A Comparative Study of Nursing Service Experiences and Perceptions among Urban and Rural Residents in Cambodia

Su-Mi OH [1], Do-Young LEE [2]

1. First Author Assistant Professor, Department of Nursing, Changshin University, Korea. Email: oyy1134@cs.ac.kr
2. Corresponding Associate Professor, Department of Nursing, Changshin University, Korea. Email: shine@cs.ac.kr

Abstract

Purpose: This study aimed to compare nursing service experiences and perceptions of nurses between urban and rural areas in Cambodia, and to provide baseline evidence for improving nursing education and health workforce strategies. **Research design, data and methodology:** A descriptive cross-sectional survey design was employed. Data were collected through face-to-face questionnaires administered to 100 community residents from Phnom Penh (urban) and Kampong Speu (rural). The questionnaire assessed participants' experiences of receiving nursing services, perceived roles and professionalism of nurses, and accessibility of healthcare resources. **Results:** The findings indicated meaningful regional differences in the utilization of nursing services and the perceived availability of nursing care. Participants in the urban area reported relatively higher exposure to nursing services and more frequent interactions with nurses, while rural participants experienced greater limitations related to healthcare access and service continuity. Perceptions regarding the scope of nursing roles also differed by region, reflecting variations in local healthcare infrastructure and human resource distribution. Overall, the study highlights persistent disparities between urban and rural settings in Cambodia in terms of nursing service experience and recognition of nursing functions. **Conclusion:** These results imply that policy efforts should prioritize strengthening rural nursing capacity, expanding access to basic nursing services, and establishing standardized nursing education and practice guidelines to reduce regional gaps and enhance quality of care.

Keywords : Cambodia, Nursing service, Urban–rural comparison, Healthcare accessibility, Nursing perception

JEL Classification Code : A10, A19, I14, I20, I31

1. Introduction

Cambodia has recently set the strengthening of its health-care system as a national priority alongside rapid economic growth (Kingdom of Cambodia, 2019). In this context, attention has increasingly focused on enhancing the professional competencies of the nursing workforce and ensuring a more equitable distribution of health personnel across regions (Sakurai-Doi et al., 2014). In particular, disparities between urban and rural areas in terms of health-care access and the composition of the nursing workforce are regarded as foundational evidence for determining the future direction of the national health-

care system (Ministry of Health, 2012; Ministry of Health, 2018). International organizations likewise identify capacity building for Cambodia's health professionals as a key determinant for achieving the Sustainable Development Goals (SDGs) (UNDP, 2022; United Nations Department of Economic and Social Affairs, 2019). The World Bank has also emphasized the need for health workforce development by advancing initiatives that support the modernization of education systems and the training of qualified professionals (World Bank, 2020; World Bank Data, 2022). Prior studies have discussed several challenges for future development, including improving the efficiency of the nursing education system,

standardizing programs across educational institutions, and strengthening clinical training environments (Jo & Yang, 2016). Other research suggests that perceptions of nurses' roles and the image of nursing may positively influence health-care service experiences and occupational preferences (Braun & Clarke, 2006; Morgan & Krueger, 1993). In addition, the competency-based nursing education model advanced by the Korean Accreditation Board of Nursing Education (KABONE)—grounded in professionalism, accountability, and trustworthiness—offers an internationally relevant benchmark for developing competent nurses and provides policy-relevant implications for health workforce development research. Despite these developments, relatively few studies in Cambodia have conducted integrated analyses comparing urban and rural contexts with respect to nursing workforce utilization, experiences of nursing services, and perceptions of nurses' roles. Given the convergence of demographic transitions (Kingdom of Cambodia, 2019), the rising burden of non-communicable diseases (Ministry of Health, 2018), and expanding demand for health personnel (UNDP, 2022), region-specific analyses of nursing services are expected to provide critical evidence for informing future policy and educational strategies. Accordingly, this study aims to examine patterns of nursing workforce utilization, experiences of nursing service use, and perceptions of nurses among urban and rural populations in Cambodia, thereby providing an empirical basis for establishing health workforce development strategies and directions for nursing education.

