



## Original Article

## Geriatric Nursing and Long Term Care Content in Baccalaureate Nursing Programs in Taiwan

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## SUMMARY

**Background:** The population aged 65 years old and above is expected to dramatically increase annually in Taiwan. Health care professionals need to be prepared to better serve the aged and disabled population. The purpose of this study is to survey Taiwan's current Geriatric Nursing (GN) or Long Term Care (LTC) courses offered in baccalaureate nursing programs.

**Methods:** A descriptive research design was used and detailed checklist review was applied. Data were obtained from the official websites for the content review of Taiwan's current baccalaureate programs in GN and/or LTC course offered in baccalaureate nursing programs.

**Results:** The results showed that the content of the GN course included aging process, communication, ethical, elderly activity, health promotion, nutrition and dementia care. LTC courses focus on the current system of LTC, policy, management of LTC institutions, ethical issues in LTC, and various types of LTC services such as day care, home care and LTC facilities.

**Conclusion:** The survey findings indicated that GN and LTC education must be recognized by providing required stand-alone courses and interdisciplinary education in nursing curricula. These courses should be included in curricular design and innovations to ensure nursing students to acquire strong competence for the future through education.

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## 1. Introduction

World Health Organization (WHO) reported that the health workforce education to improve the quality and relevance of health workers to meet the needs of the 21st century and contribute to better population health outcomes.<sup>1</sup> The International Council of Nurses (ICN) also claim that more numbers of student nurses should be equipped with gerontology knowledge to provide professional nursing care for elder and people of disabilities.<sup>2</sup>

The number of people aged 65 years old and above accounted for over 13.2% of the Taiwan population in 2016, and it is expected to increase to 20% by 2025.<sup>3</sup> To meet this trend, the Taiwanese government implemented a ten-year plan to develop aging-in-place network for the Long Term Care (LTC) system beginning in

2007. Since 2010, Taiwan's Ministry of Health and Welfare has provided annual professional LTC training programs to all health care providers to enhance their LTC-related knowledge and care attitude toward LTC clients. Furthermore, the Long-term Care Services Act was enacted as the principal legal basis for developing comprehensive LTC services in Taiwan in June 2015.<sup>3</sup> All LTC service providers are required to be prepared with LTC competence through initial education to practice in LTC settings by the end of 2017.

Despite this urgent issue, few nurses have been adequately prepared to care for the elderly and disabled.<sup>4,5</sup> It even appears that student nurses do not always have the Gerontology/Geriatric Nursing (GN) or LTC course to address this major concern.<sup>6</sup> More and better prepared student nurses are needed to fulfill aged and disabled population care needs.<sup>2</sup> As a result, GN and/or LTC curriculum development has been enclosed in nursing education in recent years. However, reviews on this development revealed that the majority of studies were descriptive studies found in the US.<sup>7–11</sup> Compared with previous studies on the barriers to gerontology education, lack of clear articulation and standards for gerontology

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curricula and practice competencies were rated by almost half of the respondents as important barriers.<sup>4,12–14</sup> In addition, the GN or LTC curriculums only have been offered as an elective course in most Bachelor of Science in Nursing (BSN) programs.<sup>4</sup> Lack of consensus planning in curriculum development has been observed in most nursing programs.

To reverse this trend, American Association of Colleges of Nursing (AACN) developed a specified program in 2000 to define and revise nurse programs in the US. A document entitled “Older Adults: Recommended Baccalaureate Competencies and Curricular Guidelines for Geriatric Nursing Care” was published to introduce geriatric core competencies and contents.<sup>6</sup> Since then, the majority of studies from the US revealed that gerontology content incorporated into curricula based on AACN guideline have been increased.<sup>7–11</sup>

