

The Challenges of Health Services at Senior Centers in an Urban South Korean Community: A Mixed-Method Approach, Focusing on the Role of Nurses

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Abstract

Background This study aimed to identify the current challenges of health services provided by senior centers in South Korea and to determine recommendations for improving service to community-dwelling older adults, focusing on the nurse's role.

Methods Quantitative data were obtained from a survey of 30 nurses at senior centers in Seoul, South Korea. In addition, focus group interviews were conducted with 6 senior center nurses, 5 health experts, and 4 attendees of senior centers (n = 15). Content analysis was performed to analyze the qualitative data.

Results The study results revealed several challenges, including insufficient health services; a lack of human resources; non-systematic and overlapping health services; and a lack of legal clarification of nurses' roles. Our recommendations for improvement are that senior centers should: focus on disease prevention and chronic disease management; be hubs to connect health and welfare services; empower nurse's role and capacity; and establish legal regulation and adequate staffing for nurses.

Conclusions These findings are important for improving the senior centers in playing a key role in contributing to health promotion, disease prevention, and chronic disease management among older individuals in South Korea.

Background

According to the United Nations, the proportion of people in the world aged over 65 years was 9% in 2019 and it will be 16% by 2050 [1]. South Korea is expected to see the largest global increase between 2015 and 2050 [1]. The proportion of the population older than 65 years in South Korea was 14.9% in 2019 [2]. Moreover, 89.5% of those aged 65 years or older had been diagnosed with at least one chronic disease, and 51.0% had been diagnosed with three or more chronic conditions [3]. Medical expenses for the South Korean older adult population account for 39.9% of all medical expenses [2]. The increasing proportion of older adults who incur high medical costs creates a burden on communities [4]. Therefore, the health promotion, disease prevention, and chronic disease management of older adults are among the greatest challenges facing Korea.

South Korean senior centers in urban communities are government-sponsored public facilities with the greatest ease of accessibility and high utilization [3]. These senior centers have been operating since 1989; there are currently 385 locations across the country, which constitutes more than twice the number of public health centers [5]. According to the Welfare of Senior Citizens Act [6], Korean senior centers provide various information and services to older adults related to their hobbies, interests, social activities, and so on, as well as other services necessary for promoting health, preventing diseases, enhancing welfare at home, and promoting the welfare of older adults [6]. In a previous study, it was found that approximately 9.3% of older adults used senior centers regularly, while an additional 27.5% were willing and planning to do so [3].

Among the various services provided at the senior centers, health services are considered most important in meeting the needs of older adults [7, 8]. Community health programs led by senior centers are reportedly effective at promoting health [7, 9, 10], and comprehensive, community-based senior centers could play a key role in promoting the health of older adults [11]. In general, South Koreans living in community receive primary health services at public health centers [4]. However, public health centers are less accessible than senior centers to older adults, because, first, they are fewer in number, and, second, interest in providing services specifically for older adults is limited because they are facilities for not only the elderly, but all people from infants to adults. Moreover, public health centers are less effective for older adults who need continuous health services, because their programs usually run for short periods of time [12].

Senior centers have the greatest potential for providing accessible and cost-effective health services to older adults; however, lack of medical staff and resources for senior centers have been highlighted in the past [13]. In particular, the senior nurse is a medical expert in the senior center who plays an important role in providing health services, but the rate of employment of nurses in Korean senior centers is lower than 50% [14]. Because the senior center is defined as a leisure welfare facility [6], these nurses are not considered an essential workforce. Considering these points, it is very important to identify current challenges to the utilization of health services in senior centers and establish recommendations for the improvement of these services with a focus on the nurse's role.

Previous studies examining the utilization of health services at senior centers have focused mainly on senior center users' health service needs and satisfaction [15–17], or the results of health services programs [7, 8]. In addition, several studies have been conducted to explore the role of and efforts to improve senior centers [13, 18]. However, no studies have yet focused on identifying current challenges with regard to the nurse's role in order to suggest possible improvements to senior center health services. Therefore, the purpose of this study was to identify challenges and possible recommendations for the utilization of senior center health services in an urban community, by explicitly focusing on the role of senior center nurses.

