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Visualizing health inequality: a photovoice study of healthcare communication barriers and facilitators in marginalized communities in South Korea

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Abstract

Background As South Korea faces growing population diversity, including aging, socioeconomic inequality, and migration, there is an urgent need to improve equity in healthcare communication and utilization.

Methods This study employs a photovoice methodology to explore how four marginalized groups (older adults, persons with disabilities, low-income public assistance recipients, and migrant women) experience barriers and facilitators to patient-doctor communication and healthcare utilization ($n=20$).

Results Participants' photographs and narratives showed three cross-cutting structural barriers: long wait times and limited consultation time, financial constraints, and insufficient or unclear information. These barriers took different forms across groups, ranging from language barriers among migrant women to inaccessible transportation and kiosks for participants with disabilities. Facilitators included empathetic provider communication, trust-based relationships, visual aids, and family or peer support. Proactive patient strategies recurred across all four groups, though access to them was itself unequally distributed.

Conclusions These findings highlight the need for patient-centered communication, provider training in shared decision-making, and system-level reforms that address time pressure, cost uncertainty, interpreter access, and information asymmetry in healthcare encounters. Photovoice was useful in capturing the lived experiences of structurally marginalized groups and offers practical insights for designing inclusive healthcare practices and policies.

Keywords Photovoice, Communication barriers, Physician-patient relations, Aged, Persons with disabilities, Public assistance, Emigrants and immigrants, Health services accessibility, Republic of Korea

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Background

Patient–doctor communication is central to building trust, ensuring mutual understanding, and delivering patient-centered care, making it an important factor of healthcare utilization, and health outcomes [1, 2]. However, minority groups, such as older adults, persons with disabilities, economically disadvantaged populations, and migrants, often encounter substantial barriers that restrict effective healthcare communication as well as utilization [3, 4]. These barriers are not uniform across minority groups and stem from structural conditions within the healthcare system intertwined with each group's social status, resulting in both common and group-specific disadvantages. Common structural barriers include short consultation times, unclear cost information, transportation issues, and information asymmetry. For example, older adults may experience age-related sensory or cognitive limitations, which hinder their ability to access health information and engage fully during consultations [5–7]. Persons with disabilities often face structural accessibility issues such as transportation, communication problems with healthcare providers, and inadequate accommodations for specific needs [8, 9], but these limitations are common across several groups as transportation barriers also affect the older adults and rural migrant women. Economically disadvantaged populations may delay or avoid care due to financial constraints, uncertainty about medical expenses, or perceived power asymmetry in provider interactions [10, 11]. Migrants frequently face linguistic and cultural barriers, as well as limited availability of interpretation services, all of which complicate communication with healthcare professionals and reduce effective service utilization [12, 13]. Distinguishing the systemic from the group-specific matters for the design of care that supports patient participation across social positions.

In South Korea (hereinafter Korea), the increasing diversity of the population, driven by rapid aging, widening socioeconomic inequality, and a growing migrant population, has brought renewed attention to disparities in healthcare access and communication [14, 15]. Prior Korean work has also shown that older adults' chronic illness management is shaped by the need for clearer information, communication, and support [16]. Although efforts to promote patient-centered care have gained traction globally, many outpatient encounters in Korea remain shaped by a high-volume, physician-led clinical environment. This environment reflects intersecting structural and cultural factors, including historically hierarchical expectations in clinical communication, patients' reluctance to challenge medical authority, and a fee-for-service reimbursement system in which payment is tied to service volume [17–20]. Recent Korean observational work documents brief outpatient consultations, especially in follow-up visits [21], and related work from rural China links consultation length to process and diagnosis quality [22]. This physician-led and time-compressed context may discourage open dialogue and limit patient participation, particularly for individuals who already face disadvantages [23–26]. Comparative work on Asian aging societies also shows that service delivery reform must address the coordination of healthcare, long-term care, welfare, and community support under rapid population aging [27]. For instance, migrant women often struggle with language barriers and unfamiliar expectations around healthcare. Older adults may be left out when care relies on digital tools, or they may find health information difficult to interpret, a pattern documented in cross-cultural studies of the gray digital divide in Germany, Japan, and Thailand [28]. Persons with disabilities may encounter physical, sensory, or cognitive barriers when communicating with providers, particularly when appropriate accommodations are unavailable. Individuals facing financial hardship may remain quiet because of stigma, uncertainty about costs, or fear that asking questions could create additional burdens [14, 25, 26]. Existing Korean research has examined patient experience and shared decision-making (SDM) through surveys, scale development, and interview-based designs, but participant-led visual accounts of healthcare communication among structurally marginalized groups remain scarce [29–31].

