex and exert subtle influences on the meanings of words. In response computational psychologists have proposed various simplifying tricks, such as the use of standard ‘frames’ to represent typical situations, not too different from reality.

In regard to both these research programs, as they say, the jury is still out. The optimism of the nineteen seventies has given way to a much more cautious attitude to computational modelling in the 21st century. At the same time the amazing developments of the technical side of computation as an aid in all sorts of practices is widely acknowledged. It may have some way to go to pay off in psychology, but in both everyday matters and professional practices it has been of incalculable value.

Broadly speaking we can distinguish between models for which source and subject are the same and those for which source and subject are different. The former are of great heuristic and practical value, but rarely advance knowledge in other than minor ways. The latter are at the heart of creative thinking in science, and open out new vistas for further investigation.

### Uses of Models

In this section I will concentrate on the role of models in scientific thinking, for the most part. The application of these techniques to matters of everyday interest is not hard to make. Models are used to represent aspects of reality that are
inaccessible to people at some moment in history. They are also used to extract the salient features of very complex situations and processes.

1. To create explanations by filling gaps in our knowledge

Models fulfil this function by representing an unobservable process to explain what can be observed. Clearly the source on which the model is based must be different from that which it represents, its subject. The whole point is to represent or stand in for something which has not been observed or otherwise examined.

The technique is to create a model of the unknown process by drawing on a source that is known. Necessarily the subject is not yet known, but with the model as a guide we might find ways to make it available to observation directly as in microscopy or indirectly as in techniques of manipulation of unobservables guided by the model in hand.

One of the most important and striking examples of ‘gap-filling’ with a model is Darwin’s Theory of Natural Selection. We have a pretty good idea of how Darwin came to his hypothesis. The pattern of his thinking is set out in the first few chapters of the Origin of Species (Darwin, 1859). Travelling around the coasts of South America with the great cartographer, Captain Fitzroy in their three year voyage on the Beagle, Darwin began to puzzle over the origin of huge variety of animals, birds and plants he had encountered and the fossil bones of creatures than no longer existed. He found Fitzroy’s ‘creationism’ unsatisfying, a doubt which came to a head in the Galapagos Islands. The climate and plant life were different on each of the islands. The beaks of finches were also different, as were the shells of the giant tortoises. Was God especially prolific in acts of creation in this unlikely place? Or was there a natural explanation for these differences, something to do with the conditions on each island?

Schematically we can represent Darwin’s creation of his explanatory model, to fill the gap in which could be observed. The processes of selection were too slow for anyone to watch in action.

Darwin’s observations: Differences of species and variation generation by generation...
Darwin’s problem: how to explain origin of species?
Darwin’s solution: some variations conferred a breeding advantage on the creature, and so spread through the population over time, accumulating small changes into large changes.

The subject of Darwin’s model was the variety of species, and their origins. The source of Darwin’s model was how farmers and gardeners bred new varieties by selecting which animals to breed from and from which plants to save the seeds. Here is the pattern of his model building in tabular form.

<table>
<thead>
<tr>
<th>Domestic: Farm and Garden</th>
<th>Model</th>
<th>Nature:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variations</td>
<td>Natural variation</td>
<td>Variations</td>
</tr>
</tbody>
</table>
| A. Selective breeding     | B. Natural selection | C.?????
| New varieties             | New species | New species   |

What is the relation between A, B and C? A is the source, C is the subject and B is a model of the unobservable process, C. What is the ‘analogic’ of this? Between A and B there is an analogy relation, and between B and C, though this one could not be explored in Darwin’s day. Looking at the A to B relation we can see its structure.

Positive analogy – better adapted breed faster
Negative analogy – no farmer in nature [anti-creationist]
Neutral analogy – process of inheritance unknown.

In the subsequent 150 years each of these aspects has been further explored. Subsequent research involves exploring the analogies; including trying to observe what C really is, guided by the model, B. The way that natural conditions affect fertility and survival of offspring has been extensively researched and a great deal of detail discovered, though Darwin’s general insight has survived intact. The neutral analogy, the mechanism of inheritance is now very fully understood, thanks to the work of Gregor Mendel and Watson and Crick.

Thousands of examples of this procedure can be found in every domain, including police work. The trick is to find the most fruitful model to fill the gap in what has already been observed. Then, to use the model to carry on the research into the hidden realms of the situation, be it the cause of earthquakes (tectonic plates) or the identity of the murderer (the butler did it).

2. Revealing the significant aspects of a complex and obscure phenomenon

Significant aspects of a complex phenomenon can be highlighted by using what we know about
one situation or process to reveal hidden aspects of another. Different aspects will be highlighted depending on the source of the model we are using to abstract key features. Any interaction among a number of people that lasts for any length of time is extraordinarily complicated, and opaque. What are they doping, and what are their motivations for doing it?

Reviving an old technique, popular in the renaissance, social psychologists have drawn on the stage as a source for the popular dramaturgical model for unravelling the complexities of social episodes.

The technique sounds simple: to compare episodes in social life to stage plays. However it involves very careful balancing of positive and negative analogues to bring out the growing points, the neutral analogies, and those aspects that are not represented overtly in the model, or clearly displayed in the subject.

The dramaturgical model was revived in modern times by Kenneth Burke (1945). He put forward an analysis of stage performances, Burke’s Pentad. Using these aspects of the staging of a drama one can ‘look across’ so to speak, to an episode of social life to try to identify their analogues, and so begin the process of abstracting salient features, in preparation for further investigation of the neutral analogies.

The Pentad comprises five features of a scene in a play.

Act: a student back from the university stages a play
Scene: a room in a castle in medieval Denmark.
Agent: a gloomy Prince
Agency: the plot of the play in which a man murders his brother to acquire the other’s wife.
Purpose: to force a confession from the guilty parties.

Burke coined the term ‘ratios’ for the way that any two of the above features interact and mutually determine one another. Foe example, the plot of the play only makes sense as the forensic device on the assumption that the Princes’ uncle did indeed murder his father.

The dramaturgical model was used to great effect by Erving Goffman (1969) in his analyses of the way social episodes were carried through by the people involved. He seems to have used a simplified version of the Pentad we could call ‘Goffman’s Triad’. For him the significant feature of the model were Scene, Action (requiring attention to scripts and rules) and Actor (requiring attention to roles and costumes).

Goffman elaborated the model in another way, drawing attention to regions he called ‘front stage’ where one set of conventions for action were salient, from ‘back stage’ where people acted in ways that sometimes contradicted the impressions they were trying to create front stage.

This model can be used to great effect in the analysis of such scenes as clinics and banks. It would be shocking to have one’s child examined by a doctor in beach shirt with 3 cm of ash on the end of his cigarette! Or for bankers to be seated at picnic tables with funny hats on. The Burkean ratio between Scene and Action requires that seriousness of the action should be represented in the decor and costumes of the performers.

Studies of British football hooliganism in the 1970s (Marsh, Rosser and Harré, 1977) were also based on the use of the dramaturgical model. The Goffman Triad was interpreted as follows:

i. Scene: football grounds and their surroundings
ii. Action: ritual fights to achieve advance in social status
iii. Actor: recognized members of the fans of a soccer club.

Using this scheme opened up all sorts of questions suggested by the neutral analogies. For example, was there any significance in the way that fans acquired step by step the full costume that distinguished their group? Research showed that several items of the costume were regalia, marks of social status achieved in engaging in ritual fights with members of some opposition fan club. The ultimate point of the apparent acts of inexplicable violence became clear. Here was a micro-society, with its own rules and rituals, and its own ways of disciplining those who strayed from the accepted forms of behaviour. Just as in society at large, the good that was aimed for and sometimes achieved was a place of honour in the local hierarchy. Other models suggested themselves, such as medieval jousting, and the ritual fighting between tribes in the New Guinea highlands.

Conclusions

There are many ways of thinking. However, studies of actual patterns and methods of cognition have revealed how important iconic thinking is in the sciences as well as in everyday life. This is not to downplay the importance of symbolic thinking, but to bring out the limits to which verbal forms of thought are subject.
References

Positioning Theory
Rom Harré

The True Domain of Thinking
To appreciate the significance of positioning analyses one must first reflect on some main features of the relations between language and thought and language and action. Thinking has many forms, but the form that is of paramount importance for most people is thinking as the use of cognitive tools to carry out the tasks of everyday life. The most important cognitive tools are symbols, usually words and other language like devices, and models and other forms of iconic representation. Only recently has it been realised by psychologists that thinking can be communal as well as individual, public as well as private.

That insight leads to reflections on the question of where and when people are thinking. The domain of thinking is intrapersonal and interpersonal. Thinking is not only an Individual - Personal activity but also a Social – Public one. For example, the process of remembering includes conversational as well as introspective activities. Members of a family group, or a committee, or the golf club reminisce, each contributing something to the construction of a version of the past. It is communally constructed, and each member takes away with them some version of that version on which further action is often based. It follows that there are exterograms, records of the past outside the brain of a person, as well as engrams, traces of the past incorporated in the long term memory. There are legible material things, such as diaries, photos and monuments. There are the relevant sayings and doings of other people. These are all resources for acts of remembering, often over riding personal recollections.

There are plenty of examples of thinking spanning both the Individual – Personal Social – Public domains. In deciding what to do a person will spend time on private reflections of the consequences of a plan of action, perhaps attempting to imagine the future in some concrete way. However, often there are public discussions, people go about seeking advice on the best course of action. There are influences from the unstated opinions of others which may show up indirectly in what they do and say. There are informal varieties of the formal decision procedures involving agendas, resolutions, amendments, votes and so on.

Clearly interpersonal relations must enter into communal forms of remembering, deciding, problem solving and so on. Among the most important are rights and duties and their distribution among the people involved.

Vygotsky’s Principle
According to Vygotsky all higher order mental processes exist twice; once in the relevant group, influenced by culture and history, and then in the mind of the individual. The development of a human being is dependent as much on interpersonal relations as it is on individual maturation. Here is the famous passage from Vygotsky (1978: 57):

Every function in the child’s cultural development appears twice: first, on the social level, and later, on the individual level; first between people (interpsychological) and then inside the child (intrapsychological). This applies equally to voluntary attention, to logical memory, and to the formation of concepts. All the higher functions originate as actual relationships between individuals (Vygotsky, 1978: 57).

The appropriation of public-social practices as personal-individual skills comes about by a kind of psychological symbiosis. When an activity is the Zone of Proximal Development, Vygotsky’s rather clumsy phrase, the less skilled member of a dyad tries to accomplish some task (which may be recognizing the task required in the first place). If the junior member is unable to carry through the performance correctly, the senior or more skilled member supplements the efforts of the less competent in such a way as to bring
the task to a successful conclusion. The junior member copies the contributions of the senior next time the opportunity arises. Thus individual - personal skills are transferred in social - public performances.

