

A Study on Healing Environmental Factors in the Elderly Patients with Long-Term Care

In-Young Yoo

Nursing Department of Jeonju University, Korea
yiny@jj.ac.kr

Abstract

The aim of this study is to identify the factors of the healing environment for the elderly receiving long-term care, as perceived by healthcare providers in long-term care hospital and nursing home. The participants were 130 healthcare providers who worked at long-term care hospitals and a nursing home in a region. The data was collected by the structured questionnaire and analyzed by using SPSS/Win 22.0. The mean of the healing environmental importance perceived by participants were 4.76(±0.46). Among the healing environmental domains, comfort scored highest with 4.64 (±0.32) on average, followed by sociality with 4.41 (±0.58), stability with 4.35 (±0.53), territoriality with 4.31 (±0.61), and livability with 4.21 (±0.66). There was no significant difference in the mean importance of any domains in the healing environment between long-term care hospitals and nursing home where the respondents worked. The healing environmental factors affecting the perceived healing environmental importance of participants were natural view, safety/security, and privacy ($R^2 = 0.29$). The research findings suggest that healthcare providers in long-term care facilities need to make efforts to recognize the importance of the healing environment and to reflect it in the health care plans.

Keywords: *Healing Environment, Elderly, Long-Term Care*

1. Introduction

The population aged 65 or older accounts for 12.7% of the entire population in South Korea as of 2014 and is expected to account for 19.0% by 2024 and 27.6% by 2034; thus, the South Korean society is expected to become aged society rapidly [1]. With the longer life span in addition to the rapid increase in the elderly population, the rate of admission to hospitals and other institutions due to geriatric diseases is also on the increase. The number of nursing homes has rapidly increased since the long-term care insurance system for the aged was introduced in July 2008. 378,000 (6.1%) out of 6.19 million persons aged 65 or older were qualified for long-term care in the first to third grade as of the end of 2013 and the number of beds for long-term care at hospitals in South Korea increased by 41.6% a year on average between 2000 and 2011 [2, 3].

The institutions in which the elderly can stay for long-term care in South Korea can be divided into long-term care hospitals based on the Medical Law (2014) and senior medical welfare facilities (nursing homes and group homes for the elderly) based on the Elderly Welfare Act (2011) [4, 5]. The Medical Law defines a long-term care hospital as a medical institution which is equipped with facilities to accommodate 30 or more patients suffering from geriatric diseases, including dementia, and chronic diseases and in which general doctors or herb doctors give healthcare with the aim of providing medical service. A nursing home is a facility in which the elderly who needs assistance due to geriatric diseases, such as dementia and stroke, can stay and be provided with foodservice, care, and other conveniences necessary for daily living. A group home for the elderly aims to provide residential conditions like home, foodservice, care, and other conveniences necessary for daily living to the elderly who need assistance due to geriatric diseases, such

as dementia and stroke. However, patients in long-term care hospitals often overlap with those in nursing homes in South Korea.

Elderly patients may stay in long-term care hospitals or nursing homes for a long time in most cases and a hospital may be the final destination in the life of some of them. For this reason, a hospital environment is the living space for elderly patients and it is important to allow them to enjoy the better quality of life during their stay in hospitals.

A healing environment is not medical technology but the condition that inpatients can feel physically, psychologically, and socially in the space and relieves stress for patients, accelerates their health recovery, and reduces the number of hospitalization days. A healing environment can be meaningful to elderly patients having one or more chronic diseases in that it may help them maintain a better health state and enjoy the better quality of life through desirable disease control as well as through quick, complete recovery.

Greater importance has recently been attached to the concept of a healing environment, which focuses on the better quality of life for elderly patients as well as on disease treatment and recovery, in U.S. geriatric hospitals. This trend is contributing to the development of new types of geriatric hospitals and nursing facilities, including assistive living, and continuing care retirement communities, in addition to the existing nursing homes. These new types of geriatric hospitals focus on offering the same environment as a home and on allowing elderly patients to maintain the same living pattern there as at home [6].