To address this gap, this study adopts a photovoice approach, a participatory visual method that enables individuals to document and reflect on their everyday experiences through photography and narrative [32–34]. This method is particularly well-suited for populations with verbal or linguistic limitations, as it provides an alternative mode of expression that centers participants' perspectives. Photovoice gives marginalized participants a route into the conversation and lets them point directly at the structural, interpersonal, and cultural conditions of their encounters.

Focusing on four structurally marginalized groups: older adults, persons with disabilities, recipients of Korea's Basic Livelihood Security Program (a national means-tested welfare scheme, hereinafter recipients of public assistance), and migrant women, this study explores how these groups experience barriers and facilitators to healthcare communication and utilization. These four groups were studied together because they represent distinct yet overlapping social positions through which healthcare communication disadvantage is commonly organized in Korea: aging, disability, poverty, and migration. Yet they have typically been studied separately. A cross-group design allows the analysis to separate cross-cutting structural barriers from group-specific manifestations and to identify whether

facilitators travel across groups. This study aims to (i) identify shared and group-specific barriers and facilitators to healthcare communication and utilization among four structurally marginalized groups in Korea, and (ii) demonstrate the methodological value of photovoice for capturing these experiences in Korea as an East Asian health-system setting.

Our study applied a structural vulnerability lens, which holds that difficulty in clinical encounters is produced by social position interacting with institutional arrangements rather than by individual deficits or cultural traits [35–38]. This view directs attention to the structural conditions under which a clinical encounter occurs, including consultation length, fee-for-service reimbursement, interpreter availability, and transportation infrastructure. This lens clarifies three concepts used to interpret the findings. SDM refers to a deliberative process in which patients and clinicians jointly weigh treatment options in light of the patient's values; the literature notes that it is unevenly available across patient populations and hard to implement within short, hierarchical consultations [19, 24]. *Cultural humility* refers to a lifelong commitment to self-critique and to redressing power imbalances in clinical encounters, distinguished from the static notion of cultural competence [37, 38]. *Structural inequities* refer to the institutional and policy conditions under which some populations carry a heavier load of communicative and access burdens than others, and follows directly from the structural vulnerability lens.

Methods

Study design: photovoice

Photovoice is a qualitative method in which participants take photographs of their everyday environments and discuss them in their own words [39]. The visual element gives participants a way to bring forward concerns that are hard to put into words alone. By integrating visual imagery ("photo") with participants' personal narratives ("voice"), photovoice brings into view community-level issues while also contributing to social change by informing policies and interventions [40]. Unlike conventional text-based methods such as interviews or focus groups, photovoice captures lived experiences in a more immediate and evocative way through visual representation [32, 33, 40, 41].

Photovoice is well-suited to participants with linguistic or verbal limitations because it allows visual rather than verbal expression. However, smartphone-based photo capture is not equally easy for all participants because digital and visual-literacy support cannot be assumed even where smartphone ownership is widespread [42–44]. Our orientation session (see below for details) addressed this directly, and technical assistance was offered throughout the study for participants who were less comfortable with smartphone photography. Its visual nature allows participants to communicate across linguistic boundaries, making it especially valuable when working with minority groups or populations with limited verbal fluency due to language, cognitive, or emotional constraints [33, 45–47]. For this reason, photovoice has gained increasing traction in health research, particularly in studies involving trauma-affected populations or adolescents, whose perspectives are often underrepresented in traditional research [39, 46, 48, 49].