Sometimes the contribution of the more skilled member of a group is hands-on showing and guiding, sometimes it is accomplished by words and other signs. Whatever device is employed one thing is of paramount importance in the unfolding of such an episode – the distribution and acknowledgement of rights and duties among the members. In both communal thought processes and in Vygotskian development the distribution of power in the group is closely tied in with the assignments and appropriations of rights and duties.

**Temporality**

Not only do the tools of thought and action change with time, but so too do the distributions of rights and duties among a group of people. The individuals involved in communal cognitive activities are the bearers of a complex and labile psychology, some of which can be captured in a discussion of ‘selves’. Though the English word ‘self’ does not translate easily into most other languages, for instance into Spanish, nevertheless the concept can be appropriated as a term of art for scientific purposes. We must take account of how the mutability and multiplicity of self ties in rights and duties in thought and action.

Persons ‘have’ selves. There seem to be four main items in personhood that the word is currently used to pick out. There is the embodied self, which comes down to the unity and continuity of a person’s point of view and of action in the material world, a trajectory in space and time. The embodied self is singular, continuous and self-identical. Then there is the autobiographical self, the hero or heroine of all kinds of stories. Research has shown how widely the autobiographical selves of real people can differ from story to story. Then there is the social self or selves, the personal qualities that a person displays in their encounters with others. This ‘self’ too is multiple. Psychologists use the phrase ‘self-concept’ to refer to the beliefs that people have about themselves, their skills, their moral qualities, their fears and their life courses.

What can change? Clearly the embodied self is invariant under the kind of transformations that occur in everyday life. Changing jobs or partners, the birth and death of family members, even moving into a new linguistic community, does not disrupt the continuity of the trajectory of life through space and time. When memories fade and anticipation of the future dims the continuity of self fades with it, and though a living human body is before us sometimes we are forced to acknowledge it is no longer an embodied self. However, the repertoire of social selves and the stories with which one marshals one’s life may and do change and sometimes in radical ways.

Persons have rights and duties which are also distributed in a variety of ways, depending on many factors, some of which involve the selves comprising the personhood of an individual. Here we encounter the province of ‘positioning theory’, the study of the way rights and duties are taken up and laid down, ascribed and appropriated, refused and defended in the fine grain of the encounters of daily lives.

**The Language Angle**

Language is the prime instrument of thought and social action. In following up the line of argument of the discussion so far, we must abandon a widely held presupposition of much psychological research, namely the stability and transpersonal intelligibility of language. In so far as there are psychologically significant varieties of language, so there are other dimensions of multiplicity of selves.

**Cultural Variety**

Since there are many languages the senses of self as unique, independent individuals are likely to vary from culture to culture. For example, there are differences in patterns of self reflection between users of languages in which pronouns index individuals independently of their social affiliations, and those in which pronouns index the group or category to which a person belongs. Feminists have drawn attention to the role played by the preference for the third person masculine singular in English in inclining the culture towards marginalizing women. In Japanese there are many first person pronominal expressions, the use of which displays the speaker’s and the hearer’s sense of relative social position. ‘Watakushi’ is used to display higher status that the use of ‘watashi’. There is even a form, ‘ore’, which can be used for self-reference but which exempts the speaker from the moral commitments of what he might say. (‘He’ is needed in this account since pronoun use differs between men and women.) Modern urban Japanese speakers largely omit pronouns, reflecting differences in the modern Japanese sense of self from the socially dominated sense of personhood of the past.
Context

Languages are unstable, in the sense that significance of utterances is likely to vary from time to time and situation to situation. For example, there are subtle changes of the word ‘captain’ from its use in ships, teams and planes. Technically context includes indexicality, the contribution to the meaning of an expression from knowledge of the place, time and person of utterance. The way a word like ‘here’ indexes the content of an utterance with the place of the speaker. This is one of the functions of the first person singular. Then there is historicity, the way a word’s current use is loaded with its past history. No one can use the words ‘twin towers’ now in the kind of generic descriptive way it was used before ‘9/11’. For the purposes of this discussion the way that social relations partly determine the moment by moment significance of utterances will be of paramount importance. For example, take such a simple utterance as ‘I am going out; I might be some time’. Think of the way being married sets up social relations between a man and a woman and so informs the significance of utterances such as ‘I am going out; I might be some time’. And then think of these words as uttered by Captain Oates on Scott’s ill-fated Antarctic expedition. This third aspect of the meanings of speaking and acting is the field of ‘positioning theory’.

Positioning Theory

Positioning Theory is the study of the nature, formation, influence and ways of change of local systems of rights and duties as shared assumptions about them influence small scale interactions. Positioning Theory is to be seen in contrast to the older framework of Role Theory. Roles are relatively fixed, often formally defined and long lasting. Even such phenomena as ‘role distance’ and ‘role strain’ presuppose the stability of the roles to which they are related. Positioning Theory concerns conventions of speech and action that are labile, contestable and ephemeral.

Conditions of meaningfulness

There are three relevant background conditions for the meaningfulness of a flow of symbolic interactions. The media of such interactions include linguistic performances, but also other symbolic systems. People make use of religious icons, road signs, gestures and so on in the maintenance of the flow of actions constitutive of a social episode.

a. The local repertoire of admissible social acts and meanings, in particular the illocutionary force of what is said and done. Illocutionary force is the effective, then and there social significance of what is said or done (Austin, 1959). The same verbal formula, gesture, flag or whatever, may have a variety of meanings depending on who is using it, where and for what. Uttering ‘I’m sorry’, may, in certain circumstances, be the performance of an apology. It may also, in the UK, be a way of asking someone to repeat what has just been said. It may be a way of expressing incredulity. There are no doubt other uses for the phrase.

b. The implicit pattern of the distribution of rights and duties to make use of items from the local repertoires of the illocutionary forces of various signs and utterances. Each distribution is a position. A mother has the right to discipline her child in whatever way law and custom allow, but a visiting neighbour does not. ‘Nice little girls say “Thank you”’ is only available, properly, to the parent. Catholics have a duty to confess their sins individually, while Protestants do not. Positions have this in common with roles, that they pre-exist the people who occupy them, as part of the common knowledge of a community, family, sports team and so on.

c. Every episode of human interaction is shaped by one or more story lines which are usually taken for granted by those taking part in the episode. The study of origins and plots of the story lines of a culture is the work of narratology. There are strong connections too to autobiographical psychology, the study of how, why and when people ‘tell their lives’ and to whom. A train journey may be told as a ‘heroic quest’, and what would have been complaints about lateness according to one story line become obstacles to be bravely overcome. A solicitous remark can be construed as caring according to one story line, but as an act of condescension according to another (Davies & Harré, 1990).

The Positioning ‘Triangle’

The three background conditions mutually determine one another. Presumptions about rights and duties are involved in fixing the moment by moment meanings of speaking and acting, while both are influenced by and influence the taken-for-granted story line. Challenges to the way an episode is unfolding can be directed to any one of the three aspects. We can represent this mutuality schematically as follows:

- Position(s)
- Illocutionary force(s)
- Story line(s)
Each such triangle is accompanied by shadowy alternatives, into which it can modulate, or which can sometimes exist as competing and simultaneous readings of events.

**Positioning Analysis**

Some examples will illustrate the value of using Positioning Theory to analyze the underlying structure of presuppositions that influence the unfolding of an episode.

**Taking charge**

Marga Kreckel’s (1981) studies of life in a working class family revealed the positioning structure of episodes of collective remembering. The family consisted of middle aged parents and three sons each of whom had a partner. Discussions frequently involved creating a version or story of events of the past, in the process of deciding some future course of action. The fiancée of the youngest son tried to make contributions to the remembering project but her suggestions were never taken into account. She was positioned as lacking any right to conduct memory work. Power and the right to adjudicate disputes as to `what really happened' was taken by the mother. She positioned herself as the authority on the events of the previous weekend, and so appropriated both the right and the duty to admit or refuse contributions to the agreed family history.

After the Osaka earthquake the newspapers reported how a person with no official standing had taken charge of rescue operations. He began to issue orders to people which were obeyed without question. The community positioned him as ‘the person in charge’, thus ascribing certain rights to him, supporting his own taking on of duties.

**Attribution of Personal Qualities Creates and Changes Positions.**

In giving an account of a scientific controversy Gilbert & Mulkay (1982: 390) show how a damaging character description ascribing certain faults to a a the leader of a rival research team served to weaken the standing of the team, disputing the right of the leader to be taken to be authoritative on the structure of a certain compound. The effect of this repositioning echoed round the positioning triangle, to changes the illocutionary force of the publications of the rival team. The story line changed from `sober scientific research' to a `mad scramble for fame', involving not dishonesty, but self-deception. Paraphrasing a quotation we have a rival declaring `She is so competitive that her results are suspect’, that is she has lost the right to be believed. Declaring that a scientist’s results are ‘self-deception’ is to transform their overt illocutionary force from fact stating to mere speculation. Latour and Woolgar (1979: 119) report a conversation in which a rival’s character was described as `he never dared putting in what was required, brute force’. In this phrase he is positioned as lacking the right to be heard in the scientific community.

On the other hand ascriptions of good character strengthens the rights inherent in a position and again changes illocutionary force of what has been said. ‘You are a very honest person, so we can trust you to keep promises’ is a paraphrase of an exchange between Dr. Kissinger and Secretary Brezhnev reported in the Kissinger transcripts of his conversations with foreign statesmen. Shortly afterwards Kissinger repositions himself with respect to Brezhnev in a conversation with the Chinese, when he seems to approve a remark by Ambassador Huang apropos the Russians: ‘... first they will bully the weak and are afraid of the strong. And that their words are not usually trustworthy’. Kissinger’s repositioning is confirmed by a remark to a British diplomat that the Soviet leaders `capacity to lie on matters of common knowledge is stupendous' (Moghaddam & Harré, 2003: 150 - 153). In the last remark we have an explicit re-interpreting of the illocutionary force of Russian speech acts, so that the positioning and the story line of the Kissinger-Brezhnev conversations are retrospectively revised.

**Simultaneous but Incompatible Positionings Possible in with Same words.**

A recent study of the documents produced by and interviews with the protagonists of the two sides in a dispute between the Georgetown community and Georgetown University over the University’s development plans yields nicely to positioning theory. Each party to the dispute read the very same sentences, uttered by the protestors and by the University authorities as having quite different illocutionary force. Each side constructed a story line in which the opposition was cast as villainous and dishonest. Statements by activists against development of University housing, such as ‘They should not build any more dormitories’ were interpreted by their authors as examples of a brave stand against the bullying tactics of a privileged institution. The story line was roughly this: ‘The University is encroaching on the city without a right', that is the activities of the community spokespersons was a legitimate protest. The very same utterances were interpreted
by some on the side of the University authorities as typical expressions of jealous resentment. (Harré & Slocum, 2003: 130 - 135).