Studies on reviewing GN content in baccalaureate nursing programs to evaluate the changes in gerontology content, stand-alone courses, and faculty preparation were found between 1997 and 2003.<sup>4,12</sup> Results indicated that gerontological preparations, after the implementation of the John A. Hartford Foundation Institute, the growing shortage of faculty with qualifications were still observed. In 2003, 76% of BSN programs reported at least one full-time faculty expert in gerontological nursing. In addition, most of the nursing curriculum offered GN course as elective ones or by integrating geriatric content into other nursing courses, such as Nursing Fundamentals (67% in 1997 & 94% in 2003), Health Assessment (88% in 1997 & 97% in 2003), Adult Health/Medical-Surgical Nursing (79% in 1997 & 98% in 2003), and Community Health Nursing (89% in 1997 & 93% in 2003).

Gerontology nursing, or geriatric nursing, is simply defined as nursing care for elderly patients with a focus not only on illness but on overall health and wellness. GN draws on knowledge about complex factors affecting the health of older adults who have one or more chronic health conditions, such as diabetes, cardiovascular disease, cancer, arthritis, hearing impairment, or a form of dementia such as Alzheimer’s disease. The branch of GN concerned with the care of the older population, including promotion of healthy aging, prevention, assessment, and management of physiological, pathological, psychological, and sociological problems. LTC is to provide custodial and non-skilled care, such as assisting with ordinary daily tasks. LTC involves providing a level of medical care requiring the expertise of skilled practitioners, including to address multiple chronic conditions associated with the older or disabled populations. It is encouraged that more BSN programs could adopt stand-alone GN or LTC course or reconceptualize other courses into GN course to merge the Geriatric Long Term Care (GLTC) content.<sup>4,12,14</sup> GLTC is supposed to be various services helping meet living and some medical needs of older adults with a chronic impairment or disability who cannot care for themselves for long periods of time. GLTC focuses on not only the older adults’ care problems but health needs associated with disability that occurs during the aging process.

A national mail survey of all baccalaureate programs accredited by AACN, and the results demonstrated that more than half of universities integrated gerontology contents into baccalaureate curriculum.<sup>14</sup> Furthermore, students have to meet the most important task to care for the elderly and disabled population. Most study results indicated that if GN curriculum content is integrated into baccalaureate nursing programs, that could improve students’ perception of GLTC competency, including critical thinking, communication, assessment, and technical skills.<sup>7,12–14</sup> Baccalaureate GN, LTC or GLTC curriculums were designed to increase student’s care ability of the elder and/or disabled people. Furthermore, most students perceived helpful for their nursing role development after GN, LTC or GLTC courses.<sup>14</sup>

Establishing and applying academic standards, entry-to-practice competencies and faculty development are important to improve quality education, practice standards and accreditation capacities of GLTC curriculums. Unfortunately, few nursing students have been exposed to specialized knowledge about care of older adults or disabled people over the world.<sup>15</sup> As mentioned earlier, GLTC focuses on the older adults’ care problems and health needs associated with disability that occurs during the aging process. The nursing competence of older adults or disabled people and standards of GLTC nursing education curriculum investigation have been found lacking in Taiwan. Nursing students need to be cultivated and receive training in geriatric nursing and long term care education to offer high-quality care to elder and disabled population.

## 2. Research aim

This study aims to survey current GN or LTC curriculum offered in baccalaureate nursing programs in Taiwan. Three questions were posed:

- 2.1 What is the situation of GN or LTC in baccalaureate nursing education in Taiwan?
- 2.2 Which specific GN or LTC content and competencies are included in baccalaureate nursing education programs in Taiwan?
- 2.3 What qualifications are the educators equipped to teach the courses in the care for the elder and disabled population?

## 3. Method

### 3.1. Research design

A descriptive research design was used.

### 3.2. Sample

All baccalaureate education, universities of general (n = 17) and science and technology (n = 13) offering bachelor nursing education program in Taiwan were noted. New programs including 3 general universities and 2 universities of science and technology were excluded since no student has graduated from the program yet. Finally, 14 general universities and 11 universities of science and technology were selected.