Methods

This study used a cross-sectional, mixed-methods approach that combined quantitative survey data, which provides a general picture of the current status of health service at senior centers, and qualitative data from focus group interviews (FGIs), which facilitates a deeper understanding of the relevant challenges and recommendations. The study was approved by the institutional review board at a university in South Korea (IRB approval #2013-70). The researchers explained the study purpose and process to participants, and assured them of the anonymity and confidentiality of their data. Written, informed consent was obtained from all participants.

Quantitative data collection

Out of a total of 59 senior centers in Seoul, 29 hired nurses. Of these, 28 centers hired one nurse and 1 center hired two. We conducted a survey of all 30 of these senior center nurses. The survey instrument was developed by the authors, based on a comprehensive literature review, with the aim of collecting quantitative data on nurses working for senior centers in Seoul. Twenty-five nurses completed the survey while attending a continuing education program at the Seoul Senior Center Association, and the remaining five nurses received the survey via mail. Participants' demographic information, educational profiles, experience, and qualifications were examined, and their roles in and perspectives on health services at senior centers were collected using a closed questionnaire survey.

Qualitative data collection

The participants were recruited via purposive sampling to explore the perspectives of various senior center stakeholders and provide a multi-faceted understanding of health service utilization in senior centers. To ensure the reliability of our data, we recruited people who are familiar and experienced with senior centers. Six senior center nurses, five experts in health and welfare for older adults, and four senior center attendees were recruited to participate in the FGIs. Four FGIs were performed with two groups of senior center nurses, one group of experts in health and welfare for older adults, and one group of senior center attendees, respectively. The semi-structured FGI questions in this study were formulated based on previous research. Each FGI adhered to the Krueger and Casey method to ensure the auditability of the data [19]. The FGI questions were organized into initial, introduction, transition, major, and final stage questions. All groups participating in the FGIs were guided by the following major questions:

- *What do you think the role of a senior center is?*
- *What do you think the nurse's role in senior center is?*
- *In what health services do senior center attendees mainly participate?*
- *What do you think should be included in senior center health services?*
- *What are the current challenges to senior center health services?*
- *What is needed for improvement?*

The FGIs were conducted until data saturation was reached. Each meeting (approximately 60–120 minutes in length) was digitally recorded, and detailed field notes were taken. After each interview, research team members debriefed the interviewees. These results were verified via repeat interviews and a follow-up meeting with three nurses who participated in the interviews.

Data Analysis

Quantitative data analysis was conducted using the SPSS 23.0 statistical software. The database was screened for normality, outliers, and missing data. Descriptive statistics were used to examine the current status of staffing, educational profiles, job experience, qualifications, nurses' roles, and utilization of health services.

Graneheim and Lundman's content analysis method [20] was followed to analyze the qualitative data. All recorded data were transcribed, with the final transcriptions checked against the digital recordings. The text was divided into meaning units, which were then condensed, abstracted, and labeled with codes. Differences and similarities between the codes were identified, and the codes were sorted into themes, which constituted the content. Ultimately, 291 codes were extracted, and 8 subthemes were identified under two main themes. To increase the credibility and dependability of the data analysis, the research team held regular meetings to review and analyze the results until consensus was reached.

Results

Quantitative Findings

The senior center nurses (n = 30) were all women with an average age of 38.2 ± 8.5 years. Most participants were college graduates of three-year degrees (n = 15, 50.0%), followed by graduates of four-year degrees (n = 12, 40.0%). Most nurses held only one nursing license (n = 20, 60.6%), and those with multiple licenses were most commonly licensed social workers (n = 6, 20%). Most nurses had worked ≤ 3 years (n = 13, 43.3%), and a similar number had worked for > 5 years (n = 12, 40.0%).