Malignant Positioning

Tom Kitwood (1990) introduced the term ‘malignant psychology’ to highlight the catastrophic effects of a priori psychological categorising of people with declining powers in old age. Sabat (2003) introduced a development of this idea in his expression ‘malignant positioning’. This reflected a stance from which the ways that sufferers from Alzheimer’s Disease were positioned in such a way that a demeaning and destructive story line was set in motion.

Two brief illustrations of malignant positioning should make the concept clear. Speaking of sufferers from Alzheimer’s a caretaker says ‘They don’t know anything anymore’. In this remark a description of the apparent loss of cognitive capacities by the elderly is used as a positioning move, deleting certain rights, for example to be heard. Thus the utterances of A’s are not listened to, and the story line is of non-humanity. More startling still is the remark of a physician who introduces his story line when he says ‘Treating an Alzheimer’s patient is like doing veterinary medicine’ (Sabat, 2003: 87).

The result of malignant positioning is more complex. Sabat (2001) describes in detail the lives of several sufferers from Alzheimer’s Disease. Positioned as having no right to be heard, on the presumption that such people have nothing worth listening to, the sufferer is cut off from communal cognition, the thinking together that is such a feature of language using beings like ourselves. The strain of waiting for the person with word finding problems to complete the expression of a thought quickly gives way to impatient dismissal of the other as any sort of conversationalist.

Sabat reports the striking effect on the willingness with which a regular visitor to the day care centre continued to struggle to express his thoughts of officially appointing him to the Georgetown University research team, studying the condition. This man re-entered the communal conversation. In this and like ways the effects of malignant positioning can be reversed by the restoration of rights (and sometimes the taking on of duties), that is by repositioning the person. At the same time the dynamics of Positioning Theory transforms the story line of daily episodes equally dramatically. From seeing the days events as ‘mere filling’, Sabat’s retired professor came to see it, and so to live it, as ongoing research.

Conclusion

The advent of Positioning Theory as a development of Vygotsky’s conception of the person in an ocean of language, in intimate interaction with others in the construction of a flow of public and social cognition, opens up all sorts of insights and research opportunities. Moving beyond the overly restrictive frame of Role Theory it offers a conceptual system within which to follow the unfolding of episodes of everyday life in new and illuminating ways.

References


Philosophic Position on Nature of Human Beings Foundational to Orem’s Self-Care Deficit Nursing Theory

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Abstract

Through a process of philosophic inquiry, the philosophic assumptions and beliefs foundational to Orem’s Self-Care Deficit Nursing Theory (SCDNT) were explicated. This article describes the position on the nature of human beings that underlies the SCDNT. Based on the philosophy of moderate realism, Orem’s view of the nature of human beings is that of dynamic unitary beings engaged in an ongoing process of development, striving for their self-ideal, and possessing uniquely human qualities such as free will. Orem’s position on nursing-specific views of human beings are also discussed.

Key Words: Orem’s Self-Care Deficit Nursing Theory; Philosophic Inquiry; Nature of Human Beings; Moderate Realism

Philosophic Position on Nature of Human Beings Foundational to Orem’s Self-Care Deficit Nursing Theory

Ambiguity and misunderstanding of a nursing theory are more likely to occur when the philosophic foundations of the theory are not clearly stated. Sarter (1988b) claims that the extant nursing theories are “laden with philosophical assumptions which are not always explicitly acknowledged” (p. 52). In order to ensure an accurate, comprehensive understanding of a nursing theory, the philosophic foundations of the theory need to be identified.

Sarter’s (1988b) point regarding the philosophic foundations of extant nursing theories applies to the Self-Care Deficit Nursing Theory (SCDNT). Orem (2001) identifies the SCDNT as a general theory, one that is descriptively explanatory of nursing. Her work pertaining to the SCDNT focuses on the human requirements of persons for nursing and the processes for the production of nursing. Although not specifically addressed, the SCDNT does rest upon certain beliefs and assumptions regarding the nature of reality and of human beings. Rather than being clearly identified, these philosophic assumptions and beliefs are implicit. Uys (1987) and Smith (1987) have criticized Orem’s work because the philosophic foundations have not been clearly articulated.

The lack of explicitness with regard to the philosophic foundations of the SCDNT has contributed to misinterpretations of Orem’s work. For example, Parse (1987) claims that Orem describes human beings as organisms with self-care capabilities. Instead of accurately representing Orem’s position regarding the nature of human beings, this statement has been taken out of context. In contrast to Parse’s position, Sarter (1988c) states that “although it is not as readily apparent, Orem’s self-care theory of nursing expresses a view of human beings and health that also finds philosophical support from evolutionary idealism” (p. 102). Orem’s general theory is not based on evolutionary idealism, it is based on the philosophic system of moderate realism.

The positions of both Parse and Sarter represent inaccurate interpretations of Orem’s work. In this article, the philosophic position of the nature of human beings that is foundational to the SCDNT is presented and discussed. The method of philosophic inquiry used for this analysis is also described.

Philosophic Inquiry Process

A philosophic inquiry of Orem’s nursing theory was carried out using a six phase inquiry process (Banfield, 1997). One of the inquiry questions was “What is the view regarding the nature of human beings that underlies Orem’s SCDNT?”. Because this question is a philosophic one, the appropriate way to address it is through the use of a philosophic approach. Kikuchi (1992) makes the point that “what is of concern is that nurses are erroneously subjecting to scientific study nursing questions that are nonscientific, beyond the scope of science to answer” (p. 26). As a systematic method of inquiry, philosophic inquiry involves the use of reason to critically examine, clarify, and interpret meanings and positions.

The six phases of the inquiry process are (a) critical reading and examination of Orem’s work with the identification of statements pertaining
to the inquiry question, (b) examination and analysis of these statements, (c) examination and analysis of the work of authors cited by Orem, (d) comparison between Orem’s work and the work of the cited authors, (e) construction of the answer to the inquiry questions, and (f) evaluation of the findings. This discussion focuses on the process used to identify and clarify the philosophic position on the nature of human beings that is foundational to the SCDNT.

First Phase

The first phase involved the critical reading and examination of Orem’s work to identify statements pertaining to the nature of human beings. The work of Orem that was examined included five editions of Nursing concepts of practice (1971, 1980, 1985, 1991, 1995), two editions of Concept formalization in nursing (1973, 1979), an article on views of human beings specific to nursing (Orem, 1997), and an article about positive mental health (Orem & Vardiman, 1995). The sixth edition of Nursing concepts of practice was published after this inquiry was completed. (All references to Nursing concepts of practice have been updated for the 2001 edition). During this initial phase, the aim was to identify statements and phrases pertaining to the nature of human beings, rather than to analyze the meaning of these statements and phases. To ensure that the examination was comprehensive and complete, each of these works was read in its entirety a minimum of two times.

Second Phase

The second phase involved the analysis of the identified statements and phrases. These statements and phrases were grouped according to the topic or areas to which they pertained. For example, statements that pertained to human development were grouped together, statements that pertained to human freedom were grouped together, etc. These statements were then critically examined to clarify meaning and to identify unstated or implicit assumptions. The process not only involved an analysis of the statements, but also the examination of the sections of the text from which the statements and phrases had been extracted. The aim of this phase of the inquiry was to gain an initial understanding of Orem’s position on the nature of human beings.

Third Phase

After the analysis of Orem’s work was completed, the work of authors cited by Orem was read and examined. The work read included the work of philosophers such as Harre (1970), Lonergan (1958), Macmurray (1957, 1961), and Wallace (1979); psychologists such as Allport (1955), Arnold (1960a, 1960b), and Fromm (1956/1989); sociologists such as Parsons (1949, 1951) and Plattel (1965); and the work of Catholic theologians such as de Montcheuil (1954), Gannon (1965), Gilby (1970, 1974), and Rahner (McCool, 1975). (It is important to keep in mind that the choice of words used by these authors is a reflection of the language used at the time of publication.) During this phase of the inquiry, the goal was to understand the positions put forth by the authors whom Orem cited.

Fourth Phase

The fourth phase involved further analysis of the identified statements. The consistency or compatibility between Orem’s statements regarding human beings and the work of the cited authors was examined and analyzed. The cited work often provided a more comprehensive treatment of the topic being addressed. This served to clarify the points made or alluded to by Orem. The aim of this phase of the inquiry was to achieve a comprehensive understanding of Orem’s position regarding the nature of human beings and to identify and resolve any apparent discrepancies or ambiguities.

Fifth Phase

The fifth phase of the inquiry focused on formulating an answer to the inquiry question. The answer was constructed in light of the work of Orem and others. Through this process, Orem’s views were synthesized into a coherent, comprehensive description on the nature of human beings.

Sixth Phase

The final phase of the inquiry was the evaluation. Unlike quantitative studies in which numerical scores reflect the reliability of the instruments and the significance of the findings, the evaluation of philosophic inquiries is a matter of judgment. Criteria identified for the evaluation of such inquiries include rigorous, clear, and precise thinking (Soltis, 1978); significance of the inquiry questions and the meaningfulness of the inquiry for enlightenment and for ordering understandings and meanings in nursing (Ellis, 1983, p. 225), and explanatory power, comprehensiveness, coherence, and simplicity for inquiries presenting a philosophic position (Sarter, 1988a, p. 189). In relation to the findings, the following questions
can also be asked: (a) Is there increased understanding of Orem’s SCDNT as a result of the inquiry? and (b) Are the findings useful in terms of conceptualizing nursing and providing direction for further knowledge development?

Nature of Human Beings

Through the inquiry process, the philosophic position on the nature of human beings that is foundational to Orem’s SCDNT was identified. As previously stated, Orem does not clearly articulate the philosophic foundations of the SCDNT. However, she does identify views of human beings that may be useful to nurses in the conceptualization of nursing as well as in the design and production of nursing care. These specified views represent different ways of looking at or considering human beings; they are not different views regarding the nature of human beings. To promote a clearer understanding of Orem’s SCDNT, it is necessary to distinguish between the philosophic position on the nature of human beings that is foundational to the SCDNT and the views of human beings that Orem claims may be taken for practical purposes.

Description of the Nature of Human Beings

A synthesis of Orem’s views and positions resulted in the construction of the following description of the view on the nature of human beings foundational to the SCDNT.

Human beings are unitary beings who exist in their environments, influencing the world as well as being influenced by the world. Unitary humans are beings in process, striving to achieve their human potential and self-ideal through developmental processes. Human beings possess free will; are capable of maintaining an awareness of self and environment, attaching meaning to what is experienced, and reflecting upon their experiences; and possess the ability to engage in deliberate action. In addition to freedom, other essential qualities of human beings include bonding together with others through human love, the unrestricted desire to know, the appreciation of beauty and goodness, the joy of creative endeavor, the love of God, and the desire for happiness (Banfield, 2001, p. xiii).

Moderate Realism

Through the inquiry process, it became evident that the philosophy of moderate realism underlies Orem’s work. This philosophy is reflected in her view regarding the nature of reality and the nature of human beings. In addition, Orem’s position regarding the form of nursing science is based upon the moderate realist notion of practical science (1988, 2001).