### 3.3. Data collection

Data was collected from March to April in 2015. A checklist was developed by the first author to identify GN/LTC curriculum design, content and faculty preparation situation. Through detailed review on each program’s official website, the data were assessed for undergraduate nursing programs at each nursing university and university of science and technology in Taiwan.

### 3.4. Ethical considerations

All information analyzed were data obtained from the university websites. Ethical approval for the study was obtained from the Human Research Ethics Council (HREC code: 103-354).

### 3.5. Data analysis

After data collection, the results were analyzed. A descriptive analysis was carried out at the level of the total samples.

#### 4. Findings

The results showed that every BSN program in Taiwan has offered GN and/or LTC programs. Ten (71.43%) general universities and 9 (81.82%) science and technology universities offered GN courses. Furthermore, 57.14% of curriculums in general universities and 90.91% in science and technology universities offered LTC courses (Table 1). Up to 57.14% in general universities and 72.72% in science and technology universities have offered choice of both GN and LTC.

In current baccalaureate nursing programs, 50% of GN courses are offered to juniors. LTC courses are offered either to juniors (50%) or seniors (33.33%) students. Only one baccalaureate nursing program either in general universities and universities of science and technology has set their GN or LTC course as required stand-alone course. On the other hand, up to 90% of both types of universities provide either GN/LTC curriculums as elective courses (Table 2).

##### 4.1. Faculty preparation in baccalaureate nursing programs

Among programs surveyed, there were 52% (n = 31) in general universities and 47.46% (n = 28) in universities of science and technology equipped with full-time faculty specialized in GN or LTC nursing. Meanwhile, most of the instructors for GN or LTC courses had Community, Medical-Surgical or Adult Nursing experience. The results also indicated that majority of faculty members hold professor position in general universities (45.16%); however, most faculty members (35.71%) were lecturers in universities of science and technology (Table 3).

##### 4.2. Components of geriatric nursing and long-term care curriculum

Among 25 universities, only six programs offered their course syllabus on the websites. It shows that 83.33% of the didactic component of the GN course emphasized on aging process, communication, ethical, elderly activity, attitude toward the elderly, Pharmacy/Medication and Aging, health promotion, nutrition and dementia care; 50% was about home safety, universal design and resources utilization; 33.33% included comprehensive geriatric assessment, traditional medicine, alternative therapies, respite care and home care. Nearly 83.33% of the didactic component of the LTC course emphasized on the essential concepts of LTC, issues and policy in LTC, comprehensive geriatric assessment, respite care, dementia care, home care, management of LTC facilities and quality of care in LTC; 33.33% was about attitude toward the elderly, resources utilization, nutrition and health informatics and technology in LTC (Fig. 1).

The majority of clinical practice of GN and LTC curriculum were offered as elective courses in the junior and senior year both types of universities. Methods of teaching included classroom lecture and discussion and service learning. Assigned readings from the textbooks were required. Written assignments included care plans, process recording, case study discussion, and reflection papers. Clinical practicum settings were arranged in nursing homes,

**Table 1**  
Baccalaureate nursing programs offered with curriculum in geriatric nursing and long term care (n = 25).

Current curriculum	Geriatric Nursing n (%)	Long Term Care n (%)	Both Courses n (%)
General university (n = 14)	10 (71.43)	8 (57.14)	8 (57.14)
University of science and technology (n = 11)	9 (81.82)	10 (90.91)	8 (72.72)