Table 1
 Characteristics of nurses in the quantitative survey (n = 30)

Variable	Categories	n (%)
Education	College	15 (50.0)
	University	12 (40.0)
	Graduate school	3 (10.0)
License and certification	Only RN	20 (60.6)
	RN + Social worker	6 (20.0)
	RN + School nurse	1 (3.3)
	RN + Nurse Practitioner + Social worker	2 (6.7)
	RN + Social worker + School nurse	1 (3.3)
Career (y)	< 1	6 (20.0)
	1–3	7 (23.3)
	3–5	5 (16.7)
	> 5	12 (40.0)

Regarding senior center health services (see Table 2), the perceived main goals of the senior center health services are chronic disease management (n = 14, 46.7%) and health screening and prevention (n = 8, 26.7%). The nurses perceived their key roles to be mainly chronic disease management (n = 11, 36.7%), health counseling (n = 10, 33.3%), and health education (n = 10, 33.3%). They noted that chronic disease management (n = 13, 43.3%) and health education (n = 7, 23.3%) are the most frequently provided services. The most utilized services by older attendees are health screening and prevention (n = 11, 36.7%) and chronic disease management (n = 8, 26.7%). The ways in which senior center health services were perceived to differ from those provided by other agencies are health education (n = 10, 33.3%), chronic disease management (n = 8, 26.7%), and health screening and prevention (n = 6, 20.2%).

Nurses reported that the health services that need to be improved are health screening and prevention (n = 10, 33.3%) and chronic disease management (n = 7, 23.3%). Many nurses reported that the supply of medical support staff is needed in senior centers (n = 19, 63.3%). They specified that educational resources (n = 15, 50.0%) and work manuals (n = 12, 40.0%) need to be developed. With respect to their training needs, the participants responded that the training about emergency treatment (n = 10, 33.3%), development of health program (n = 9, 30.0%), and clinical physiology specific to older people (n = 9, 30.0%) are required.

Table 2
Survey of nurses working in senior centers (n = 30)

Variable		Categories	n	%
Current state of senior centers	Goals of health services	Chronic disease management	14	46.7
		Health screening/prevention	8	26.7
		Health education	4	13.3
		Others	4	13.3
	Nurse's key role ^a	Chronic disease management	11	36.7
		Health counseling	10	33.3
		Health education	10	33.3
	Health services provided the most	Chronic disease management	13	43.3
		Health education	7	23.3
		Health screening/prevention	6	20.0
		Health counseling	4	13.3
	Most utilized health services	Health screening/prevention	11	36.7
		Chronic disease management	8	26.7
		Exercise	3	10.0
		Physical therapy	3	10.0
		Health counseling	3	10.0
		Others	2	6.7
	Health services differing from those provided by other agencies	Health education	10	33.3
		Chronic disease management	8	26.7
		Health screening/prevention	6	20.0
Health counseling		5	16.7	
Disease diagnosis		1	3.3	
Needs	Health service to be improved	Health screening/prevention	10	33.3
		Chronic disease management	7	23.3
		Health education	6	20.0
		Disease diagnosis	4	13.3
		Health counseling	3	10.0
	Support needed	Medical staff support	19	63.3
		Financial support	6	20.0
		Administrative support	5	16.7
	Resources needed	Educational resources	15	50.0
		Work manual	12	40.0
		Record system	3	10.0
	Training required	Emergency treatment	10	33.3
		Health promotion program development	9	30.0
		Elderly adults' clinical physiology	9	30.0
Health policy for elderly individuals		5	16.7	

^a Multiple choice questions

Qualitative Findings

The participants' characteristics in each of the four focus groups are described in Table 3 (n = 15). Senior center nurses who participated were aged 28–54 years and had worked for 1.8–12 years. The experts in health and welfare for older adults included a gerontological nursing professor, geriatric doctor,

senior center director, and section chief, and they were aged 34–54 years. The senior center attendees were aged 70–94 years and all had used a senior center 1–7 times per week for > 5 years. They participated in various activities such as yoga, fitness, table tennis, English classes, and diabetes self-management programs.

