

Nursing and Animal Research Literatures

Ma Hongbao ¹, Margaret Young ², Yang Yan ¹

¹ Brookdale Hospital, Brooklyn, New York 11212, USA; ² Cambridge, MA 02138, USA
ma8080@gmail.com

Abstract: Nursing is a professional work within the health care system on the care of individuals, families, and communities so that they may attain, maintain, or recover optimal health and quality of life. Nurses provide care within the ordering scope of physicians. In the postwar period, nurse education has undergone a process of diversification towards advanced and specialized credentials, and many of the traditional regulations and provider roles are changing. In the fifth century BC, for example, the Hippocratic Collection in places describes skilled care and observation of patients by male attendants, who may have been early nurses. This article introduces recent research reports on nursing and animal as references in the related studies.

[Ma H, Young M, Yang Y. **Nursing and Animal Research Literatures**. *Biomedicine and Nursing* 2015;1(2):99-103]. <http://www.nbmedicine.org>. 9

Key words: nursing; cell; life; research; literature; hospital; medicine; patient; animal

1. Introduction

Before the foundation of modern nursing, members of religious orders such as nuns and monks often provided nursing-like care. Examples exist in Christian, Islamic and Buddhist traditions amongst others. Phoebe, mentioned in Romans 16 has been described in many sources as "the first visiting nurse". These traditions were influential in the development of the ethos of modern nursing. The religious roots of modern nursing remain in evidence today in many countries. One example in the United Kingdom is the use of the honorific "sister" to refer to a senior nurse.

In the 19th and early 20th century, nursing was considered a women's profession, just as doctoring was a men's profession. With increasing expectations of workplace equality during the late 20th century, nursing became an officially gender-neutral profession, though in practice the percentage of male nurses remains well below that of female physicians in the early 21st century.

The authority for the practice of nursing is based upon a social contract that delineates professional rights and responsibilities as well as mechanisms for public accountability. In almost all countries, nursing practice is defined and governed by law, and entrance to the profession is regulated at the national or state level.

The aim of the nursing community worldwide is for its professionals to ensure quality care for all, while maintaining their credentials, code of ethics, standards, and competencies, and continuing their education. There are a number of educational paths to becoming a professional nurse, which vary greatly worldwide; all involve extensive study of nursing theory and practice as well as training in clinical skills.

Nurses care for individuals of all ages and cultural backgrounds who are healthy and ill in a

holistic manner based on the individual's physical, emotional, psychological, intellectual, social, and spiritual needs. The profession combines physical science, social science, nursing theory, and technology in caring for those individuals.

To work in the nursing profession, all nurses hold one or more credentials depending on their scope of practice and education. A licensed practical nurse (LPN) (also referred to as a licensed vocational nurse, registered practical nurse, enrolled nurse, and state enrolled nurse) works independently or with a registered nurse (RN). The most significant differentiation between an LPN and RN is found in the requirements for entry to practice, which determines entitlement for their scope of practice. For example, Canada requires a bachelor's degree for the RN and a two-year diploma for the LPN. A registered nurse provides scientific, psychological, and technological knowledge in the care of patients and families in many health care settings. Registered nurses may earn additional credentials or degrees.

In the United States, the Occupational Health Safety Network (OHSN) is an electronic surveillance system developed by the National Institute for Occupational Safety and Health (NIOSH) to address health and safety risks among health care personnel, including nurses. It focuses on three high risk and preventable events: musculoskeletal injuries from patient handling activities; slips, trips, and falls; and workplace violence. Hospitals and other healthcare facilities can upload the occupational injury data they already collect for analysis and benchmarking with other de-identified facilities, in order to identify and implement timely and targeted interventions.

Nurses are also at risk for violence and abuse in the workplace. Violence is typically perpetrated by non-staff (e.g. patients or family), whereas abuse is

typically perpetrated by other hospital personnel. 57% of American nurses reported in 2011 that they had been threatened at work; 17% were physically assaulted.

There are a number of interventions that can mitigate the occupational hazards of nursing. They can be individual-focused or organization-focused. Individual-focused interventions include stress management programs, which can be customized to individuals. Stress management programs can reduce anxiety, sleep disorders, and other symptoms of stress. Organizational interventions focus on reducing stressful aspects of the work environment by defining stressful characteristics and developing solutions to them. Using organizational and individual interventions together is most effective at reducing stress on nurses.

Catholic religious institutes were influential in the development of Australian nursing, founding many of Australia's hospitals - the Irish Sisters of Charity were first to arrive in 1838 and established St Vincent's Hospital, Sydney in 1857 as a free hospital for the poor. They and other orders like the Sisters of Mercy, and in aged care the Sisters of the Little Company of Mary and Little Sisters of the Poor founded hospitals, hospices, research institutes and aged care facilities around Australia.