2. Research Methods

2.1. Study Design

This study employed a descriptive cross-sectional survey design to examine nursing service utilization, experiences of nursing care, and perceptions of nurses among residents in Cambodia. The design was considered appropriate for exploring regional differences between urban and rural populations and for providing baseline data to inform future research and policy development.

2.2. Participants and Study Setting

To To examine urban–rural differences in nursing service experiences and perceptions, Phnom Penh, the capital city of Cambodia, was selected as the urban study site, while Kampong Speu Province was selected as the rural study site. Data were collected through face-to-face surveys administered to community residents. A total of

100 participants were recruited using convenience sampling, with 50 respondents from each region. The sample was intended to provide preliminary, baseline evidence regarding regional differences in nursing service utilization and perceptions among the general population.

Table 1: Phnom Penh vs Kampong Speu (n=100)

Category	Division	Phnom Penh		Kampong Speu		All	
		(n=50)	%	(n=50)	%	(n=100)	%
Age	Under 30s	30	60	2	4	32	32
	30s	10	20	8	16	18	18
	40s	5	10	11	22	16	16
	Over 50s	5	10	29	58	34	34
Job	Construction day laborer	0	0	4	8	4	4
	Civil servant	3	6	4	8	7	7
	Farmer	4	8	23	46	27	27
	Merchant	5	10	4	8	9	9
	Homemaker or unemployed	4	8	7	14	11	11
	Student	18	36	2	4	20	20
	Office worker	16	32	6	12	22	22
Educational attainment	Elementary school	3	6	19	38	22	22
	Middle school	12	24	19	38	31	31
	High school	9	18	7	14	16	16
	University	26	52	5	10	31	31
Gender	Male	14	28	24	48	38	38
	Female	36	72	26	52	62	62

The age distribution of respondents showed that individuals aged under 30 years accounted for 32% of the sample, while those aged 50 years and older comprised 34%, representing the largest age groups. Rural respondents tended to be older than their urban counterparts.

In terms of occupation, farmers constituted the largest group overall (27%), followed by office workers (22%), students (20%), and homemakers or unemployed individuals (11% each). Regional differences were evident: urban areas had higher proportions of students (36%) and office workers (32%), whereas farming was the predominant occupation in rural areas (46%). Regarding educational attainment, middle school and university graduates each accounted for 31% of the total sample. In urban areas, more than half of respondents were university graduates (52%). In contrast, rural areas showed higher proportions of elementary school and middle school graduates, both accounting for 38%.

With respect to gender, women comprised a greater proportion of the overall sample (62%), while men

accounted for 38%. The proportion of women was higher in urban areas (72%), whereas the gender distribution in rural areas was relatively balanced, with 48% men and 52% women.

3. Perceptions of Healthcare Utilization

3.1. Hospital Utilization Frequency

The frequency of hospital use was highest for once per year (52%), followed by once per month (30%). By region, once-per-year utilization was the most common in both urban and rural areas (52% each). The proportion of respondents who reported that they rarely used hospital services was higher in rural areas (36%) than in urban areas (24%). A chi-square test indicated a statistically significant association between region and hospital utilization frequency ($\chi^2 = 10.801$, $p = 0.013$).

Table 2: Hospital utilization frequency (n=100)

Category	Phnom Penh (n=50)	%	Kampong Speu (n=50)	%	All (n=100)	%
Once a week	2	4	1	2	3	3
Once a month	10	20	10	20	30	30
Once a year	26	52	21	42	52	52
Rarely use	12	24	18	36	15	15
X²(df)	10.801 (3)					
p-value	0.013					
Likelihood Ratio(df)	11.653 (3)					
p-value	0.003					

3.2. Travel Time to the Hospital

The most common response regarding travel time to the hospital was "varies depending on traffic conditions" (39%), followed by "within 1 hour" (28%). By region, a higher proportion of rural respondents reported that travel time varied depending on traffic conditions (48%) compared with urban respondents (30%). Although a slightly higher proportion of urban residents reported a travel time of "within 30 minutes," the overall distribution of responses was similar between urban and rural areas. The chi-square test indicated no statistically significant association between region and travel time to the hospital ($\chi^2 = 4.778$, $p = 0.311$).