Literature review found that it contributed to physical design, various environmental elements, and health-related outcomes: 1) For dementia elderly patients, it was related to reduce wandering behaviors, reduce agitated behavior, improve cognitive and functional performance, reduce falls or fall-related injuries, reduce medication uses, improve sleep, support spatial orientation, and way-finding [7-13]. 2) For general elderly patients, it was related to improve quality of life, improve well-being, and promote physical activity [14-17].

Since the environment of long-term care facilities may improve safety for patients, relieve stress for them, improve therapeutic results, relieve fatigue and stress for healthcare professionals, and make care acts more efficient, it is crucial to assess and improve the healing environment. In particular, since healthcare providers in long-term care hospitals or nursing homes can understand the behavioral characteristics of patients, an effort to identify the elements of the healing environment of long-term care hospitals and nursing homes they perceive would be very useful in developing a care plan to improve caring and the quality of life for the patients.

The purpose of this study was to identify the factors of the healing environment to improve the quality of life for elderly patients, as perceived by healthcare providers working at long-term care facilities in South Korea, and provide basic data that could help improve the environment of long-term care hospitals and nursing home.

2. Method of Research

2.1. Research Subjects and Data Collection

A structured questionnaire was used to explore the healing environmental among 134 healthcare providers working at nursing homes and long-term care hospitals in a region, who understood the purpose of this study and agreed to participate in the research. 130 questionnaires were analyzed, with the exception of 4 containing lots of non-responses.

2.2. Research Instrument

The questionnaire was composed of 8 items for the personal characteristics of the respondents, 2 for necessary spaces and the importance of the healing environment, and 23 for healing environment evaluation elements.

The items for healing environment evaluation elements were drawn from Woo's (2010) research on the healing environment factors in geriatric hospitals [18]. A total of 22 items were used to assess the healing environment in terms of its physical, psychological, and social characteristics. 8 items for comfort and 5 for stability were used to cover the physical characteristics, 3 for territoriality and 2 for livability to cover the psychological characteristics, and 4 for sociality to cover the social characteristics. A five-point likert scale was used to measure the healing environment evaluation elements and awareness of the importance of the healing environment: 5 *very important*, 4 *somewhat important*, 3 *average*, 2 *unimportant*, and 1 *totally unimportant*.

As for reliability of the instrument for evaluating the healing environment, Cronbach's Alpha=0.93 for the entire instrument and 0.85, 0.83, and 0.84 for the sub-factors, such as physical, psychological, and social factors, respectively.

2.3. Data Analysis

For the statistical analysis, SPSS/Window 22.0 was used. The data was analyzed by using descriptive statistics, independent t-test, and stepwise multiple regression.

3. Results

3.1. General Characteristics

120 respondents (92.3%) were female and 10 (7.7%) were male; the mean age was 50.2 years. 90 (69.2%) worked at long-term care hospitals and 40 (30.8%) at nursing homes. 28 (21.5%) were nurses, 60 (46.2%) nursing assistants, 33 (25.4%) care workers/caregivers, and 9 (6.9%) others (social workers, physical therapists, etc.).

Table 1. General Characteristics of Participants

Variables		N(%)
Gender	Male	10(7.7)
	Female	120(92.3)
Age	20-40	43(33.1)
	41-50	48(36.9)
	51+	39(30.0)
	Occupation	28(21.5)
Occupation	Nurse	28(21.5)
	Assistant nurse	60(46.2)
	Helper	33(25.4)
	Etc.(Social worker, physical therapist ..)	9(6.9)
Education level	< Middle school	12(9.2)
	High school	56(43.1)
	> College	62(47.7)
Marriage	Not marriage	19(14.6)
	Marriage	102(78.5)
	Etc	9(6.9)
Economy	Low	1(0.8)
	Middle	110(84.6)
	High	19(14.6)
Religion	Christian	55(42.2)
	Catholic	29(22.3)
	Buddhism	14(10.8)
	Etc.	32(24.5)
Work place	Long-term care hospital	90(69.2)
	Nursing home	40(30.8)
Total		130(100.0)