When participants can both take photographs and reflect on what those images mean to them, photovoice does more than surface barriers; it gives people a way to engage with their own healthcare experiences on their own terms. Because it does not rely heavily on language or shared cultural assumptions, it works particularly well with communities that are often left out of conventional research. In this study, we use photovoice to get closer to the everyday realities of underrepresented groups, with the goal of informing communication approaches that actually work for the people they are meant to reach, and advancing health equity in the process.

Participants and recruitment

Twenty participants were recruited between June and September 2024, with equal representation (five participants per group) from four structurally marginalized groups: older adults, persons with disabilities, low-income public assistance recipients, and migrant women. The sample size was chosen to balance within-group depth with cross-group breadth. We did not aim to claim within-group saturation. Instead, sampling was guided by the logic of information power: the adequacy of qualitative sample size depends on the study aim, sample specificity, use of theory, quality of dialogue, and analytic strategy [50]. Prior photovoice studies have employed sample sizes ranging from 7 to 49 participants, illustrating flexibility depending on study design and objectives [51].

Inclusion and exclusion Criteria were as follows for each group. ***Older adults***: Participants aged 65–80 years or older were eligible, with an upper recruitment bound reflected pragmatic recruitment reasons. We acknowledge in the Limitations that this excludes the oldest old, whose experiences may differ, and we make no claim that age limits the capacity to communicate. ***Persons with disabilities***: In July 2019, Korea abolished the legacy Grade 1–6 disability grading system and replaced it with a binary classification distinguishing persons with disabilities whose disability is severe from persons with disabilities whose disability is not severe [52]. Our participants corresponded broadly to legacy Grades 4–6 and, under the post-2019 system, were classified as persons with disabilities whose disability was not severe. Although

this category is often translated as mild disability, participants in this group had physical disabilities affecting mobility but did not require substantial daily assistance. We refer to legacy grade labels only as shorthand to convey functional level to international readers. To maintain a focus on physical disability without additional communication-related barriers, individuals with hearing or visual impairments were excluded. ***Low-income public assistance recipients***: Participants under age 65 were eligible if they belonged to households earning less than 50% of the national median income or received at least one form of basic livelihood assistance (e.g., livelihood, medical, housing, or education subsidies). For context, in 2024, the income threshold for single-person households was set at 1,114,223 Korean won (KRW; approximately USD 830 per month), a level indicating significant financial vulnerability in meeting basic living expenses. ***Migrant Women***: Eligibility criteria required participants to be adult women (aged 18 years or older) who had been legally residing in Korea for at least six months prior to enrollment, possessed sufficient Korean language skills to communicate in interviews, and had visited a healthcare facility at least four times within the past year. These criteria ensured that participants had relevant healthcare experiences to share. We acknowledge that the Korean-language requirement selects out the women who face the most acute language barriers; our findings on linguistic exclusion are therefore conservative.

Some recruited individuals met criteria for more than one group (for example, an older adult who also received basic livelihood assistance, or a migrant woman with a mild physical disability). In each such case the participant self-identified the group with which they wished their experiences to be read, and recruitment notes captured the other eligible categories. We acknowledge in the Limitations that single-group attribution underplays compounded, intersectional experience [63, 64].

Photovoice procedures

The study followed a three-stage photovoice process conducted over three months (June 14–September 24, 2024). In the first stage, participants attended an orientation session where the researcher introduced the photovoice methodology and explained its focus on healthcare communication and utilization. The orientation also covered practical use of the smartphone camera, allowing participants of varying digital comfort levels to ask questions before fieldwork began. Participants were asked to capture 1–2 photographs for each of the following themes: (1) a photo representing their current health condition, (2) a photo reflecting their emotional state during communication with healthcare providers, and (3) a photo illustrating healthcare accessibility.