A census in the 1800s found several hundred nurses working in Western Australia during the colonial period of history, this included Aboriginal female servants who cared for the infirm.

In order to become a registered nurse, one must complete a program recognized by the Nursing and Midwifery Council. Currently, this involves completing a degree, available from a range of universities offering these courses, in the chosen branch specialty (see below), leading to both an academic award and professional registration as a 1st level registered nurse. Such a course is a 50/50 split of learning in university (i.e. through lectures, assignments and examinations) and in practice (i.e. supervised patient care within a hospital or community setting).

The oldest method of nursing education is the hospital-based diploma program, which lasts approximately three years. Students take between 30 and 60 credit hours in anatomy, physiology, microbiology, nutrition, chemistry, and other subjects at a college or university, then move on to intensive nursing classes. Until 1996, most RNs in the US were initially educated in nursing by diploma programs. According to the Health Services Resources Administration's 2000 Survey of Nurses only six percent of nurses who graduated from nursing programs in the United States received their education at a Diploma School of Nursing.

Levsey, Campbell, and Green voiced their concern about the shortage of nurses, citing Fang, Wilsey-Wisniewski, & Bednash, 2006 who state that over 40,000 qualified nursing applicants were turned away in the 2005-2006 academic year from baccalaureate nursing programs due to a lack of masters and doctoral qualified faculty, and that this number was increased over 9,000 from 32,000 qualified but rejected students from just two years earlier. Several strategies have been offered to mitigate this shortage including; Federal and private support for experienced nurses to enhance their education, incorporating more hybrid/blended nursing courses, and using simulation in lieu of clinical (hospital) training experiences.

With health care knowledge growing steadily, nurses can stay ahead of the curve through continuing education. Continuing education classes and programs enable nurses to provide the best possible care to patients, advance nursing careers, and keep up with Board of Nursing requirements. The American Nurses Association and the American Nursing Credentialing Center are devoted to ensuring nurses have access to quality continuing education offerings. Continuing education classes are calibrated to provide enhanced learning for all levels of nurses. Many States also regulate Continuing Nursing Education. Nursing licensing boards requiring Continuing Nursing Education (CNE) as a condition for licensure, either initial or renewal, accept courses provided by organizations that are accredited by other state licensing boards, by the American Nursing Credentialing Center (ANCC), or by organizations that have been designated as an approver of continuing nursing education by ANCC. There are some exceptions to this rule including the state of California, Florida and Kentucky. National Healthcare Institute has created a list to assist nurses in determining their CNE credit hours requirements. While this list is not all inclusive, it offers details on how to contact nursing licensing boards directly. This article introduces recent research reports as references in the related studies.

The following introduces recent reports as references in the related studies.

Banks, M. R., L. M. Willoughby, et al. "Animal-assisted therapy and loneliness in nursing homes: use of robotic versus living dogs." *J Am Med Dir Assoc.* 2008 Mar;9(3):173-7. doi: [10.1016/j.jamda.2007.11.007](https://doi.org/10.1016/j.jamda.2007.11.007).

Loneliness is a common problem in long-term care facilities (LTCF) and previous work has shown that animal-assisted therapy (AAT) can to some degree reverse loneliness. Here, we compared the ability of a living dog (Dog) and a robotic dog (AIBO)

to treat loneliness in elderly patients living in LTCF. In comparison with a control group not receiving AAT, both the Dog and AIBO groups had statistically significant improvements in their levels of loneliness. As measured by a modified Lexington Attachment to Pets Scale (MLAPS), residents showed high levels of attachment to both the dog and AIBO. Subscale analysis showed that the AIBO group scored lower than the living dog on "animal rights/animal welfare" but not on "general attachment" or "people substituting." However, MLAPS measures did not correlate with changes in loneliness, showing that attachment was not the mechanism by which AAT decreases loneliness. We conclude that interactive robotic dogs can reduce loneliness in residents of LTCF and that residents become attached to these robots. However, level of attachment does not explain the decrease in loneliness associated with AAT conducted with either a living or robotic dog.

Berry, W. L. and L. Reyers "Nursing care of the small animal neurological patient." J S Afr Vet Assoc. 1990 Dec;61(4):188-93.

Nursing care of long-term recumbent small animals, with emphasis on the neurological patient, is described. Principles of general nursing care, particularly nutritional support and the prevention and treatment of urinary complications, are of major concern in any weak or recumbent patient. The estimation of nutritional requirements and adjustments, information on South African commercial liquid diets and practical rehabilitation are described.

Fick, K. M. "The influence of an animal on social interactions of nursing home residents in a group setting." Am J Occup Ther. 1993 Jun;47(6):529-34.