Moderate realism, which is just one of a number of philosophic positions considered to be realist positions, is associated with the philosophy of St. Thomas Aquinas. According to this philosophy, there is an existent world, a real world that exists independent of the thoughts of the knower. The beliefs and views of the human beings that inhabit the world do not determine the nature of reality. Realism stands in opposition to idealism, which holds that reality is mind dependent or relative to the knower. For the realist, what is real is distinguished from what is rational or logical. “The rational or logical is whatever exists in my mind in such a way that it cannot exist outside my mind. The real, on the other hand, although in my mind when I know it, also exists outside my mind” (Wallace, 1979, p. 164).

Moderate realists believe that it is possible to gain knowledge of this existent world. Kikuchi and Simmons (1999) state that:

Moderate realism takes the position that, although we view reality differently as a consequence of how we are nurtured, we can, nonetheless, attain an objective view of reality which is probably true by testing our various subjective views against reality which common sense tells us exists, and is the way it is regardless of how anyone of us views it. (p. 45).

Arnold (1960a) makes the point that, unless we trust our senses to give us accurate information about the world, we must conclude that it is impossible to reach any kind of truth (pp. 6-7).

Nature of Reality

Although not addressed as such, a moderate realist position on the nature of reality is reflected in Orem’s work. For example, Orem (2001) states that “the world of the nurse is manifested to each nurse as a system of ‘qualitatively differentiable and separately locatable’ persons and things” (p. 16). In relation to this statement, Orem cites the work of Harre (1970), a realist philosopher. Phrases used by Orem (2001) such as (a) “time-place localization” (p. 17), (b) “objectively discernible reality” (p. 27), (c) “reality conditions in self or environment” (p. 257), and (d) “function within a veridical (reality) frame of reference” (p. 232) reflect a moderate realist view of reality. It is clear from these phrases that Orem sees reality
as something that has an existence independent of the knower; reality is not something that is seen as relative or dependent upon the knower. Orem does recognize that human beings perceive and attach meaning to the things they perceive. However, she does not support the position that reality is dependent upon the perceptions and meanings held by human beings.

Four categories of postulated entities are identified as establishing the ontology of the SCDNT: (a) persons in space-time localizations, (b) attributes or properties of these persons, (c) motion or change, and (d) products brought into being (Orem, 2001, p. 141). In terms of these entities, the persons in space-time localizations refer to the nurses and patients; the attributes or properties refer to the properties of self-care agency, therapeutic self-care demand, and nursing agency; motion or change pertains to the performance of self-care, the seeking of nursing assistance, the exercise of nursing agency, and the changes in properties of concern; and the products brought into being refer to the self-care and/or dependent care systems as well as the nursing systems of care provided for patients.

**Unitary Beings**

According to Orem (1979, 2001), human beings are unitary beings. “Men, women, and children who are patients of nurses are unitary beings with singular ways of living and singular life histories” (Orem, 2001, p. 357). The view of human beings as unitary beings is incorporated into statements pertaining to other topics. For example, in relation to deliberate action, Orem (2001) states that “persons as unitary beings act deliberately to achieve the ends or the states of affairs sought” (p. 64).

Orem’s view of human beings as unitary beings reflects the moderate realist position. The phrase “rational animal” is seen in the work of those scholars associated with Aristotelian Thomism (Gannon, 1965; Wallace, 1977, 1979). Wallace (1977) states that “man, in the classical definition, is a rational animal, animal rationalis, i.e., an animal like other animals, but distinct by having the power of universal, abstract reason, and all that follows from it” (p. 80).

According to moderate realism, human beings are not made up of two things, body and soul or body and spirit. Rather, human beings are embodied beings. The human being “is a substantial unity resulting from a union between matter and spirit that is the most intimate possible” (Wallace, 1979, p. 226). “Since the body is only human through the soul, and the soul in turn determines the body, the soul-body relationship is not that of a mere juxtaposition of parts but rather the unity of substantial being” (Wallace, 1977, p. 81). Wallace (1977) makes the point that the person who is experienced in bodily presence is the same person who thinks; that person is one entity or being, not two different beings (p. 81). Macmurray (1957) also addresses this notion of unity, maintaining that the person or self who engages in action is the same self who engages in thought. Plattel (1965) claims that, due to limitations of our understanding, we often think and speak of the body and soul as two things, rather than as a unity of being (p. 50). Although we may speak of body and soul as two different things, this does not make them two different things.

In relation to the notion of parts of human beings, (Orem, 2001) maintains that “each human being, like other living things, is a substantial or real unity whose parts are formed and attain perfection through the differentiation of the whole during processes of development” (p. 187). Acknowledging that human beings have parts or structural and functional differentiations does not negate the position that human beings are unitary beings. It is important to note that Orem does not claim that human beings are structural and functional differentiations, rather that they have these differentiations.

**Human-Environmental Relationship**

With regard to the relationship of human beings and their environments, Orem (1991) claims that “within the theory of self-care, person and environment are identified as a unity characterized by human-environmental interchanges and by the impact of one on the other. Person-environment constitutes a functional type of unity with a concrete existence” (p. 143). Persons exist in their environments and are never isolated from them. It is in our thinking that we often consider persons as separate from their environments.

**Ongoing Developmental Process**

According to Orem (1979), each human being is a dynamic unitary being in a continuing process of development (p. 122). “The existence of men, women, and children lies in their development. They are beings in process” (Orem, 2001, p. 100). Rather than being regarded as something that just happens to a person, development is viewed as an ongoing process to which the person contributes through striving to achieve his/her human potential and self-ideal. This process of development occurs throughout the lives of human beings.
**Essential Humanness**

In her work, Orem (1979, 2001) uses phrases such as “uniquely human qualities” and “essential humanness of individuals”. She states that “a person focus will never be explicated if the uniquely human qualities of men, women, and children are ignored and not recognized as operative in nursing practice situations” (Orem, 2001, p. 28). These qualities or aspects of essential humanness, which develop as persons live, are free will, human love, desire to know, appreciation of beauty and goodness, joy of creative endeavor, love of God, and the desire for happiness. Authors whom Orem cites in relation to these human qualities include Arnold (1960a, 1960b), Fromm (1956/1989), and Rahner (McCool, 195).

**Free will.**

One of the essential human qualities is that of free will. In relation to free will, Orem refers to the work of Rahner, a Catholic theologian.

If, therefore, man is personal freedom, then it follows that he is one who uses the resources of his own innermost nature to form himself by his own free act, for by the exercise of this freedom of his he can definitively determine the shape of his life as a whole, and decide what his ultimate end is to be, the ultimate realization of his own nature, beyond all possibility of revision. (Rahner, McCool, 1975, pp. 352-353).

Personal freedom does not mean that a person is free to be or do anything he/she wants. Rather it means that, given the possibilities, that person is free to decide the course he/she will pursue.

The idea of self-care as deliberate action is based upon the view of human beings as possessing free will. According to Macmurray (1957), the possibility of action is dependent upon human beings having free will (p. 134). “Deliberate action is essentially action to achieve a foreseen result that is preceded by investigation, reflection, and judgment to appraise the situation and by a thoughtful, deliberate choice of what should be done” (Orem, 2991, p. 272). Arnold (1960b) differentiates deliberate action from instinctive and emotional action patterns and from overt reactions to feelings of pleasantness and unpleasantness (p. 193). Deliberate action involves the person making the choice to pursue a particular course of action.

In a discussion of deliberate action, Orem (2001) identifies seven assumptions about human beings. These explicit assumptions pertain to aspects of deliberate action rather than to the nature of human beings. For example, the assumption “human beings are capable of self-determined actions, even when they feel an emotional pull in the opposite direction” (Orem, 2001, p. 65) pertains to the ability to take action. This explicit assumption rests upon the implicit assumption that human beings possess free will.

**Intellectual capabilities.**

Human beings are distinguished from other living things by their capacity (1) to reflect upon themselves and their environment, (2) to symbolize what they experience, and (3) to use symbolic creations (ideas, words) in thinking, in communicating, and in guiding efforts to do and to make things that are beneficial for themselves or others. (Orem, 2001, p. 182).

The position that these intellectual capabilities are unique to human beings, and therefore serve to differentiate humans from other living beings, reflects the philosophy of St. Thomas Aquinas. Wallace (1979) claims that “man differs from lower animals in his ability to grasp meanings or ideas or intelligible contents that become the basis for his language, literature, culture, science, and other distinctively human activities” (p. 237). He goes on to say that this capability is also associated with the will power, or free will, of humans.

According to Arnold (1960b), the desire to know exhibited by human beings is possible only in beings able to form concepts and use symbols. Lonergan (1958) identifies the desire to know as the inquiring and critical spirit of human beings (p. 348).

The position that human beings possess intellectual capabilities is foundational to the conceptualization of self-care as deliberate action, as is the position that human beings have free will. The capability for deliberate action is unique to human beings (Arnold, 1960b; Macmurray, 1957, Orem, 2001). Deliberate action involves the intellectual activities of reflecting on possible courses of action, making judgments, and deciding on a course of action to be pursued. The following are two assumptions regarding human beings that Orem (2001) identifies in relation to deliberate action: (a) “human beings know and appraise objects, conditions, and situations in terms of their effects on ends being sought” and (b) “human beings know directly by sensing, but they also reflect, reason, and understand” (p. 65). These assumptions pertain to intellectual capabilities that are regarded as uniquely human.

**Human love.**

Another quality of essential humanness is the bonding together with others through human love. “Mature love with its element of care and concern for others develops and is expressed
when individuals live in or seek communion with one another in fundamental unity as persons in community” (Orem, 2001, p. 30).

Authors whom Orem cites in relation to human love include Fromm (1956/1989) and Arnold (1960b). Fromm (1956/1989) claims that “love is not primarily a relationship to a specific person; it is an attitude, and orientation of character which determines the relatedness of a person to the world as a whole, not toward one ‘object’ of love” (p. 42). Arnold (1960b) maintains that human love is essential to the formation of the self-ideal and its pursuit (p. 312).

Plattel (1965) claims that human beings coexist together in the world. “It is love, the social art par excellence, which serves most to confirm man in his value as a person” (Plattel, 1965, p. 23). The quality of human love is an integral component of the nurse’s ability to help others (Orem, 2001, p. 100).

Other aspects of essential humanness.

Appreciation of beauty and goodness, joy of creative endeavor, love of God, and the desire for happiness are all regarded as aspects of essential humanness and are seen as involved in the person’s ongoing development and pursuit of self-ideal. Arnold (1960b) describes the contemplation of beauty as a satisfying, perfective, and integrative human experience (p. 321). This human experience is valued not as a means to an end, but as a connection to the spiritual activities of knowing and loving truth and goodness. Human beings derive satisfaction from achieving a goal. The love of God and the desire for happiness are aspects of humans’ striving for their self-ideal.