3.2. Perceived Healing Environmental Importance and Necessary Spaces for Healing Environment of Participants

The respondents had very high levels of the perceived healing environmental importance: 4.76(±0.46) on average. 31 (23.8%) suggested a place for family counseling as necessary for healing, 24 (18.5%) a resting room, 17 (13.1%) a healing garden, and 15 (11.5%) a sunshiny walk, 12(9.2%) a program room, 11(8.5%) a treatment room(physical, occupational, rehabilitation therapy), 8(6.2%) a place for personal play and hobby, 3(2.3%) a lecture hall/concert hall, 2(1.5%) a religious room, and so on Table 2.

Table 2. Perceived Healing Environmental Importance and Necessary Spaces for Healing Environment of Participants

N=130

Variables	Mean(SD) or n(%)	
Perceived healing environmental importance	4.76(0.46)	
Necessary spaces for healing environment	Place for family counseling	31(23.8)
	Resting room	24(18.5)
	Healing garden	17(13.1)
	Sunshiny walk	15(11.5)
	Program room	12(9.2)
	Treatments room	11(8.5)
	Place for personal play and hobby	8(6.2)
	Patient's room	5(3.8)
	Lecture hall/concert hall	3(2.3)
	Lobby	2(1.5)
Religious room	2(2.5)	

3.3. Healing Environmental Factors to Improve Quality of Life for Elderly Inpatients

In the healing environment positively affecting the better quality of life for elderly inpatients, comfort scored highest with 4.64 (0.32) on average, followed by sociality with 4.41 (0.58), stability with 4.35 (0.53), territoriality with 4.31 (0.61), and livability with 4.21 (0.66). Of the 23 items, hygiene scored highest with 4.91 (0.27) and furniture and seat arrangement scored lowest with 3.93 (0.87) Table 3.

There was no significant difference in the mean importance of any domain - comfort, safety, territoriality, livability, or sociality - in the healing environment between long-term care hospitals and nursing homes where the respondents worked Table 4.

Table 3. Healing Environmental Factors to Improve Quality of Life for Elderly Inpatients

N=130

Variables	Mean(SD)
Physical characteristics	4.54(0.36)
Comfort	4.64(0.32)
Temperature	4.83(0.45)
Noise	4.76(0.53)
Air/Ventilation	4.91(0.27)
Hygiene	4.93(0.28)
Comfort	4.81(0.43)
Natural view	4.44(0.68)
Convenience	4.36(0.68)
Walk	4.13(0.75)
Stability	4.35(0.53)
The simple flow of human movement	4.33(0.78)
Furniture and seat arrangement	3.93(0.87)
Organization of space	4.30(0.75)
Safety/Security	4.80(0.43)
Way finding	4.39(0.73)
Psychological characteristics	4.26(0.59)
Territoriality	4.31(0.61)
Privacy	4.67(0.54)
Place for personal play and hobby	4.11(0.78)
Independence/liberty	4.13(0.92)
Livability	4.21(0.66)
Intimacy	4.27(0.70)
Color/Finishing material	4.13(0.83)
Social characteristics (Sociality)	4.41(0.58)
Communication place	4.56(0.65)
Resting place	4.40(0.74)
Education place	4.17(0.79)
Place for families and visitors	4.48(0.64)

Table 4. Healing Environmental Domains for Elderly Inpatients by Long-term Care Hospital and Nursing Home

N=130

Variables	Long-term care hospital	Nursing home	t (p)
	Mean(SD)	Mean(SD)	
Physical characteristics	4.53(0.33)	4.56(0.42)	-.422(.67)
Comfort	4.63(0.30)	4.66(0.36)	-.458(.64)
Stability	4.34(0.50)	4.37(0.61)	-.298(.76)
Psychological characteristics	4.27(0.52)	4.25(0.73)	.206(.837)
Territoriality	4.31(0.53)	4.28(0.74)	.272(.78)
Livability	4.21(0.62)	4.20(0.67)	.087(.93)
Social characteristics			
Sociality	4.38(0.54)	4.45(0.67)	-.571(.56)

3.4. Healing Environmental Factors Affecting the Perceived Healing Environmental Importance of Participants

To identify the healing environmental evaluation factors affecting the importance of the healing environment, as perceived by the respondents, the stepwise multiple regressions found that those attaching greater importance to three factors - natural view, safety/security, and privacy - gave greater importance to the healing environment. These three factors accounted for 29.1% Table 5.