**Table 2**  
Placement and type of geriatric nursing and long term care courses by frequency and percentage.

Placement of GLTC course	General university n (%)	University of science and technology n (%)	Total n (%)
Geriatric Nursing (n = 21)	(n = 11)	(n = 9)	(n = 20)
First year	0	0	0
Sophomore year	4 (30.77)	3 (33)	7 (35.00)
Junior year	4 (30.77)	6 (67)	10 (50.00)
Senior year	3 (28.08)	0	3 (15.00)
Long Term Care (n = 8)	(n = 8)	(n = 10)	(n = 18)
First year	0	0	0
Sophomore year	3 (37.50)	1 (7)	4 (22.22)
Junior year	1 (12.50)	8 (70)	9 (50.00)
Senior year	4 (50.00)	2 (20)	6 (33.33)
Type of course			
Geriatric Nursing (n = 11)	(n = 11)	(n = 9)	(n = 20)
Required	1 (8.33)	1 (11.11)	2 (10.00)
Elective	10 (91.67)	8 (88.89)	18 (90.00)
Long Term Care (n = 8)	(n = 8)	(n = 10)	(n = 18)
Required	0	0	0 (0)
Elective	8 (100.00)	10 (100.00)	18 (100.00)

hospitals, residential house, day-care centers, and community centers or home care facilities. The clinical component of the GLTC course focused on skilled assessment, monitoring of chronic conditions, identification and care of acute conditions, promotion of health and safety of the health of older adults or disabled clients.

#### 5. Discussion

This study aims to survey current GN or LTC curriculum offered in Taiwan's baccalaureate nursing programs. Interesting results were found in reference with conditions in Belgium<sup>13</sup> and USA<sup>14</sup> studies. Firstly, only 10% of BSN programs provide GN courses as the required course in Taiwan, 6% was found in Belgium and 34% in US.<sup>12,13</sup> If a stand-alone GLTC were offered, most of them were offered as elective course in universities for all these countries compared. Secondly, the situation observed that most of the universities indicated that GN and LTC curriculums are offered in senior-level (in junior or senior year of a 4-year undergraduate degree). In addition, a higher proportion of universities of science and technology offered GN and/or LTC courses than general universities. This may be due to the different philosophy of the organizations. The universities of science and technology emphasizes on fostering clinical care personnel, aiming at equipping vocational school students with clinical nursing skills. On the other hand, the philosophy of general universities focuses on fostering students' independent thinking and judgment capabilities while leadership and research capabilities in nursing are also reinforced.

The survey reported that the themes in most GN courses included comprehensive geriatric assessment, elderly health

**Table 3**  
GN and LTC instructors' positions in general university and university of science and technology.

Position of faculty	General university n (%)	University of science and technology n (%)	Total n (%)
Professor	14 (45.16)	2 (7.14)	16 (27.12)
Associate Professor	6 (19.35)	7 (25)	13 (22.03)
Assistant Professor	10 (32.26)	9 (32.14)	19 (32.20)
Lecturer	1 (3.23)	10 (35.71)	11 (18.64)
Total	31 (52.54)	28 (47.46)	59 (100.00)