Table 3: Travel time to the hospital (n=100)

Category	Phnom Penh (n=50)	%	Kampong Speu (n=50)	%	All (n=100)	%
Within 30 munites	8	16	6	6	11	11
30munuites ~ 1 hours	15	30	18	26	28	28
More 1 hour	8	16	6	12	14	14
Depends on traffic conditions	15	30	24	48	39	39
Not known	4	8	4	8	8	8
X²(df)	4.778 (4)					
p-value	0.311					
Likelihood Ratio(df)	4.884 (4)					
p-value	0.299					

3.3. Satisfaction with Nursing Care

Satisfaction with nursing care was most commonly reported as "neutral" (52%), followed by "satisfied" (40%) and "dissatisfied" (8%). By region, a higher proportion of rural respondents reported being satisfied with nursing care (44%) compared with urban respondents (36%). Although the proportion of respondents reporting dissatisfaction was slightly higher in rural areas, the overall distribution of satisfaction levels was similar between the two groups. The chi-square test indicated no statistically significant association between region and satisfaction with nursing care ($\chi^2 = 3.631$, p = 0.163).

Table 4: Satisfaction with nursing care (n=100)

Category	Phnom Penh (n=50)	%	Kampong Speu (n=50)	%	All (n=100)	%
Satisfied	18	36	22	44	40	40
Neutral	30	60	22	44	52	52
Dissatisfied	2	4	6	12	8	8
X²(df)	3.631 (2)					
p-value	0.163					
Likelihood Ratio(df)	3.729 (2)					
p-value	0.155					

3.4. Perceived primary roles of nurses

Perceptions of nurses' primary roles were most commonly reported as "not sure" (57%), followed by "neutral" (25%) and "well aware" (18%). By region, both "well aware" and "not sure" responses were more frequent in rural areas, whereas in urban areas the proportion reporting "neutral" was higher (36%) than in rural areas (14%). A chi-square test indicated that the p-value for the association between region and "Perceived primary roles of nurses" was 0.046 (p < 0.05). Although this association is weaker than those observed for other items, the result nevertheless demonstrates a statistically significant relationship between region and "Perceived primary roles of nurses".

Table 5: Perceived primary roles of nurses (n=100)

Category	Phnom Penh		Kampong Speu		All	
	(n=50)	%	(n=50)	%	(n=100)	%
Well aware	7	14	11	22	18	18
Neutral	18	36	7	14	25	25
Not knows	25	50	32	64	57	57
X^2(df)	6.145 (2)					
p-value	0.046					
Likelihood Ratio(df)	6.320 (2)					
p-value	0.042					

3.5. Willingness to Recommend the Nursing Profession to others

Regarding willingness to recommend the nursing profession to others, "yes" was the most common response (58%), followed by "neutral" (26%). By region, a substantially higher proportion of rural respondents reported willingness to recommend the nursing profession (76%) compared with urban respondents (40%). The chi-square test indicated a statistically significant association between region and willingness to recommend the nursing profession to others (χ^2 = 15.578, p < 0.001).

Table 6: Willingness to recommend the nursing profession to others (n=100)

Category	Phnom Penh		Kampong Speu		All	
	(n=50)	%	(n=50)	%	(n=100)	%
Yes	20	40	38	76	58	58
Neutral	16	32	10	20	26	26
No	14	28	2	4	16	16
X^2(df)	15.578 (2)					
p-value	0.000					
Likelihood Ratio(df)	16.800 (2)					
p-value	p < 0.001					

3.6. First associations with Nurses

Regarding the image of nurses, the most common response was "someone who cares for patients" (64%). This was also the most frequent response in both urban and rural areas; however, the proportion was substantially higher in rural areas (88%) than in urban areas (40%). A chi-square test revealed that the p-value for the association between region and "First associations with nurses" was extremely close to zero (p < 0.05), indicating a very strong and statistically significant relationship between region and ″First associations with nurses″.