This study was conducted to determine the effect of the presence and absence of a dog on the frequency and types of social interactions among nursing home residents during a socialization group. Point sampling was used to evaluate the behaviors of 36 male nursing home residents at a Veterans Administration Medical Center under two conditions, Dog Present and Dog Absent. A significant difference in verbal interactions among residents occurred with the dog present, $F(1, 69) = 4.92$, $p < .05$. These findings are consistent with existing literature, thus providing further evidence of the value of Animal Assisted Therapy programs as an effective medium for increasing socialization among residents in long-term care facilities. Because an increase in social interactions can improve the social climate of an institution and occupational therapists frequently incorporate group process into their treatment, the

therapeutic use of animals can become a valuable adjunct to reaching treatment goals.

Gammonley, J. and J. Yates "Pet projects: animal assisted therapy in nursing homes." J Gerontol Nurs. 1991 Jan;17(1):12-5.

1. Animal assisted therapy is an applied science using animals to solve a human problem. It is an interdisciplinary approach using animals as an adjunct to other therapies. 2. The major difference between animals as therapy and entertainment is the animal-human bond, a special relationship that develops when a person has strong feelings of psychological attachment to the animal. 3. It is essential that a complete nursing and activity assessment be made before implementation of individualized animal assisted therapy.

Majic, T., H. Gutzmann, et al. "Animal-assisted therapy and agitation and depression in nursing home residents with dementia: a matched case-control trial." Am J Geriatr Psychiatry. 2013 Nov;21(11):1052-9. doi: 10.1016/j.jagp.2013.03.004. Epub 2013 Jul 3.

OBJECTIVES: To investigate the efficacy of animal-assisted therapy (AAT) on symptoms of agitation/aggression and depression in nursing home residents with dementia in a randomized controlled trial. Previous studies have indicated that AAT has beneficial effects on neuropsychiatric symptoms in various psychiatric disorders but few studies have investigated the efficacy of AAT in patients suffering from dementia. METHODS: Of 65 nursing home residents with dementia (mean [standard deviation] age: 81.8 [9.2] years; mean Mini-Mental State Examination score: 7.1 [0.7]), 27 matched pairs (N = 54) were randomly assigned to either treatment as usual or treatment as usual combined with AAT, administered over 10 weekly sessions. Blinded raters assessed cognitive impairment with the Mini-Mental State Examination, presence of agitation/aggression with the Cohen-Mansfield Agitation Inventory, and depression with the Dementia Mood Assessment Scale at baseline and during a period of 4 weeks after AAT intervention. RESULTS: In the control group, symptoms of agitation/aggression and depression significantly increased over 10 weeks; in the intervention group, patients receiving combined treatment displayed constant frequency and severity of symptoms of agitation/aggression ($F_{1,48} = 6.43$; $p < 0.05$) and depression ($F_{1,48} = 26.54$; $p < 0.001$). Symptom amelioration did not occur in either group. CONCLUSIONS: AAT is a promising option for the treatment of agitation/aggression and depression in patients with dementia. Our results suggest that AAT may delay progression of neuropsychiatric symptoms

in demented nursing home residents. Further research is needed to determine its long-time effects.

Manor, W. "Directions for the human-animal bond in the nursing education curriculum." Holist Nurs Pract. 1991 Jan;5(2):64-71.

Metcalf, J. A. "George Orwell's Animal Farm: a case study in leadership/management for undergraduate nursing students." Nurse Educ Pract. 2005 Jul;5(4):252-4. doi: 10.1016/j.nepr.2005.03.005.

Many BSN curricula require a "leadership and management" course. At George Mason University, that course is Leadership and Management in Nursing and Health Science. This article describes how George Orwell's classic novel Animal Farm was used as a case study in leadership and management. This exercise complemented the traditional course material, united the class in a common intellectual exercise, and fostered creative thinking. A nursing student, Anne Lord, offers reaction to the assignment as a signed "In-Box" exemplar.

Miller, J. and L. Ingram "Perioperative nursing and animal-assisted therapy." AORN J. 2000 Sep;72(3):477-83.

Interacting with animals has been shown to reduce blood pressure and cholesterol, decrease anxiety, and improve a person's sense of well being. Animal-assisted therapy (AAT) can be incorporated into the care of perioperative patients. Some of the goals that can be met by using trained and certified therapy animals are reducing stress preoperatively, motivating patients to have a positive attitude, promoting postoperative activity, and reducing the need for pain medication. Infection control, immunosuppressed patients, and research are issues regarding AAT in the hospital setting that must be covered by policy and procedure. Suggestions for setting up an AAT program are discussed.

Mudzyk, A., M. Bourque, et al. "[Animal assisted therapy in a long-term care nursing home]." Soins Gerontol. 2011 Mar-Apr;(88):11-3.

Animal assisted therapy sessions have been set up at the Bellevaux nursing home in Besancon. The project has required a number of specific procedures and training courses to be put in place as well as the involvement of different departments. The sessions give real pleasure to the residents and produce interesting results.