Table 3
Characteristics of FGI participants (n = 15)

Group 1	No.	Education	Period worked at senior center; total nursing experience (y)	Position
Senior center nurses I	1	College	3.5; 10.6	Nurse
	2	College	2; 15	Nurse
	3	College	15; 19	Nurse
Group 2	No.	Education	Period worked at senior center; total nursing experience (y)	Position
Senior center nurses II	4	College	1.8; 4	Nurse
	5	College	2; 15	Nurse
	6	College	12; 16	Nurse
Group 3	No.	Education	Career (y)	Position
Experts in the area of gerontology	1	PhD, Health Science	Community health (19)	Professor
	2	PhD, Nursing Science	Nursing science (29)	Professor
	3	Doctor of Medicine	Medicine (24)	Professor
	4	BA, Social Work	Senior center (8)	Section chief
	5	Doctoral candidate, Social Work (completed)	Senior center (11)	Director
Group 4	No.	Education	Senior center participation (total y; times per week)	Health service utilization
Senior center attendees	1	Middle school	12; 3	Fitness class
	2	College	5; 1	Diabetes self-management class
	3	College	12; 7	Tai Chi, Yoga class Laughter class
	4	High school	7; 6	Ping-Pong, billiard Taekgyeon class

In the qualitative data content analysis, two main themes were identified: “challenges to senior center health services” and “suggestions for future health services.” Four subthemes were identified under each main theme.

First Main Theme: Challenges to Senior Center Health Services

Insufficient availability of health services. The senior center attendees confirmed that they had received health management assistance via various health services offered there. They were aware that the senior centers are places in which basic health management services, such as blood pressure and blood sugar checks, are offered, and various health programs, such as those involving exercise and chronic disease management, are available. They stated that most senior center attendees were satisfied with the easy accessibility of health and welfare services. However, they were concerned that the current state of health services provided at senior centers is far insufficient to their needs and asked for an expansion of these services.

“I check my blood pressure and blood sugar once a month at the senior center. If I do not check it once a month, she (the nurse) calls me. Before that, I worried a lot about my blood sugar and blood pressure levels. But now? I am getting better! But I can check (blood sugar) only once a month. Is that all? It should be more frequent.” (Attendee 3)

This comment was heard from not only senior center attendees but also nurses and expert groups. The expert group stated that despite the numerous recreational and leisure activities provided at senior centers for the elderly, the true priority for older adults is healthcare services:

“We have found that the priority needs of elderly [individuals] were health related, and this need has been stronger than anything else for seven consecutive years.” (Expert 4)

Lack of human resources to meet health service needs. Health services in senior centers have expanded in accordance with an increase in demand [13-18]. However, there remains a desperate shortage of human resources to meet the current demand.

Nurses are the primary medical personnel providing health services in senior centers. However, more than 50% senior centers do not have nurses. Of the 59 centers in Seoul, 28 had only one nurse, and only one center had two nurses. Therefore, most health services are provided by non-nursing staff or a single nurse. Nurses felt that it was difficult to manage the increasing demand for health services with limited medical staff and that they are not provided with adequate time or training to perform all the necessary tasks.

"It's so hard... the number of required programs continues to increase more and more.... At first, there wasn't a day care center, but it's mandatory now, and all of a sudden, it became a space for health, welfare, employment, and so on. The demands of elderly users are also growing... but there is not sufficient staff." (Nurse 3)

"The problem is that the demand for these programs is excessive for the senior center without adequate staff. It (senior center) was initially established to provide mainly elderly leisure activities, but health services have increasingly started to be offered there. There is too much work for just one person (nurse) to do!" (Expert 2)

Non-systematic and overlapping health services. Senior center health services have gradually been extended to include day care and visiting nursing services for older people; therefore, some health services roles overlap with those of other agencies such as public health centers, long-term care facilities, and home care facilities. Moreover, the absence of communication channels between different institutional systems often causes problems with care coordination – for example, when different agencies provide overlapping services:

"The institutions, such as [those providing] public health, home care, and family medicine,... provide similar chronic disease management services that don't show any specific differences. Moreover, like a department store, there are four or five similar programs in one institution; they are all in different department stores, and each has its own network and never communicates with another institution." (Expert 1)

In addition, most senior center health services are not based on structured systems and networks, but instead are entirely dependent on individual nurses' competencies:

"It depends a lot on how competent the individual is. We are proud of our health promotion programs, but if she (the nurse) quits, then... well, I don't know. The problem is that the service is dependent on the person, not the system." (Nurse 4)