The view of the nature of human beings that is foundational to Orem’s SCDNT is that of human beings as unitary beings in the process of becoming and possessing qualities such as free will. This position regarding the nature of human beings reflects the philosophy of moderate realism. The identification of this philosophic position on the nature of human beings may not fit with the conception some people hold of Orem’s SCDNT. However, unless one in carefully focusing on what Orem says, it is easy to overlook the points she makes about human beings. Because Orem does not specifically address the nature of human beings, it is possible to misinterpret the foundational view on the nature of human beings without a thorough, in-depth study of her work.

Views of Human Beings

Orem (1979, 1997, 2001) identifies five views of human beings that, when taken by nurses, serve some practical purpose; (a) person, (b) agent, (c) user of symbols, (d) organism, and (e) object subject to physical forces. These five views of human beings “are necessary for developing understanding of the conceptual constructs of self-care deficit nursing theory and for understanding the interpersonal and societal aspects of nursing systems” (Orem, 1997, p. 28).

As persons, human beings are regarded as embodied unitary beings living in coexistence with other human beings. This view reflects the philosophic position on the nature of human beings upon which the SCDNT rests. In relation to this view, Orem (1979) maintains that “the reference then is to their individuality expressed as a unity of being and becoming; of knowing, feeling, and imagining; of reflecting and judging; of valuing and willing; and to their possession of self by self” (Orem, 1979, p. 122). The view of human beings as persons is the conceptualization of human beings in the fullness of their being human. However, for practical purposes, the other views of human beings “can be taken at different times without considering all that characterizes human beings as persons” (Orem, 2001, p. 187).

The view of human beings as agent is central to understanding nursing as conceptualized within the SCDNT. From the view of agent, human beings are regarded “as persons who can bring about conditions that do not presently exist in humans or in their environmental situations by deliberately acting using valid means or technologies to bring about foreseen and desired results” (Orem, 1997, p. 28). The person-as-agent is foundational to the SCDNT’s conceptual elements of self-care, dependent care, nursing care, self-care agency, dependent care agency, and nursing agency. Self-care, dependent care, and nursing care are all conceptualized as deliberate action, action purposefully engaged in to achieve desired results. Self-care agency, dependent care agency, and nursing agency are conceptualized as powers or capabilities of persons to engage in specific types of deliberate action.

Considered from the view of user of symbols, “individual human beings are viewed as persons who use symbols to stand for things and attach meaning to them, to formulate and express ideas and to communicate ideas and information to others through language and other means of communication” (Orem, 1997, p. 29). This view of human beings is useful to nurses in understanding the interpersonal aspects of nursing situations, in understanding the communication that occurs between persons involved in nursing practice situations.

From the organism view, “individuals are viewed as unitary living beings who grow and
develop exhibiting biological characteristics of Homo sapiens during known stages of the human life cycle” (Orem 1997, p. 29). With-in the view of person-as-organism, human beings are regarded as having functional and structural differentiations. Orem (2001) states that “each developmentally differentiated structure or functional system can be studied as an existent entity with its own parts and to their operations, and to the unitary functioning of individuals who coexist in a world with other human beings” (p. 187). It is important to recognize that, for Orem, health and well-being are not synonymous. Well-being refers to the person’s perceived condition of existence, whereas health refers to the soundness and wholeness of human structures and functioning. The study of the functional and structural differentiations of human beings is the domain of various sciences such as human anatomy, human physiology, and psychology. Knowledge from these sciences is helpful for nurses in understanding health and well-being and is utilized in the design and production of nursing care.

The view of person-as-object subject to physical forces is taken in situations in which the person is unable to protect himself/herself from physical forces. For example, in a nursing practice situation in which the patient is unable to initiate and control movements, the nurse might consider the person from the object point of view in designing and providing care to protect him/her from hazards associated with the inability to move.

To summarize, Orem (1979, 1997, 2001) claims that these views may be taken by nurses for some practical purpose; be it to understand nursing as conceptualized within the SCDNT, to gain understanding of human health and well-being, and/or to design and produce nursing systems for persons in need of the human health service known as nursing. In taking the view of person as agent, symbolizer, organism, or object subject to physical forces, the nurse considers the person from the particular view to accomplish some purpose. For example, the nurse may consider the person receiving nursing care from the perspective of organism in order to understand how a particular structural defect may be impacting upon his/her health. Although the nurse may take a particular view in order to achieve some practical purpose, it is the person view that is taken by nurses in all of their interpersonal contacts with persons receiving nursing care (Orem, 1997, p. 29).

Conclusion

Because Orem does not clearly articulate the philosophical assumptions and beliefs that are foundational to the SCDNT, it is easy to misunderstand or misinterpret her position. Certainly, phrases and statements can be identified in Orem’s work that do not seem to support the view regarding the nature of human beings that is presented in this article. However, through the philosophic inquiry process described in this article, Orem’s assumptions and beliefs were explicated and synthesized into the presented description.

Orem’s views regarding the nature of human beings and reality all reflect the philosophy of moderate realism. Human beings are unitary beings engaged in ongoing development and becoming. They possess free will as well as intellectual capabilities, which enable them to engage in deliberate action. The explication of Orem’s position on the nature of human beings serves to clarify the SCDNT. Hopefully, the clarification of this view will also serve as an incentive for nurses to pursue an in-depth, comprehensive understanding of Orem’s work. It is also important for nurse researchers investigating phenomena from the perspective of the SCDNT to take this foundational position on the nature of human beings into consideration when making decisions about the types of knowledge to be developed and about the appropriateness of various research approaches for the development of this knowledge.

References

Guided Imagery as Internally Oriented Self-care: A Nursing Case

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Abstract

The self-care deficit theory of nursing (Orem, 2001) provides nurses with a framework to create nursing systems that incorporate internally oriented self-care actions such as guided imagery. Internal orientations include “action sequences to control oneself (thoughts, feelings, and orientation) and thereby regulate internal factors or one’s external orientations” (Orem, 2001, p. 269). Imagery, a multi-sensory representation of an experience that uses imagination to invoke visual, auditory, smell, taste, sense of movement, position, and touch perceptions (Solomon & Saylor, 1995), is one form of internally oriented self-care. After differentiating between the external and internal orientations of self-care, guided imagery is described. A case is made for guided imagery as a form of internally oriented self-care. Linkages between the action sequences of internal and external orientations and specific helping methods used by nurses are shown. A nursing case illustrating how a nurse creates a nursing system to help a school-aged child learn guided imagery to reduce pain is presented.

Theoretical Considerations

Orientations of Self-care

Orem (2001) states that individuals “develop behavioral repertoires for taking action” (p. 268). These behaviors, constituting self-care, have two orientations: external and internal. Observation and subjective data, singularly or in combination, are ways nurses can identify whether a self-care action is externally or internally oriented. By identifying and grouping self-care according to orientation, nurses can assess, analyze, and judge in order to help individuals meet their therapeutic self-care demands (Orem).

Guided Imagery as Internally Oriented Self-care: A Nursing Case

Orem (2001) defines nursing science as a “practical science with theoretically practical and practically practical components and a set of applied sciences” (p. 519). This definition of nursing science requires that theory and practice be linked. Using empirical nursing cases to illustrate theoretical knowledge is one way to explicate the link between the theoretically practical and the practically practical.

The purpose of this paper is to show how the self-care deficit theory of nursing (Orem, 2001) provides nurses with a theoretical framework to create nursing systems that incorporate internally oriented self-care actions such as guided imagery. After differentiating between the external and internal orientations of self-care, guided imagery is described. A case is made for guided imagery as a form of internally oriented self-care. Linkages between the action sequences of internal and external orientations and specific helping methods used by nurses are shown. A nursing case illustrating how a nurse creates a nursing system to help a school-aged child learn guided imagery to reduce pain is presented.

MeSH key words: self-care, theory, imagery, children, pain
limits movement to avoid pain by using a urinal rather than ambulating to the bathroom, external factors are controlled through self-care.

Internally oriented self-care includes “action sequences to control oneself (thoughts, feelings, and orientation) and thereby regulate internal factors or one’s external orientations” (Orem, 2001, p. 269). Internally oriented self-care actions are also deliberate and, like external oriented self-care, are initiated for maintaining life, health, and well-being (Orem). However, these self-care actions are sometimes not directly observable. Two action sequences correspond with internally oriented self-care: resource using to control internal factors and action sequences to control oneself (see Figure 1). For example, when a child pushes a button on the patient controlled analgesia (PCA) to administer pain medications, resources to control internal factors are used. Another example, performing action sequences to control oneself, is when an individual uses guided imagery to reduce anxiety.

Orem (2001) indicates that there are specific behaviors that individuals must be capable of executing in order to perform internally oriented self-care. In other words, individuals must have developed or developing self-care agency. First, individuals must be exposed to learning activities related to the development of self-care knowledge, attitudes, and skills. Second, they must then use that knowledge to initiate, perform, and control self-care. Additionally, they must also be able to monitor their own conditions or responses to the self-care.

**Guided Imagery**

Practiced since ancient times, imagery has been identified as one of the world’s oldest and greatest sources of healing (Stephens, 1993). Imagery is a multi-sensory representation of an experience that uses imagination to invoke visual, auditory, smell, taste, sense of movement, position, and touch perceptions. Imagery includes techniques such as guided imagery, hypnotherapy, relaxation training, and music imagery (Solomon & Saylor, 1995). Guided imagery typically involves an experience whereby individuals use their imaginations while listening to a story.