Niksa, E. "The use of animal-assisted therapy in psychiatric nursing: the story of Timmy and Buddy." J Psychosoc Nurs Ment Health Serv. 2007 Jun;45(6):56-8.

A therapy session gone wrong and a therapy dog in training having a bad day combined to remind those of us who work daily with people who have chronic, severe mental illnesses that our idea of what is successful is not always true. This is the story of how a tiny dog acting in a nontherapeutic way helped a young man learn how to get along better with other human beings, as well as how a nurse who thought she knew better learned a lesson about conflict resolution in human-animal relationships.

Vrbanac, Z., I. Zecevic, et al. "Animal assisted therapy and perception of loneliness in geriatric nursing home residents." Coll Antropol. 2013 Sep;37(3):973-6.

Use of animals for therapeutic purposes, animal assisted therapy or AAT is a method for improving quality of life for long-term inpatients. The object of this paper was to evaluate dog companionship as a form of AAT and its effects on perception of loneliness in geriatric nursing home residents. The participants were involved in a six-month program of dog companionship three times weekly for 90 minutes. There were 21 residents included in the program, with a mean age of 80 years. Loneliness was measured by the short version of the UCLA Scale of loneliness. Comparison of test results before and after participation in the program showed that dog companionship reduces the perception of loneliness.

The above contents are the collected information from Internet and public resources to offer to the people for the convenient reading and information disseminating and sharing.

References

1. Banks, M. R., L. M. Willoughby, et al. "Animal-assisted therapy and loneliness in nursing homes: use of robotic versus living dogs." J Am Med Dir Assoc. 2008 Mar;9(3):173-7. doi: 10.1016/j.jamda.2007.11.007.
2. Berry, W. L. and L. Reyers "Nursing care of the small animal neurological patient." J S Afr Vet Assoc. 1990 Dec;61(4):188-93.
3. Fick, K. M. "The influence of an animal on social interactions of nursing home residents in a group setting." Am J Occup Ther. 1993 Jun;47(6):529-34.
4. Gammonley, J. and J. Yates "Pet projects: animal assisted therapy in nursing homes." J Gerontol Nurs. 1991 Jan;17(1):12-5.
5. Ma H, Chen G. Stem cell. The Journal of American Science 2005;1(2):90-92.
6. Ma H, Cherg S. Eternal Life and Stem Cell. Nature and Science. 2007;5(1):81-96.

7. Ma H, Cherg S. Nature of Life. Life Science Journal 2005;2(1):7 - 15.
8. Ma H, Yang Y. Turritopsis nutricula. Nature and Science 2010;8(2):15-20. http://www.sciencepub.net/nature/ns0802/03_127_9_hongbao_turritopsis_ns0802_15_20.pdf.
9. Ma H. The Nature of Time and Space. Nature and science 2003;1(1):1-11. Nature and science 2007;5(1):81-96.
10. Majic, T., H. Gutzmann, et al. "Animal-assisted therapy and agitation and depression in nursing home residents with dementia: a matched case-control trial." Am J Geriatr Psychiatry. 2013 Nov;21(11):1052-9. doi: 10.1016/j.jagp.2013.03.004. Epub 2013 Jul 3.
11. Manor, W. "Directions for the human-animal bond in the nursing education curriculum." Holist Nurs Pract. 1991 Jan;5(2):64-71.
12. Metcalf, J. A. "George Orwell's Animal Farm: a case study in leadership/management for undergraduate nursing students." Nurse Educ Pract. 2005 Jul;5(4):252-4. doi: 10.1016/j.nepr.2005.03.005.
13. Miller, J. and L. Ingram "Perioperative nursing and animal-assisted therapy." AORN J. 2000 Sep;72(3):477-83.
14. Mudzyk, A., M. Bourque, et al. "[Animal assisted therapy in a long-term care nursing home]." Soins Gerontol. 2011 Mar-Apr;(88):11-3.
15. National Center for Biotechnology Information, U.S. National Library of Medicine. <http://www.ncbi.nlm.nih.gov/pubmed>. 2015.
16. Niksa, E. "The use of animal-assisted therapy in psychiatric nursing: the story of Timmy and Buddy." J Psychosoc Nurs Ment Health Serv. 2007 Jun;45(6):56-8.
17. Vrbanac, Z., I. Zecevic, et al. "Animal assisted therapy and perception of loneliness in geriatric nursing home residents." Coll Antropol. 2013 Sep;37(3):973-6.
18. Wikipedia. The free encyclopedia. <http://en.wikipedia.org>. 2015.
19. Wikipedia. The free encyclopedia. Nursing. <https://en.wikipedia.org/wiki/Nursing>. 2015.

9/22/2015