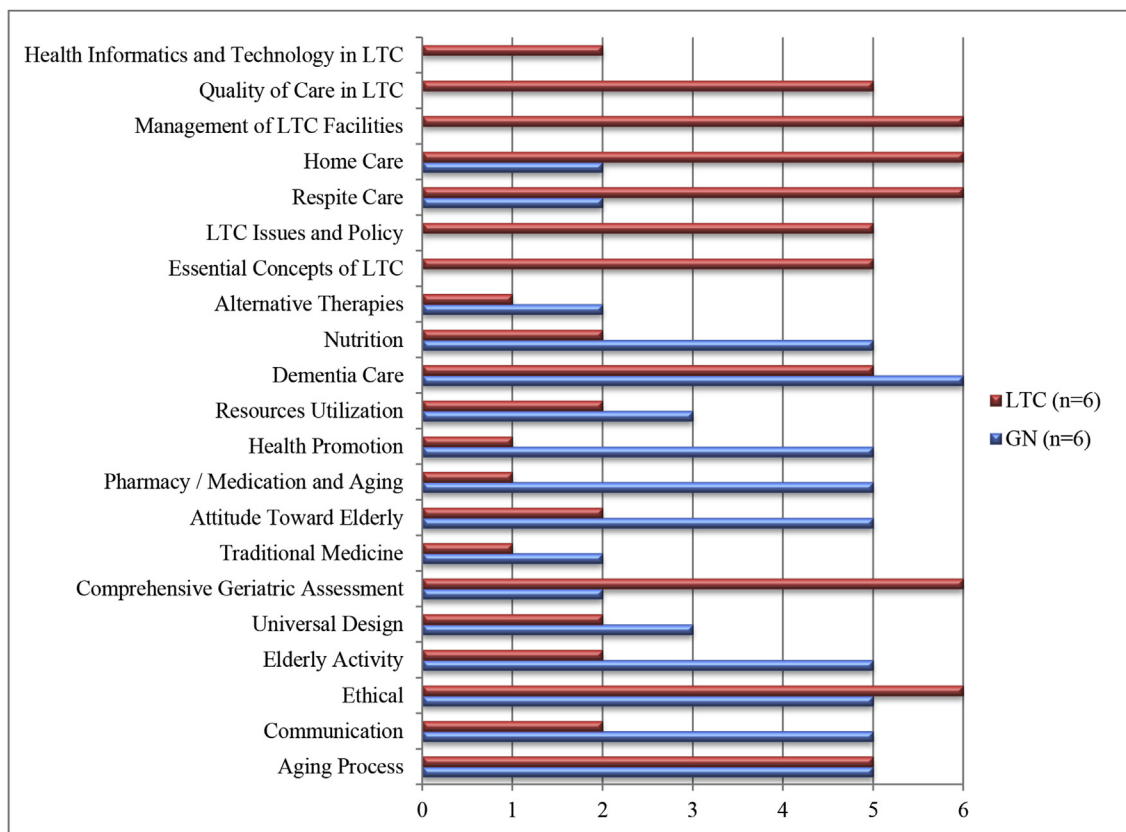


Fig. 1. Content of Geriatric Nursing (GN) and Long Term Care (LTC) courses.

promotion, aging process, dementia care, universal design and resources utilization. On the other hand, the focus of LTC courses were LTC policy, management of LTC facilities, quality of care in LTC, ethical issues, and various types of LTC services such as day care, home care, nursing homes. In fact, some of the themes included aging process, communication, ethical, attitude toward elderly, nutrition, dementia care, and comprehensive geriatric assessments were overlapping in the GN and LTC courses as shown in Fig. 1. It was recommended that the programs need to revise their curriculum to reflect the needs of the current and future health care.<sup>4,12</sup> Therefore, the GN and LTC courses can be combined and offered as a required stand-alone course. Based on WHO, LTC should be various services helping meet both the living (Activity and Participation) and some medical needs of people with a chronic impairment or disability who cannot care for themselves for long periods of time. As people age, their need for LTC increase, and disabled older adults need living care and require professional health care. Increasingly, long-term care involves a level of medical and nursing care requiring skilled practitioners to address the chronic conditions associated with older or disabled populations, which can be provided at home or people of any age in various institutions. Hence, the scope and content of practical LTC is composed of ADLs/IADLs or accommodation; living/basic medical care, reconditioning (occupational therapy (OT), Physical Therapy (PT)...or with new therapists potentially) so as to clarify the care needs. Rather, those important but without mentioning in the curricula should be included, such as diet and preparing for poorly chewing or swallowing, care management, care themes, care domains and even care plans.

In most nursing programs, the teaching of disease prevention, illness and disease management, information and health care

technologies, ethics, human diversity, global health care, and health care systems were offered in the first and sophomore year in Fundamental Nursing and Medical-Surgical Nursing, covering merely a small proportion of geriatric nursing and long term care.<sup>13,14</sup> However, it was believed that the disease and illness management competencies should be prepared in advanced GLTC courses.<sup>12,13</sup> Therefore, AACN (2000) which have developed baccalaureate competencies and curricular guidelines for geriatric nursing care could be referenced for nursing educators in other countries to incorporate the above-mentioned contents into GLTC curricula.<sup>12,14</sup> This highlights the GLTC concepts that have to be developed and expanded into health professional curricula to fulfill specific needs for older adults during aging process.