Lack of legal clarification of nurses' roles. The senior centers in South Korea have been defined as leisure facilities for older people by the law; therefore, nurses are not considered mandatory staff members. However, because of increasing demand for health services, many of these are provided by nurses without clarification of their roles or any relevant legal protection for tasks performed. Hence, the senior center nurses expressed confusion regarding their roles and the limitation of their ability to provide continuous health services. The experts also voiced this concern as an issue to be addressed. Although senior centers are expected to play an important role in the screening of high-risk older adults and managing chronic disease in the community, there are no clear regulations or legal protection for these nurses.

"So, I regret that we have no regulations for medical care such as medication administration. There is also the simple case of giving over-the-counter medications such as pain killers. I don't know if I can get legal protection for such conduct (as a part of this job). School nurses have rules about medication, but we don't have any." (Nurse 3)

"In fact, senior centers play an important role in screening high-risk older adults and managing chronic disease. However, from a legal perspective, senior center nurses are not protected by any law, and that is a problem." (Expert 1)

Second Main Theme: Suggestions for Future Health Services

Focus on disease prevention and chronic disease management. The nurses and experts stated that the most important role played by senior centers in the health services involves health promotion, disease prevention, and chronic disease management. The attendees' group also requested much more health services, such as exercise and disease management programs for specific chronic diseases, including hypertension, diabetes, and arthritis. All FGI groups seemed to agree that the senior center health services should avoid the indiscriminate expansion of health services that overlap with other health service agencies (e.g., home care services or day care centers), and focus instead on health promotion, disease prevention, and chronic disease management for senior center attendees.

"Blood sugar management is important for diabetic patients. Once a week, the diabetes management program has been a great help to me. Since I started that program, I am doing much better." (Attendee 2)

"I think that the role of the health services at [the] senior center should be to support them to prevent disease. Moreover, improving self-management abilities to take care of chronic diseases is the most important." (Expert 2)

"I think the most important thing is to give older adults the ability to perform their own disease prevention and care. Yes! I think we need to provide and reinforce education." (Nurse 1)

Senior centers as hubs to connect health and welfare services for older adults. Nurses and expert groups agreed that health and welfare services should be managed together because it was difficult to separate them, especially for community-dwelling individuals. They stated that the senior centers should function

as hubs connecting health and welfare services to meet older people's needs. Nurses could provide a triage role, assessing, screening, classifying, and transferring individuals to appropriate services, dividing them into groups, such as those who are healthy, have been diagnosed with chronic diseases, or have been found to have acute diseases.

"Usually, the elderly [individuals] misunderstand that they have a disease when their physical function decreases..., [and] how to increase their function is very important. I think senior centers can play an essential role at this point—the triage, whether providing welfare services, such as promoting social participation, or health services, such as connecting to hospitals, like [a] regional hub role." (Expert 3)

As an example, a senior center nurse introduced her senior center as a "one-stop assessment system" in which nurses assessed patients to make referrals, and liaised between senior centers and hospitals or public health centers:

"When a new elderly member joins our senior center, we make a one-stop assessment. A social worker is responsible for social welfare items, and I am responsible for health-related items, such as blood pressure, blood sugar, cholesterol tests, and health consultations, and, if necessary, I also make referrals to dental or ophthalmology services. The elderly are satisfied with our health services, especially those who are in difficult financial circumstances." (Nurse 3)

Increase nurses' competencies through training and support. Both expert and nurse participants in the FGI groups stated that nurses should be empowered to improve their competency. Moreover, most nurses felt that they lacked the educational and administrative resources to perform various tasks in the senior centers. Because of this, they were eager to participate in any educational programs and continuing education that would strengthen their competency.

"At first, when I came to the senior center, I was surprised because there were so many tasks to do. Developing and operating programs, counseling, administrative work... it was hard to adapt to the various kinds of work. We did not have any educational support or manual for the nursing role. I think that there should be ongoing job training and continuous education." (Nurse 3)

"I also need training in how to develop programs and assess the older people. There are so many things to do; I do not have enough resources to study." (Nurse 2)

Moreover, they felt that senior center nurses should play a triage role with regard to appropriate services, such as those involving health promotion, disease prevention, chronic disease management, and welfare. One of the experts, who specializes in community health, stated that well-trained senior center nurses are able to play the role of primary health provider for community-dwelling older adults efficiently.