Theories of imagery focus on the three processes of thought: imagic (intuitive thinking), enactive (thinking that stimulates motor responses), and lexical (analytical thinking) (Stephens, 1993). During imagery, both the imagic and enactive modes of thinking can be triggered. Imagic thought, controlled by the right hemisphere, develops

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**Figure 1. Theoretical components related to externally and internally oriented self-care.**

<table>
<thead>
<tr>
<th>Self-care Orientation</th>
<th>Action Sequences</th>
<th>Child Specific Self-care</th>
<th>Helping Methods</th>
<th>Nurse Specific Nursing Operations</th>
</tr>
</thead>
<tbody>
<tr>
<td>External</td>
<td>Knowledge-seeking</td>
<td>• Asks questions</td>
<td>• Guiding another</td>
<td>• Provides information</td>
</tr>
<tr>
<td></td>
<td>Assistance-and resource seeking</td>
<td>• Requests hot pack</td>
<td>• Doing for another</td>
<td>• Gives hot packs</td>
</tr>
<tr>
<td></td>
<td>Expressive interpersonal</td>
<td>• Moaning/restless Rates pain using pain scale</td>
<td>• Supporting another</td>
<td>• Assesses non-verbal behavior</td>
</tr>
<tr>
<td></td>
<td>Control external factors</td>
<td>• Avoids moving by using urinal</td>
<td>• Doing for another</td>
<td>• Assesses pain intensity</td>
</tr>
<tr>
<td>Internal</td>
<td>Resource-using to control internal factors</td>
<td>• Pushes PCA button</td>
<td>• Doing for another</td>
<td>• Manages PCA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Applies hot packs</td>
<td></td>
<td>• Gives hot packs</td>
</tr>
<tr>
<td>Control oneself</td>
<td></td>
<td>• Learns, performs, and evaluates guided imagery</td>
<td>• Teaching another</td>
<td>• Teaches about guided imagery</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Providing D.E., Guiding another</td>
<td>• Assesses likes and dislikes</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Supporting another</td>
<td>• Guides child through guided imagery session</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Supports decision to use guided imagery</td>
</tr>
</tbody>
</table>

Guided imagery is a multi-sensory representation of an experience that uses imagination to invoke visual, auditory, smell, taste, sense of movement, position, and touch perceptions.
before children learn to speak and includes intuitive and creative thought. For example, it has been hypothesized that images held in brain are lost when individuals try to translate the images into words. This may explain why dreams seem so clear upon awakening, but lose meaning as they are described. Enactive thought, originating in the hypothalamus, stimulates muscle groups. For instance, thinking about lifting a heavy object before children learn to speak and includes guided imagery, or enactive thought, improves for reducing pain and anxiety during childbirth (Hemmen & Seelen, 200; Holmes, 200), and individuals diagnosed with Parkinson’s disease (Tamir, Dickstein, & Huberman, 2007). Because of the playful nature of children and their ability to fantasize, guided imagery can be an especially useful self-care behavior for children (Lasseter, 2006; Hugh, Van Kuiken, & Broome, 2006). It has been suggested that children may be better candidates for imagery techniques because their left hemispheres are only becoming dominant during school years (Stephens, 1993). “Children generally are willing to participate in therapeutic imagery and demonstrate active imaginations” (Solomon & Saylor, 1995, p. 2.10). Furthermore, mastery of guided imagery may contribute the school-aged child’s sense of industry and the adolescent’s sense of identity. Despite the renewed interest in complementary and alternative therapies, in the last 20 years surprisingly about a dozen studies have specifically included guided imagery as an intervention for children (Broome, Lillis, McGahee, & Bates, 1992; Huth & Broome, 2007; Pederson, 1995; Sibinga, Shindell, Casella, Dugan, & Wilson, 2006; Van Kuiken, 2004). Guided imagery has been successful in reducing pain of children having cancer (Rheingans, 2007) or sickle cell disease (Sibinga et al.,). Evidence indicates that imagery has improved coping in pediatric hospice patients (Russell & Smart, 2007). In contrast, in a study involving children at home following a tonsillectomy, there were no significant differences between children using guided imagery from those who did not for self-reported pain, analgesic use, fluid intake, and emesis (Huth & Broome, 2007).

**Children and Guided Imagery as Internally Oriented Self-care**

Since self-care is learned, Orem (2001) suggested that children are “developing foundational capabilities and dispositions for engagement in forms of deliberate action, including self-care.” (p. 268). Much of this is learned through family and cultural systems. More often than not, parents are instrumental in the dependent-care system and help their children to develop a repertoire of self-care behaviors. Because the act of controlling one’s thoughts is not readily observable to others, it may be more difficult for children to learn self-care actions that control one’s thoughts, feelings, and orientations. Findings from studies involving children with sickle cell disease indicate that parents using externally oriented coping skills have children who cope better than children whose parents use more internally oriented coping skills (Gil, Williams, Thompson, & Kinney, 1991; Kliewer & Lewis 1995). Authors speculate, based on social learning theory, that their results indicate that since children cannot observe their parents who are using internally oriented coping, they are less likely to learn these useful coping mechanisms.

If children cannot observe their parents using action sequences directed to controlling oneself, they must be specifically taught to do so. The self-care deficit theory of nursing can be used to explain how nurses can use their specialized knowledge and skills to foster the development of internally oriented self-care in children.

**Helping Methods**

Orem (2001) stated that nurses have specialized capabilities involving assessment, analysis, and making judgments about helping that forms the basis for providing nursing. Nurses use assessment to obtain valid and reliable information about the self-care or dependent-care system. They subsequently analyze information
and make judgments about how individuals can and should be helped. Orem has identified five specific methods of helping: guiding another, teaching another, doing for another, providing a developmental environment (DE), and supporting another. Helping methods must be compatible with the action sequence for self-care agency to be developed and self-care to result (see Figure 1). For instance, guiding and teaching are appropriate when children are knowledge-seeking about managing their pain. Doing for and guiding are associated with assistance- and resource-seeking, such as when children ask for help with applying hot packs. Supporting another and providing a DE is appropriate when children are frustrated with their attempts to master a skill. Nurses frequently help children control external factors by doing for them, such as administering a pain medication. Doing for another is also associated with internally oriented action sequences aimed at using resources to control internal factors. For example, a nurse may choose to use an opiate, rather than an anti-inflammatory, because of specialized knowledge about medication actions. However, doing for is not an appropriate helping method for internally oriented self-care used to control one’s thoughts. One must keep in mind that responsibility for that action sequence ultimately lies with the individual.

A Nursing Case

Orem (2001) has designated six constituent units of designs for the production of nursing for individuals. These design units form the framework for the case described. The purpose of the case is to focus on guided imagery as internally oriented self-care; therefore, not every aspect of the therapeutic self-care demand is addressed.

Contract For and Jurisdiction of Nursing

James is a 10 year old admitted to a children’s hospital for managing pain from a vaso-occlusive episode related to sickle cell disease. His mother is not present, as she must work; however, James is comfortable in the hospital setting because he has been on this unit several times, and he asks questions when needing information about his care. A registered nurse is required to provide nursing, and other health care professionals, such as physicians, child life specialists, pharmacists, laboratory technicians, nursing aides, and volunteers, are involved over the course of his hospitalization. With 5 years of pediatric nursing experience, the nurse caring for James has developed nurse agency in guided imagery through training and certification. At this children’s hospital, primary nursing is the delivery care model used so that continuity of care is maintained.

Legitimate Functional Unity of Care Providers

Limited primarily by his pain, James partially participates in his care. He is vocal about what he will and will not do for himself and asks for assistance from others when he needs it. Legitimate care providers include the nurse and other health care providers. His mother also provides some dependent-care when she is present.

Current or Prior Dependent-care System

Given the developmental state of James, he has an established dependent-care system involving his mother. When he is healthy, she assists him with activities of daily living and assures that his health promotion needs are met. When he has pain at home, his mother provides him with Tylenol or Tylenol with Codeine based on his pain rating. Knowing that fluids are important, she frequently reminds him to drink water or juice. She attempts to distract him with television and music. To relieve his pain, she rubs his arms or legs and helps him apply a heating pad. When she is present at the hospital, she continues to perform the same dependent-care operations, except those related to medications.

Therapeutic Self-care Demand

The therapeutic self-care demand of James is conditioned primarily by his pain and related limitations. Rating his pain an 8, he reports that the pain is especially bad in his legs and arms. He is receiving morphine via PCA and is demanding pain medication as often as he can receive it via the pump. His pain is such that he is unable to ambulate, so he uses a urinal for voiding. He regularly requests and changes hot packs to his legs and arms. His appetite is poor, although he does drink fluids when reminded. His nurse notes that he appears restless and occasionally moans. He is only temporarily distracted by the television or listening to music.

By conducting a physical assessment, noting the history, and discussing the plan of care with the previous nurse, the nurse ascertains that many of universal self-care requisites are conditioned by factors related to the pain James is experiencing. These are summarized in Figure 2. She also notes that James has a health-deviation self-care requisite related to a need for pain alleviation. Technologies and actions directed towards meeting this requisite include: assessing
**Figure 2.** Conditioning factors and technologies and actions associated with universal self-care requisites for a child with pain from sickle cell disease.

<table>
<thead>
<tr>
<th>Universal Self-care Requisite</th>
<th>Conditioning Factors</th>
<th>Technologies and Actions</th>
</tr>
</thead>
</table>
| Maintaining a sufficient intake of air | Normal pattern of respiration, with adequate oxygen saturation on room air. At the cellular level, inadequate oxygenation of tissue causes pain. | • Position in bed to facilitate breathing  
• Monitor respiratory status |
| Maintaining a sufficient intake of water | Intake of water is limited by confinement to bed, lethargy from opioids, and need for reminders to drink. | • Assess beverage preferences and maintain supply at bedside  
• Remind patient to drink upon entering room  
• Monitor fluid intake  
• Maintain IV infusion |
| Maintaining a sufficient intake of food | James reports having little appetite, which is further depressed by opioids. Ability to feed self can be limited by pain in arms. | • Assess food preferences and offer often  
• Obtain assistance for James at mealtimes |
| Providing care associated with eliminative processes and excrements | Due to pain in legs, James does not ambulate to bathroom, but uses a urinal. With assistance, he will ambulate to bathroom for bowel. Constipation a risk with opioids, lack of ambulation, and lack of fiber. | • Provide urinal at bedside  
• Assist to bathroom  
• Administer laxative as ordered  
• Monitor output |
| Maintaining balance of activity and rest | Although James is lethargic from the pain medication, his sleep is fitful and often interrupted by hospital activities. Pain and confinement to bed limits his activity. | • Avoid interruptions during sleep  
• Push PCA button while he sleeps  
• Maintain bedtime routine as possible  
• Encourage playroom visits as possible  
• Assure television and other activities are available |
| Maintaining balance of solitude and social interaction | Because his mother is at work and his friends are in school, James has little social interaction. | • Direct child life specialist or volunteer to interact with James  
• Provide phone for contact with friends  
• Match with same age, same gender roommate. |
| Preventing hazards | Lethargy from opioids and limited mobility make James at risk for injury. | • Monitor level of consciousness  
• Maintain actions to prevent injury |
| Maintaining normalcy | Hospitalization away from family, friends, and school affect normalcy; however, he adapts well to hospitalization based on his previous experiences. | • Maintain home routines as possible  
• Encourage playroom visits  
• Provide choices for managing pain |

pain, monitoring administration of pain mediation, using distraction through television and music, applying hot packs to arms and legs, and avoiding ambulation or other movements that are painful.

**Self-care Capabilities and Roles, Dependent-care Capabilities and Roles**

James has sufficient self-care agency for directing some of his own self-care or seeking dependent-care or nursing care from others. The majority of his actions are externally oriented self-care; although, he does apply hot packs and push the PCA button in an effort to regulate his internal environment. When the nurse inquires about internally oriented self-care to control his thoughts, he indicates that he tries to watch television, listen to music, or sleep to “get away from the pain.” Since his self-care agency is primarily limited by his pain, it is anticipated that
as his pain lessens, his agency will gradually be restored. When present, his mother continues to perform dependent-care, thereby demonstrating adequacy of her dependent-care agency. In the absence of the mother, dependent-care usually performed by her is subsumed by the nurse or other health care providers.