This study surveyed GN and LTC curriculum and faculty preparation in baccalaureate nursing education programs on the web, and found that there was a great gap in faculty preparation between types of university. Nearly half (45.16%) of the GN or LTC instructors hold a professor position in general universities while 35.71% hold a lecturer position in university of science and technology, showing the current status of GN and LTC educational preparation in Taiwan. However, lacking educators with the greatest involvement in GN and LTC nursing education training would be an important issue regarding the quality of the geriatric and LTC content in a curriculum.<sup>4,12,13</sup> Instructors with experiences in GN or LTC and relevant courses may have an impact on both the effectiveness of the course and the students' motivation.<sup>12,14</sup>

The faculty development initiative was implemented by baccalaureate school of nursing to address the urgent need for education and development in gerontological nursing. However, only 30% of BSN programs in US reported hiring full-time faculty certified in



gerontological nursing recognized by American Nurses Credentialing Center (ANCC) or having a master's program related in gerontology or experiences in multiple clinical sites. Therefore, the Gerontological Nursing Education Curriculum (G-NEC) project in the US between 2006 and 2009 was to enhance the faculty's knowledge of GN and increase gerontological content in participating schools of nursing.<sup>13,14,16</sup> Due to the fact that there had not been a guideline and accredits system such as certification in Taiwan, the AACN guidelines (2000) can serve as reference for nursing educators to incorporate the above-mentioned contents into the curricula for building up the baccalaureate competencies and curriculum development guidelines for GN and LTC.

Previous studies have shown that student nurses having experience in caring for older adults perceive themselves more capable of providing practical care to older adults than those without experience.<sup>17</sup> Therefore, we recommend offering GN and/or LTC nursing courses as compulsory courses. Student nurses receiving GN or LTC-related course may have been highly motivated to provide care for elder or disabled people. This result supports the findings reported from other GN and/or LTC course content-related studies. Currently, the frequency of providing care for older patients in Taiwan is comparatively high. Thus, current or future national LTC policies should be focused on encouraging nursing personnel to consider becoming a register nurse.

To cope with this trend, we must demand the following three main steps. First, a set of nationally competencies for students in terms of GLTC need to be developed and recognized. Second, to strengthen teaching/learning resources to support faculty in the implementation of GLTC programs. Besides, it is needed to offer formal faculty development opportunities to facilitate faculties' efforts to engage in curricular redesign and innovations and further to assure that nursing students can be acquired with strong competence in GLTC content in the future education in Taiwan. GLTC education must be recognized as a special area by required stand-alone courses with interdisciplinary education in nursing curricula.

## 6. Limitations

The limitation of the study was the cross-sectional design in nature, and it was hoped that similar issues could be explored through longitudinal study to better understand the correlations between the development of gerontology and long term care programs in higher education institutions. Another limitation was that due to the fact that some information was collected and evaluated on the website at the time of survey, it would not be easily accessible, so it could not be representative when it came to the content, instructors' recruited background, teaching materials, educating competencies in GN and LTC courses. The results only reflect the condition based on the information available online. Finally, it was difficult for this study to present the quality of teaching strategies in the GN and LTC program as only written material were reported.

## 7. Conclusion

In conclusion, the study found that more than half of the universities offered both GN and LTC courses in BSN program in Taiwan, most of the courses were offered as elective and few had provided corresponding practicum course. Moreover, faculties do not have adequate preparations for teaching in GN or LTC courses in Taiwan. In practice, the nursing faculty has to be adequately prepared with the GLTC nursing competence and also with teaching experience. Finally, part of the GN and LTC course contents were overlapped. As the demand for geriatric and LTC increased, all nursing students need to be well-prepared with knowledge and skills for their future work to care for elder and disabled people.

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