"The nurse should have some discretion. By assessing the elderly [individuals], nurses should be able to find the problem and decide whether he or she needs a specific program. Nurses should develop and perform triage with the elderly [individuals]. Ideally, I wish to take advantage [of a] GNP [general nurse practitioner] at a senior center, but if it is difficult due to cost problems, training the RN [registered nurse] is a possible alternative." (Expert 1)

Establish legal regulations and adequate staffing for nurses. The senior center nurses and experts noted the necessity of defining nurses as mandatory personnel in senior centers by law. They also pointed out that adequate staffing should be included as part of the legal regulations for nurses. Further, most suggested that excessive work should be reduced so that nurses can focus on improving health service quality, although there may be differences between senior centers.

"The nurse is the only medical person who actually performs health services in a senior center. It doesn't make sense that nurses are not mandatory in senior centers, which offer various health services for older people. As the demand for health services increases, it is also essential to properly arrange the staffing of nurses to perform the work." (Expert 2)

They also said that a standard manual and regulations for the nurse's role is needed. Without these components, confusion concerning the scope and limits of nurses' roles and responsibilities could arise, and, as a result, the improvement of health service quality may be adversely affected:

"If there are any sponsored events at the center, I have to support the events, even though the events do not relate to nurses' work. Because nurses do not have a clear role regulation for their health services at senior centers, the task is ambiguous and it prevents us from doing what we need to improve the quality of health care services." (Nurse 2)

Discussion

This study was meaningful, in that the current perspectives of various stakeholders on the expansion of health services at senior centers were explored, focusing on the role that nurses play in their provision. The results reveal several vulnerabilities of and suggestions for health services at senior center in an urban South Korean community.

According to the findings, the attendees felt that health services at senior centers were insufficient, and they requested more and better services. These results are consistent with those of previous studies showing that the primary reason senior centers are used for are the health care services they provide [3, 15], and that older adults desire higher-quality health care services than any other services [4, 15]. The rapid expansion of health services at senior centers has resulted in a serious lack of both medical staff and resources. The duplication of services provided by other agencies was identified as another problem, and these results are consistent with previous studies [12]. To use limited resources efficiently, it is necessary to clarify and focus on the center's main purpose and role of providing services, and to avoid indiscriminately expanding various health services already provided by other agencies. The expansion of the center's role should occur in consideration of the entire framework for older adults' health and welfare in South Korea. In that sense, it is significant that older adults, nurses, and experts all have a consistent view that the main purpose of health services in senior centers should be to prioritize health promotion, disease prevention, and chronic disease management.

Previous studies have suggested that health services are inefficient because of a lack of a referral system and communication and mutual cooperation between health and welfare systems in Korea [17, 18]. In Korean communities, particularly, medical services are provided mainly for acute diseases, and the system of referral or coordination of health services has not been properly established [21]. In this point, experts who participated in this study proposed that senior centers should be regional hubs that connect various services, particularly in health and welfare. Considering the general characteristics of older adults in South Korea, where both health and welfare services are in high demand, these services cannot be separated. Therefore, the collaborative and integral role of senior center nurses in providing these services is very important [9, 11, 22, 23].

As shown in this study, although senior center health care needs are currently increasing and the quantity of health services offered is expanding, a shortage of personnel and resources remains. In both the quantitative and qualitative results, most of the senior center nurses complained of a lack of staffing and resources alongside too much work.

At present, mandatory staffing in senior centers include facility managers, social workers, physiotherapists, clerks, and cooks, but not nurses [24]. Nevertheless, about half of all senior centers employed nurses. This means that, contrary to their initial purpose of providing recreational welfare facilities for older people when they were established over 30 years ago, nurses have been hired at the director's discretion as demand for more specialized health services have increased [25].