Table 5. Healing Environmental Factors affecting the Perceived Healing Environmental Importance of Participants

N=130				
Variables	B	β	t	Sig
Natural view	.238	.351	4.486	<.001
Safety/Security	.238	.226	2.875	.005
Privacy	.154	.181	2.259	.026
Constant	1.842		4.118	<.001
$R^2=.291$ $F(p)=17.214(<.001)$				

4. Discussion

This study aimed to identify the elements of the healing environment for the elderly receiving long-term care, as perceived by healthcare providers in long-term care hospitals and nursing homes.

Dr. Leland Kaiser notes that “curing focuses on scientific technology and on patients’ body, whereas healing focuses on patients as spiritual, experiential, and human beings. The former involves high tech and the later involves high touch; therefore, healing medical institutions need to cover both of them in the entire experience of the patients.” In other words, caring refers to restoration of patients to the healthy state through medical means, whereas healing means as an approach to health through environmental, psychological, social, and cultural support and may cover disease prevention and health promotion as well as recovery from diseases [19].

This study obtained a very encouraging result that the respondents considered the healing environment important, scoring 4.76(± 0.46) on average. The respondents suggested that a place for family counseling was most necessary for healing, followed by a resting room, a healing garden, a sunshiny walk, a program room, a treatment room (physical, occupational, rehabilitation therapy), a place for personal play and hobby, a lecture hall/concert hall, and a religious room. Few nursing homes have a separate place for family counseling in South Korea. It is necessary to provide a certain place for privacy in communal living and to create the environment that permits families to visit more frequently. Oh (2014) reported that nurses indicated the need of resting rooms for patients and caregivers in long-term care hospitals and suggested placement of a large resting room at the center of hospitals. They also indicated great requirement of an outdoor garden, a walk, and an indoor garden, consistent with the results of this study [20]. It is necessary to see providing an outdoor garden or using the rooftop, a balcony, and indoor space to secure space for a garden as a very important environmental element in designing long-term care hospitals or nursing homes.

In the healing environment for elderly inpatients, the healthcare providers considered comfort most important, followed by sociality, safety, territoriality, and livability. *Hygiene* was considered the most important in the area of comfort and *furniture and seat arrangement* the least important in the area of livability. There was no significant difference in the mean importance of any area - comfort, safety, territoriality, livability, or

sociality - in the healing environment between long-term care hospitals and nursing homes where the respondents worked. It is presumed, therefore, that they consider all the factors of the healing environment in each domain, taking the characteristics of long-term hospitalization into account, despite the differences in the characteristics of elderly patients by facility type. Comfort is a sensory area of human beings. Elderly care facilities need to provide comfort by giving consideration to hygiene, natural ventilation, lighting, size of space, and introduction of natural elements in the healing environment required mentally as well as physically. The area of safety is important to prevent accidents within a facility. Since safety accidents frequently occur due to the physical changes of the elderly, it is necessary to make a plan for safety in facilities. Territoriality means the level of privacy for the elderly within facilities. One of the most difficult areas in community facilities is to preserve territoriality for the elderly in good harmony between a community life and a personal life. With territoriality secured for the elderly, they can have a chance to restore self-concept and self-esteem in their own territory.

The area of livability is an important factor affecting mental stability of the elderly. It is desirable to use a familiar design and furniture to remove unfamiliarity from the space of the facility, create a home-like atmosphere, and reduce the environmental gap between the facility and home. The area of sociality has an important meaning in long-term care facilities. Limited social contact may cause a sense of loneliness and isolation, which may lead to problems with mental health of the elderly on a long-term basis. It is necessary to secure space for education programs or hobby and for visitors and caregivers in long-term care facilities in pursuit of good interaction [21].