Table 7: First associations with nurses (n=100)

Category	Phnom Penh		Kampong Speu		All	
	(n=50)	%	(n=50)	%	(n=100)	%
A kind and warm person	8	16	6	6	11	11

A medical professional	15	30	18	26	28	28
Hard professional	8	16	6	12	14	14
A caregiver for patients	15	30	24	48	39	39
Service and dedication	4	8	4	8	8	8
X^2(df)	25.961 (3)					
p-value	0.000					
Likelihood Ratio(df)	30.676					
p-value	p < 0.001					

3.7. Extent to which Nurses are Perceived as Healthcare Professionals

Perceptions of whether nurses are regarded as healthcare professionals were most commonly reported as "neutral" (44%), followed by "no" (31%) and "yes" (25%). Regional differences were evident. In urban areas, 50% of respondents reported that nurses are healthcare professionals, whereas no respondents in rural areas selected this response. The chi-square test indicated a statistically significant association between region and perceptions of nurses as healthcare professionals (χ^2 = 34.129, p < 0.001).

Table 8: Extent to which nurses are perceived as healthcare professionals (n=100)

Category	Phnom Penh		Kampong Speu		All	
	(n=50)	%	(n=50)	%	(n=100)	%
Yes	25	50	0	0	25	25
Neutral	15	30	29	58	44	44
No	10	20	21	42	31	31
X^2(df)	34.129 (2)					
p-value	0.000					
Likelihood Ratio(df)	43.981 (2)					
p-value	p < 0.001					

3.8. Core Virtues of a Nurse

With respect to the competencies nurses should possess, "professional knowledge" was the most frequently selected response overall (68%), followed by "quick and accurate nursing skills" (15%). In both urban and rural areas, professional knowledge was identified as the most important competency. However, the proportion of respondents selecting professional knowledge was higher in rural areas (92%) than in urban areas (44%). The chi-square test indicated a statistically significant association between region and perceptions of the core virtues of a nurse (χ^2 = 28.029, p < 0.001).

Table 9: Core virtues of a nurse (n=100)

Category	Phnom Penh		Kampong Speu		All	
	(n=50)	%	(n=50)	%	(n=100)	%
Professional knowledge	22	44	46	92	68	68

A kind and consideration attitude	12	24	1	2	13	13
Timely and precise nursing skills	12	24	3	6	15	15
Hospital management skills	4	8	0	0	4	4
X²(df)	28.029 (3)					
p-value	0.000					
Likelihood Ratio(df)	31.846 (3)					
p-value	p < 0.001					

3.9. Expectations for Nurses

The 3.9. Expectations for Nurses
The most frequently reported expectation of nurses was that they "should be professional" (n = 64), followed by "should be kind" (n = 53). Other responses included "should not discriminate" (n = 12), "should be accurate and prompt" (n = 6), and "medical costs should be affordable" (n = 3). Analysis of the open-ended responses regarding expectations of nurses indicated that respondents wanted professional nurses who are kind and provide accurate, prompt healthcare services without discrimination.

4. Discussion

This study examined differences in nursing service utilization, perceptions of nurses, and attitudes toward the nursing profession among urban and rural residents in Cambodia. Overall, the findings revealed notable regional differences across multiple dimensions, suggesting that nursing service experiences and perceptions are shaped by variations in healthcare accessibility, demographic characteristics, and educational background.

With regard to healthcare utilization, although hospital use once per year was the most common pattern in both regions, differences emerged in less frequent utilization. Rural residents reported higher proportions of limited hospital use, which may reflect structural constraints such as fewer healthcare facilities and reduced service availability. In contrast, urban residents may experience more diverse patterns of healthcare utilization due to greater accessibility and a wider range of healthcare options.

Differences in perceived travel time to hospitals further highlight regional disparities in healthcare access. While overall distributions were similar, rural respondents more frequently reported variability in travel time, likely reflecting infrastructural challenges such as road conditions and transportation limitations. These findings are consistent with prior reports indicating uneven development of healthcare-related infrastructure between urban and rural areas in Cambodia (Ministry of Health, 2018).

Regional differences were also observed in satisfaction with nursing care and perceptions of nurses' roles. Rural respondents reported higher satisfaction levels, along with more polarized perceptions of nurses' roles, compared with urban respondents. This pattern may be associated with differences in exposure to healthcare services and access to health-related information. In urban settings, greater diversity in healthcare experiences may contribute to more moderate or nuanced perceptions of nursing roles.