According to a systematic review of health services conducted at the senior center, the health service programs provided by nurses are the most frequently used and effective [8]. However, given the reality that nurses are not required personnel, and that no regulations exist for their role in senior centers, they are limited in their capacity to provide more professional and qualified health services [25]. We suggest that one way to solve these problems would be to hire registered nurses (RN) as mandatory senior center staff. Furthermore, utilizing existing geriatric nurse practitioners (GNPs) is another appropriate option [26]. Despite the fact that 2,361 GNPs have been licensed in South Korea since 2006 [27], senior centers do not take full advantage of their advanced training and skills. In order to solve the staff shortage and improve the quality of senior center health services, nurses (either RN or GNP) should be included as mandatory personnel at the outset. Further, nurses' roles within senior center health services should be regulated, and a standard manual should be established.

In addition, educational and administrative resources are required to empower nurses and improve their competency. Both our quantitative and qualitative results demonstrate that most senior center nurses reported feeling very limited in terms of their personal competence, and their access to the educational and administrative resources needed to perform their roles. This study showed that one third of them (10 out of 30) acquired certificates other than RN; eight had social worker qualifications, and two had further NP qualifications in addition. These seem to attest to the personal endeavors of individuals to gain the competency and resources needed for their work. Although these individual efforts should be encouraged, there should be formal support to meet their educational and training needs, given the fact that most nurses desire to improve their work through continuing education.

It has been over 30 years since senior centers were first established in South Korea. Since then, the elderly population has increased several times and interest in health has increased dramatically. In response to these changes, we suggest that regulations be introduced to designate nurses as mandatory medical personnel in senior centers, and to support a greater provision of educational and administrative resources to empower and increase the competence of nurses. Finally, we suggest that senior centers serve as regional hubs, focusing on health promotion, disease prevention, and chronic disease management. Through these interventions, we expect that senior centers may play the key role in improving and managing the health of community-dwelling older adults.

Strengths And Limitations

This study has two limitations. The first is that the sampling method targeted senior centers only in urban community settings, namely, Seoul. Secondly, the study was based on nurses' perceptions of their senior centers (n = 30) and the FGI groups' (n = 15) perspectives on current challenges to and suggestions for senior center health services. Therefore, the results should be interpreted with caution.

Despite these limitations, however, this study was meaningful in that it explored the current opinions of various stakeholders and all nurses who work at senior centers in Seoul about the expansion of health services at senior centers, focusing on the nurse's role. This investigation yielded significant understanding and insights into the challenges of health service provision at senior centers, and resulted in policy and practice recommendations to improve these services in future. Amid the current phenomenon of accelerated aging worldwide, these suggestions could enable senior centers to play a key role in contributing to the chronic health management, health promotion, and maintenance of elderly people.

Conclusions

The study results revealed several challenges, including insufficient health services; insufficient availability of health services; a lack of human resources; non-systematic and overlapping health services; and a lack of legal clarification of nurses' roles. The suggestions for improvement are as follows: senior centers should focus on disease prevention and chronic disease management, and function as hubs to connect health and welfare services. To this end, it is necessary to increase nurses' competencies through training and administrative support; in addition, the establishment of legal regulations and adequate staffing for nurses are just as important.

Abbreviations

FGI
Focus group interview
GNP
Geriatric nurse practitioner

Declarations

Ethics approval and consent to participate

The study was approved by the institutional review board at a university in South Korea (IRB approval #2013-70). The researchers explained the study purpose and process to participants, and assured them of the anonymity and confidentiality of their data. Written, informed consent was obtained from all participants.

Consent for publication

This article does not contain any individual's details and consent for publication is not applicable.

Availability of data and materials

Sharing the data is not possible due to the confidentiality agreement with the participants.

Competing interests

The authors declare that they have no competing interests.

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Authors' contributions

All authors have participated in the conception and design of the study. SJL, MS, KS, JSC, HNK, and SC contributed to the data collection. MRY and SJL prepared the first draft of the manuscript and critically revised and checked the analysis and interpretation of the data and design of the article. BY was involved in revising the manuscript critically. All authors read and approved the final manuscript.

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