**Design Features of the Nursing System and Dependent-care System**

Using her nursing agency, the nurse assesses James to design a nursing system that would best support the meeting of James’s therapeutic self-care demand. Because James performs some self-care and participates in some dependent-care, a partially compensatory nursing system is needed. The nurse assesses that, while a variety externally orientated self-care actions to manage pain are being used, it appears that James is not performing any internally orientation self-care to control his thoughts. He relies solely on passive distraction through television or music to avoid thinking about his pain. The nurse judges that James may be receptive to learning guided imagery to complement the care he is receiving for managing his pain. She reasons that since James is having pain, he may be motivated to learn guided imagery. Furthermore, the nurse recognizes that James is capable of other self-care actions to alleviate pain. He performs estimative operations when he describes the intensity and locations of his pain or talks about ways he and his mother manage pain at home. He also is able to reflect on courses of action to alleviate pain, which are transitional types of operations, since he is able to decide when to push the PCA button or apply hot packs. Because he evaluates the effect of his pushing the PCA button and applying hot packs, he possesses sufficient self-care agency to perform productive type operations to alleviate pain. Finally, as a school-aged child, mastering guided imagery would enhance his sense of industry and give him another behavior that can help him control his pain.

The nurse devises a nursing system to help James learn to perform guided imagery (Figure 3). She begins by assessing if James has sufficient knowledge to perform guided imagery. She asks James about ways he uses his imagination, whether he likes to make up stories, or if he sometimes daydreams during school. When she inquires, she finds that James has never heard of guided imagery. Using the helping method of teaching to explain about guided imagery, she assists James in gaining empirical knowledge about himself and the environment. These actions assist James in estimative type operations related to using guided imagery as internally oriented self-care.

After asking some questions, he agrees to give guided imagery a try. His decision, a transitional operation, results in an expanded jurisdiction of nursing. The roles and responsibilities of James and the nurse are delineated. They agree that the nurse will get the supplies needed and teach James how to perform guided imagery. James agrees to learn and practice the technique, if it is helpful, while he is in the hospital.

They begin to take steps to fulfill the prescriptive operations. The nurse observes that James is capable of using a tape recorder, since this is how he listens to his music. Thus, he already has the capability to perform some of the productive type operations involved with guided imagery. Using her specialized knowledge and skill of nursing and guided imagery, she begins by assessing his likes and dislikes, in order to provide a DE, another helping method. Before they begin, she asks James to rate his pain, which he tells her is still “an 8.” She walks him through the guided imagery process as she records the verbal session, an example of the helping method of guiding another. After the session, the nurse reassesses James. He reports that he feels a “little better” and that he would like to try that again. The nurse has James demonstrate how to use the tape recorder, and she instructs him that he can use the tape whenever he wants. James indicates he will do it again after his lunch. These nursing actions contribute to the development of his self-care agency as James masters the technique of guided imagery.

Later that shift, the nurse reassesses James. He continues to complain of pain in his arms and legs, rating the pain a 6. When she inquires about guided imagery, he tells her that he did it a couple of times, indicating that James is fulfilling his role. The nurse notes that James appears a little more relaxed; however, he continues to demand the morphine frequently, apply hot packs to his extremities, and use the urinal. When his mother arrives, James tells her about how he is using guided imagery and shows her how he does it. The mother later tells the nurse that she appreciated the nurse’s efforts to teach James since guided imagery gives him something he can use by himself to help control the pain.

The next day when the nurse returns to work, James tells her that he used the tape before bed and in the morning after getting up to the bathroom. He says that his pain is still in his arms and legs, but reports that he is feeling much better. Rating his pain a 3, and he demands morphine from the PCA about half as frequently as he was the previous day. The physician writes orders to discontinue the PCA and begin oral pain
medications. James eats about half his breakfast, and by noon reports that he is having no pain, eats most of his lunch, and goes to the playroom. His self-care agency is being restored quickly and his self-care requisites are conditioned less by pain. Plans are made to discharge him when his mother arrives from work.

When James returns to his room from the playroom, the nurse observes him to be listening to his guided imagery tape. Concerned that he may be having pain, she asks him to rate his pain. He tells her that he does not have any. When she inquires why he is using the guided imagery tape, he tells her, “Because it is fun.” The nurse continues the nursing system by using the helping method of supporting another when she reminds James that he can use guided imagery at any time and reinforces his claim that it is fun. Because James is eating well, toileting independently, and resting comfortably, she judges that most of the previously noted universal self-care requisites are being met without nursing. At this time, he only requires nursing for taking oral pain medications until his mother arrives.

Conclusion

More scholarly work is needed to further explain the theoretical aspects of internally oriented self-care. Other techniques, such as positive self-talk or meditation, should be explicated as internally oriented self-care. While Orem’s (2001) theoretical propositions clearly specify what helping methods are appropriate for

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**Figure 3. A Nursing System to Facilitate Self-care Operations to Learn Guided Imagery.**

<table>
<thead>
<tr>
<th>Operation Type</th>
<th>Desired Result</th>
<th>Technologies and Actions to Achieve Result</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Estimative</strong></td>
<td>Gain empirical knowledge about guided imagery</td>
<td>• Assess how James uses his imagination</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Teach James about guided imagery</td>
</tr>
<tr>
<td></td>
<td>Gain experiential knowledge that reduced pain improves well-being</td>
<td>• Discuss with James how pain and related hospitalization affect him</td>
</tr>
<tr>
<td></td>
<td>Gain technical knowledge that pain can be regulated by guided imagery</td>
<td>• Teach James about how guided imagery can be used to regulate pain</td>
</tr>
<tr>
<td><strong>Transitional</strong></td>
<td>An affirming judgment to learn guided imagery</td>
<td>• Guide James as he weighs whether or not to learn guided imagery</td>
</tr>
<tr>
<td></td>
<td>Decision to engage in learning guided imagery</td>
<td>• Support James’s decision to use guided imagery</td>
</tr>
<tr>
<td><strong>Productive</strong></td>
<td>Preparation of self and materials to learn guided imagery</td>
<td>• Obtain tapes and tape recorder</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Create guided story based on assessment of James’s likes and dislikes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Have James rate pain intensity immediately before performing guided imagery</td>
</tr>
<tr>
<td></td>
<td>Performs guided imagery</td>
<td>• Guide James through first guided imagery session</td>
</tr>
<tr>
<td></td>
<td>Monitors performance of guided imagery</td>
<td>• Ask James about his perception of how guided imagery worked for him</td>
</tr>
<tr>
<td></td>
<td>Monitors response of pain to guided imagery</td>
<td>• Ask James about how he perceives his pain to be affected by guided imagery</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Have James rate pain intensity immediately after performing guided imagery</td>
</tr>
<tr>
<td></td>
<td>Reflects to confirm is guided imagery reduces pain</td>
<td>• Ask James to compare pre- and post-pain intensity ratings</td>
</tr>
<tr>
<td></td>
<td>Decide to use guided imagery if successful</td>
<td>• Remind James throughout the day to use guided imagery</td>
</tr>
<tr>
<td></td>
<td>Decide other courses of action if guided imagery is not successful</td>
<td>• Encourage to use, as guided imagery is learned and improves with practice</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Seek other pain relief measures</td>
</tr>
</tbody>
</table>

Adapted from: Orem, 2001, p. 259-260
enhancing internally oriented self-care, specific nursing interventions that build self-care agency and foster internally oriented self-care are needed. Because guided imagery is a technique that can be used for variety of reasons, strategies to identify those individuals whose agency is more attuned to internally oriented self-care need to be described. There are patients for whom this intervention may not be effective, and finding other ways to enhance their self-care agency would be relevant. Research is also needed to determine ways to test this theoretical component of the self-care deficit theory of nursing. For example, because internally oriented self-care is not directly observable to others, valid and reliable indirect measures will need to be developed. Investigation regarding how therapeutic self-care demands are best met through guided imagery, and other internally oriented self-care, may prove useful to nurses in order to improve practice and refine the theory. Finally, showing linkages between theoretical concepts and complementary and alternative therapies, such as guided imagery, broadens the jurisdiction of nursing and legitimizes the role of nurses who perform these therapies.

The nursing case presented illustrates how a nurse, using specialized knowledge and skill, creates a nursing system involving guided imagery as internally oriented self-care for a school-aged child. The presence of pain conditioned his universal and health-deviation self-care requisites while simultaneously limiting his self-care agency, thereby increasing his therapeutic self-care demand. By using the helping methods of guiding another, supporting another, providing a DE, and teaching another, the nurse helps a child learn to use guided imagery to reduce pain. The child’s self-care agency is enhanced, thus broadening the child’s repertoire of self-care, resulting in a reduction of pain intensity for the child.

References


Some Early Efforts to Conceptualize Nursing: A Tribute to Dorothea E. Orem

My first exposure to Dorothea Orem's ideas about nursing occurred during 1961-1963 when I attended a seminar led by Orem on administration of nursing education in a master's degree program at The Catholic University of America. At that time, since nursing was moving further into higher education, there was concern about the need to define the nature of nursing and nursing as a practice discipline with its own scientific body of knowledge and not knowledge largely derived from other disciplines. The question, then, was: "What is nursing? How does it differ from other health-related disciplines?"

From my prior nursing education and experience in nursing practice and teaching of nursing at The Johns Hopkins Hospital diploma nursing school, I thought I knew nursing. We had learned a lot about medicine, nursing "needs" and nursing technologies, but the idea of a need to conceptualize nursing and theorize about nursing in order to structure scientific nursing knowledge and be able to say explicitly what nursing’s particular focus or contribution to health care is was a thought that was new to me. Everyone knew what nursing was because we did it! How do nurses express the nature of what nurses do other than indicate that they monitor a person’s health status, identify any overt problems, and determine the nursing technologies needed to "care" for the patient/client? The notion of being able to “think” nursing—to be able to move from an abstract general perspective representative of nursing in all situations as a basis for analyzing nursing cases in order to “do” nursing in a variety of particular situations seemed essential if nursing was ever to move ahead as a separate scientific discipline of knowledge. Many other nurses also did not seem to clearly know what nursing’s particular contribution to health care was—what the nurse was trying to achieve for the patient other than some general health care outcome. Nurses were busy, working hard to do whatever needed to be done in a health care situation without a clear notion of what they as nurses were trying to accomplish for people under health care that was distinctive from that provided by other health care workers. A clear concept of nursing would not only help to clarify the nurse’s role and enable more productive use of the nurse’s time on behalf of patients but also could provide a basis for identifying true nursing outcomes. The concern then is how can nursing practice be restructured to ascertain achievement of these nursing outcomes?