Perceptions of nurses' professional status differed markedly by region. While a substantial proportion of urban respondents recognized nurses as healthcare professionals, none of the rural respondents selected this response. This disparity may be partially explained by differences in educational attainment, as rural respondents were more likely to have lower levels of formal education. Previous studies have similarly indicated that educational background influences perceptions of professional roles within healthcare systems (Braun & Clarke, 2006).

Despite these differences, respondents across both regions consistently identified professional knowledge as the most important competency for nurses. This finding underscores a shared expectation regarding nursing professionalism and suggests that strengthening professional competencies aligns with public expectations regardless of regional context. In this regard, the competency-based framework promoted by the Korean Accreditation Board of Nursing Education (KABONE), which emphasizes professionalism, accountability, and expertise, offers relevant implications for nursing education and workforce development. Emerging challenges such as self-directed learning, digital learning environments, and post-pandemic shifts in educational delivery should be considered as major focal points for future research in nursing education(Lee, 2025).

Taken together, the findings indicate that regional characteristics play an important role in shaping nursing service utilization and perceptions in Cambodia. These differences should not be interpreted as deficiencies of particular regions, but rather as reflections of distinct contextual needs. Accordingly, efforts to improve nursing services in Cambodia should incorporate region-sensitive strategies for nursing education, workforce deployment, and public awareness, thereby supporting more equitable and effective healthcare delivery.

5. Conclusion

This study comparatively analyzed experiences of

nursing service utilization, perceptions of nurses, and attitudes toward the nursing profession among residents in urban and rural areas of Cambodia. The results revealed regional differences in healthcare accessibility, perceptions of nurses' roles, and evaluations of professional status, which may reflect the influence of local health environments as well as social and educational factors. However, the consistently high expectations for nurses' professionalism and kindness across regions underscore the importance of strengthening nursing competencies and enhancing the quality of nursing education. The findings of this study may serve as baseline evidence to inform future efforts to improve nursing education, develop health workforce policies, and establish region-tailored nursing service strategies in Cambodia. This study has limitations due to its relatively small sample size of 100 participants and the use of convenience sampling, which may restrict the generalizability of the findings. These methodological constraints should be considered when interpreting the results.

Acknowledgement

References

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77–101.

Jo, M., & Yang, S. (2016). Current status and issues of nursing education in Cambodia. *Journal of Korean Public Health Nursing, 30*(2), 288–299.

Kingdom of Cambodia. (2019). *General population census of the Kingdom of Cambodia 2019.*

Lee, D.-Y. (2025). Text network analysis of core nursing skills research in Korea. *Journal of Wellbeing Management and Applied Psychology, 8*(6), 31–40. https://doi.org/10.13106/jwmap.2025.vol8.no6.31

Ministry of Health. (2012). *Survey on nursing education in the public sector and nursing services at sites for clinical practice in Cambodia.* Ministry of Health & Japan International Cooperation Agency.

Ministry of Health. (2018). *National multisectoral action plan for the prevention and control of noncommunicable diseases 2018–2027.* Royal Government of Cambodia.

Morgan, D. L., & Krueger, R. A. (1993). When to use focus groups and why. In D. L. Morgan (Ed.), *Successful focus groups: Advancing the state of the art* (pp. 3–19). Sage.

Sakurai-Doi, Y., Mochizuki, N., Phuong, K., Sung, C., Visoth, P., Sriv, B., Amara, S. R., Murakami, H., Komagata, T., & Fujita, N. (2014). Who provides nursing services in Cambodian hospitals? *International Journal of Nursing Practice, 20*(Suppl. 1), 39–46. https://doi.org/10.1111/ijn.12249

United Nations Development Programme (UNDP). (2022, August). *Cambodia SDG investor map: Investment opportunity areas report.*

World Bank. (2020). *Population, total – Cambodia.* https://data.worldbank.org/indicator/SP.POP.TOTL?locations=KH

World Bank. (2020, May 29). *World Bank approves $15 million for Cambodia's pre-service education system for health professionals.* https://www.worldbank.org/en/news/press-release/2020/05/29/world-bank-approves-15-million-for-cambodias-pre-service-education-system-for-health-professionals

World Bank. (2022). *Mortality rate, under-5 (per 1,000 live births).* World Development Indicators. https://data.worldbank.org/indicator/SH.DYN.MORT