The respondents gave weight to natural view, safety/security, and privacy among the factors affecting the healing environment and those giving greater importance to these three factors considered the healing environment more important. This result was also supported by the findings from literature review. Seasonal depression patients exposed to sunshine in the morning saw depressive symptoms decreased twice than in the evening [220] and the elderly with dementia exposed to sunshine in the morning for two hours every day became less anxious [23]. The number of hospitalization days for depression patients in eastern rooms was shorter by 3.67 days than those in western rooms [24].

Literature review also supports the results of this study. Such environmental elements as outside gardens, covered outdoor paths, daylight, and bright artificial light exposure were found to contribute to the relief of stress and the increase in physical activities for elderly patients in general. These factors help elderly patients with dementia make fewer insecure behaviors, improve the quality of sleep, improve the sense of spatial direction, help them reduce the use of unnecessary drugs, and ultimately, contribute to the higher quality of life [11, 12, 25]. It has also been reported that it is important to offer various public spaces for social, cultural, and religious activities, personal spaces for patients, and semi-private spaces connecting them with the aim of improving psychological well-being and the quality of life for elderly patients [15, 26].

In this study, a natural view is one of the factors in the area of comfort, safety/security in the area of safety, and privacy in the area of territoriality; therefore, it is presumed that these areas urgently require environmental improvement. Song and Choi (2009) indicated that the care facilities in South Korea gave much consideration to sociality and livability in the healing environment, with safety, comfort, and territoriality rarely considered [21]. The result that the respondents suggested the need of space for family counseling, a resting room, a healing garden, a sunshiny walk, and space for personal play/hobby for actual healing implies the need to make environmental improvement in such spaces.

Lots of domestic and foreign studies have reported that the healing environment is an important factor contributing to safety, health promotion, and improvement in the quality of life for elderly patients. However, since very few researchers have dealt with the case of the effectiveness of the healing environment in South Korea, further research should be conducted on this issue.

Since the introduction of the Long-Term Care Insurance System for the Aged in July 2008 in Korea, the number of hospitals and facilities that can accommodate elderly people has been on the drastic increase in South Korea. While the Health Insurance Review and Assessment Service and the National Health Insurance Service now assess nursing homes and long-term care hospitals for appropriateness, both of them principally deal with operation, environment and safety, and right and responsibility for medical service and are relatively less concerned about improvement in the healing environment. Also, insufficient efforts have been made to perform environment assessment in consideration to the quality of life and the emotional aspect for elderly people who require long-term care or to improve the qualitative environment in which they reside. It is necessary to design the environment for hospitals or institutions carefully by reflecting the characteristics of the elderly patients in long-term care and to reflect the evaluation of the healing environment. In addition, healthcare providers in long-term care hospitals or nursing homes need to make efforts to recognize the importance of the healing environment and to reflect it in the care-related plan and implement the plan.

5. Conclusion

This study was conducted in healthcare providers working at elderly care facilities. The subjects attached great importance to the healing environment in long-term care hospitals or nursing homes and a place for family counseling was found to be most necessary to create a healing environment, followed by a resting room, a healing garden, and a sunshiny walk. Comfort was found to be the area in the healing environment having the most positive impact on the improvement in the quality of life for elderly inpatients, followed by sociality, safety, territoriality, and livability. The detailed factors affecting the importance of the healing environment were natural view, safety/security, and privacy. On the basis of these results, if healthcare providers include the elements of the healing environment in nursing and treatment plans in a reasonable way, it would contribute to safety, health promotion and the improvement in the quality of life for elderly patients. Further research needs to make more systematic exploration into the association between these factors of the healing environment and health-related outcomes.

This study had some limitations. Because this study was conducted in healthcare providers at hospitals and a nursing home in a single region, the findings may not be generalized.

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