In the seminars she encouraged us to explore the literature to examine other nurses’ conceptualizations, like those of Virginia Henderson, Hildegard Peplau, Ida Jean Orlando and Faye Abdellah and encouraged us to examine the theoretical basis of other disciplines, like sociology and psychology and organization theory as well. Prior to that time, Orem had begun to formalize her own thinking about nursing and had published her first book, Guides for Developing Curricula for the Education of Practical Nurses, a 1959 U. S. Government Printing Office publication. She often opened up our discussions by encouraging students to explore whatever nursing topic that was of concern to them. It might be about nursing in general, nursing of patients, nursing education or nursing administration. Sometimes these discussions seemed to range all “over the map” and I would wonder what we were getting out of it all. Then, after listening for a period of time, Orem would quietly say, “I think we have something here.” She would go to the blackboard and begin to pull together whatever had been said—abstract from it and diagram the main constructs in a way that revealed the essence of it. We would suddenly have that “ah ha” experience of “Now, I understand!” She pulled things together so that they made sense to us and gave structure to the ideas expressed about nursing.

She helped us to express ourselves about nursing, never criticizing but encouraging and stimulating us to seek further understanding. She planted the seed. She shared her own ideas with us—what she had developed up to that time, the concepts of self-care and self-care requirements from which, with further exploration and study, the
self-care deficit theory of nursing later evolved. Orem enabled us to perceive the need for developing the scientific basis of nursing and the need to continue to work to develop and formalize nursing knowledge. Moreover, she encouraged me to go on to earn a doctoral degree, 1963-1968, in order to develop my own knowledge and skills. At that time, in my doctoral program, the concern was about the idea of working “toward a theory of nursing.” I found nothing being formalized then that to me was clearly representative of nursing. I turned to Orem’s work and based my dissertation, The Meaning of Rest, on self-care and the universal self-care requisite—the need for activity and rest.

Orem also encouraged us to seek out others of like mind to continue to work on developing nursing knowledge. In 1967, this led to the coming together of several nursing faculty members of the former Nursing Model Committee of the School of Nursing at The Catholic University of America, a group that had been led by Orem. Others interested in this work were invited to join an informal study group to study nursing. Meetings frequently took place at her home outside of Washington, D. C. where a warm social environment was fostered. Some other meeting sites were D. C. General Hospital and The Johns Hopkins Hospital.

Initially, this group called themselves The Improvement of Nursing Group. On their own time and at their own expense (several from out of state), these nurses came together because they were interested in and willing to commit themselves to examining nursing situations in order to formalize ways of thinking about nursing that they felt were descriptive of nursing and would contribute to nursing knowledge. The members of the group—nursing administrators, nurse educators from baccalaureate and higher degree programs, nursing practitioners and those involved in research and development in nursing, felt the need to develop and structure nursing knowledge so that it would be explanatory of the purpose and reality of nursing. Some members were more able to conceptualize and abstract nursing ideas to formalize nursing knowledge while others provided rich examples from varied nursing experiences that enabled advancement of the thinking. All contributions made were respected and ideas were shared in a receptive collegial way. In our shared commitment toward developing nursing knowledge, we appreciated what each individual had to offer. The acceptance of ideas and the productivity of the group were largely due to the vision, leadership and openness of Orem. All had a sense of personal growth and of making a contribution to nursing in that a usable nursing product would be developed that could be shared with others.

In 1968, Orem privately published the first three chapters (under a different title) of her forthcoming 1971 book, Nursing: Concepts of Practice which helped the group’s work. The nursing concepts that were formulated were derived from a variety of nursing cases as described by members of the Group and documented in the minutes. When consideration was being given to publication of the book, Concept Formalization in Nursing, based on the group’s work on conceptualizing nursing, the name of the group was changed to the Nursing Development Conference Group (NDCG).

Further development of the theoretical nursing concepts was anticipated through work in restructuring nursing practice for individuals and groups of patients based on the SCDNT and through empirical research to validate or disprove the constructs and to refine them. For example, under the direction of the Center for Experimentation and Development in Nursing at The Johns Hopkins Hospital, nursing practice in several outpatient nursing clinics was restructured to help nurses focus on helping persons to better manage their self-care and less upon managing clinic operations. In education, nursing courses were developed and nursing curriculums were revised based on the SCDNT. Workshops were provided by members of the NDCG as a way of helping others to learn about the theoretical framework being developed. Publication of the work accomplished by individual members of the group and of the group, itself, enabled others to share in the work. While apparently not highly valued in nursing today, the continuing development and structuring of nursing knowledge and nursing practice based on a definitive nursing theoretical perspective, such as the self-care deficit theory of nursing, is work that needs to be done.

Sarah E. Allison, RN, MSN, EdD
President's Message 12/07

Dear IOS Members,

As the end of the year is approaching, it is time to look to the coming year and set an agenda for the IOS.

In January 2008, you will receive a ballot for election of officers per e-mail. This past fall, ballots were distributed. However, there was a glitch in this process and not all members received their ballots. The ballots that were returned will be disregarded and the election process will be done over. Please make sure to cast your vote when you receive your ballots.

Planning is underway for the 10th IOS World-Congress on SCDNT to be held in Vancouver, British Columbia, Canada June 26-29, 2008. The theme for the conference is Self-Care and Nursing-Reflecting the Past-Conquering the Future. The planning committee is looking forward to an exciting conference. A special program is being planned to remember Dorothea E. Orem. During this program, time will be allotted for members to reflect on the contributions of Dorothea as well as to share memories.

You should have all received a notice of the Call for Abstracts. The deadline for submission is January 21, 2008. I encourage you to submit an abstract of your work. In addition, please share the Call for Abstracts with your colleagues who are pursuing work related to self-care.

A general IOS meeting will be held during the conference. We will be looking to identify strategies to best serve the membership and to advance the mission of the IOS. Plan on bringing your ideas and suggestions.

For information about the conference site and registration, check out the WEB site, www.scdnt-conferences.com.

Best wishes for 2008,
Barbara Banfield

Call for Abstract

10th IOS World-Congress on SCDNT
“Reflecting the Past – Conquering the Future”
June 26 – 29, 2008

at The University of British Columbia, Vancouver, Canada

We would like to invite you to present your research work or utilizations of SCDNT at this conference.

A major part of this conference will be a memorial for Dr. Dorothea E. Orem.

For further information on abstract submission, general conference information, and registration visit our webpage at: www.scdnt-conferences.com
Advances in Nursing Education in Vietnam

The first graduate nursing program in Vietnam officially opened Fall 2007 at the University of Medicine and Pharmacy Ho Chi Minh City. The Friendship Bridge (FB) Nurses Group, a committed group of volunteer nurse educators focused on improving nursing education and practice in Vietnam, and their colleagues in Vietnam developed the Master’s in Nursing curriculum. Dr. Berbiglia and Dr. Judy Richter taught the Nursing Theory/Theoretical frameworks course. The MSN Class of 2009 is shown with Dr. Berbiglia.

Dr. Vi Berbiglia is pleased to recognize (L to R) Tran Hong Diem and Luu Thuy, MSN Class 2009, University of Medicine and Pharmacy Ho Chi Minh University, for their selection of the Self-Care Deficit Nursing Theory to guide their theses.

University of Medicine and Pharmacy Ho Chi Minh City MSN Class of 2009

Foreground: (L to R): Miss Linh, Translator; Dr. Violeta Berbiglia, Friendship Bridge faculty
Background (L to R) Students: Nguyen Trong Nghia, Nguyen Phuong Thao, Tran Hong Diem, Luu Thuy, Bui Khanh Thuan, Nguyen Tuyet Trinh, Doan Kim Thoa, Vo Van Tan
Introduction of Karen Williamson, IOS New Scholar

The recipient of the second New Scholar Award is Dr. Karen Williamson, a 2007 graduate of the Lawrence S. Bloomberg School of Nursing, University of Toronto. We are pleased to publish her dissertation abstract and look forward to a report of her research in the near future. Karen was recommended by Dr. Vi Berbiglia who served as an external advisor on Karen’s dissertation committee.

Dr. Williamson’s academic degrees include:
- University of Toronto, Toronto, Ontario, Canada. Bachelor of Nursing Science, 1975

She is currently appointed as Assistant Professor, (tenured) University of Windsor, Faculty of Nursing, Windsor, Ontario, Canada. Previous positions include:
- Assistant Professor, University of Windsor, Faculty of Nursing, Windsor, Ontario, Canada (1995-2006)
- Sessional Lecturer, Ryerson University, Toronto, Ontario, Canada (1989-1995)
- Hospital Services Co-ordinator, Wellesley Hospital, Toronto, Ontario, Canada (1985-1989)
- Unit Manager, Wellesley Hospital, Toronto, Ontario, Canada, (1978-1985)

She holds memberships in
- Sigma Theta Tau, Iota Omicron and Tau Upsilon Chapters
- Registered Nurses Association of Ontario

Publications:
An Individualized Telephone Educational Intervention for Patients following Coronary Artery Bypass Graft Surgery During the First Three Weeks After Discharge: Using Orem’s Self-Care Deficit Nursing Theory in Interventional Research

Karen Williamson, PhD, RN

ABSTRACT

The purpose of this randomized clinical trial was to evaluate the effectiveness of a weekly individualized, telephone, educational intervention for coronary artery bypass graft (CABG) surgical patients during the first three weeks following discharge from the hospital. Orem’s Self-Care Deficit Nursing Theory-based care guided the design of the intervention and the study. An experimental design with repeated measures was used to determine the effectiveness of the intervention on improving knowledge of symptom management and performance of therapeutic self-care behaviours, and in reducing symptom severity. Patients (N = 88), undergoing their first CABG surgery, were randomly assigned to one of two groups either receiving the usual pre-discharge education or the usual pre-discharge education and the individualized, telephone intervention.

The three educational intervention sessions focused on patients’ concerns related to six post-operative symptoms (i.e. pain, anxiety, depression, fatigue, sleep disturbances, and activity limitations) and related symptom management strategies were discussed. Data related to symptom severity were collected at pre-test (during hospitalization) and during each of the three weeks of the intervention implementation. Data related to knowledge of symptom management and therapeutic self-care were collected at pre-test and at post-test (week 4).

Major findings from the analyses indicated that the intervention was effective in improving knowledge of symptom management and performance of therapeutic self-care behaviours, and in reducing symptom severity. Anxiety, fatigue, sleep disturbances, and activity limitations were significantly decreased in the intervention group during each of the first three weeks following discharge as compared to the control group. Pain intensity and interference, as well as depression, were lower in the intervention group at weeks 2 and 3 after discharge. Moderate positive correlations were found between knowledge of symptom management and therapeutic self-care, knowledge of symptom management and the symptoms severity of pain interference, fatigue, and activity limitations, as well as with therapeutic self-care and the severity of all symptoms except for pain intensity. Age was negatively moderately correlated with knowledge of symptom management. Some of the implications from the study findings are related to examining the long-term effectiveness of the intervention and evaluating the feasibility of implementing the intervention in a hospital-based setting.

SELECTED REFERENCES