During the second stage, participants took photos over three months that documented their day-to-day experiences related to healthcare decision-making. In the final stage, group discussion sessions were held separately for each participant group. Participants shared and explained their photographs, discussing the barriers they encountered, the types of support they needed, and their suggestions for improving healthcare access and communication. These group dialogues were designed to foster reflection, mutual understanding, and collective insight into challenges and facilitators related to healthcare communication and utilization.

Data analysis

Photographs and accompanying narratives were analyzed using a constant comparative approach informed by grounded theory [53]. Photographs and narrative transcripts were coded jointly rather than sequentially, so that each image was always interpreted with the narrative that the participant supplied for it. Group discussions were structured around the SHOWED mnemonic (What do you **S**ee here? What is really **H**appening? How does this relate to **O**ur lives? **W**hy does this situation exist? How could this be **E**ducational? What can we **D**o about it?), which is widely used in photovoice research [54, 55]. Two members of the research team coded independently and met biweekly to reconcile codes; disagreements were resolved through discussion with a third author. Drafted themes were returned to a subset of participants in each group for member-checking, and adjustments were made where participants disagreed with the framing. MAXQDA was used to manage the corpus and to support code retrieval; the analysis itself was discussion-led rather than software-driven.

Ethical considerations

This study was approved by the Institutional Review Board (IRB) at the authors' affiliated institution and conducted in accordance with ethical research standards.

Results

Table 1 presents participants' demographic characteristics. Of the 20 participants, 45% were male and 55% female. The largest age group was those in their 40s (35%), followed by individuals in their 30s and 70s (20% each), 50s and 60s (10% each), and 20s (5%). Over half (55%) were heads of household, 40% were not, and 5% did not respond. Regarding monthly income, 15% earned less than USD 1,000, 25% earned USD 1,000–2,000, another 25% earned USD 2,000–3,100, and 30% earned over USD 3,100; one participant (5%) did not report income. Household size varied, with 45% in two-person households, followed by three-person (20%), one-person (15%), four-person (10%), and five-person households (10%).

Table 1 Characteristics of participants ($n = 20$)

Characteristic	N	%
Gender		
Male	9	45
Female	11	55
Age		
20 ~ 29	1	5
30 ~ 39	4	20
40 ~ 49	7	35
50 ~ 59	2	10
60 ~ 69	2	10
70+	4	20
Household head status		
Yes	11	55
No	8	40
No response	1	5
Income (Monthly)		
< USD 1,000	3	15
USD 1,000 ~ 2,000	5	25
USD 2,000 ~ 3,100	5	25
> USD 3,100	6	30
No response	1	5
Household size		
One person	3	15
Two people	9	45
Three people	4	20
Four people	2	10
Five people	2	10
Marital status		
Cohabiting with spouse	15	75
Divorced	2	10
Single	3	15
Education		
< Bachelor's degree	5	25
Bachelor's degree	12	60
Graduate education	3	15
Healthcare facility type visited (Multiple answers possible)[a]		
Primary care	12	60
Secondary hospital	9	45
Tertiary hospital	9	45

[a]Percentages for the healthcare facility type variable sum to more than 100% because participants could report more than one facility type; all other variables reflect single responses

Most (75%) lived with a spouse; 15% were single and 10% divorced. Educational attainment included 25% with less than a bachelor's degree, 60% with a bachelor's degree, and 15% with graduate education. For healthcare facility type visited (multiple responses allowed), 60% visited primary care, 45% secondary hospitals, and 45% tertiary hospitals.

Table 2 summarizes the barriers and facilitators to healthcare communication and utilization across the four groups. The table separates items that appeared across all four groups (Common Barriers, Common Facilitators) from items that surfaced in only one or two groups (Unique Barriers, Unique Facilitators). Read together, the findings cluster around five cross-cutting structural axes: time pressure, information asymmetry, financial anxiety, communication access, and emotional labor. Three of these axes were named as barriers by every group and appear in Table 2 as common barriers: time pressure (long wait times and short consultations), financial constraints, and information asymmetry (insufficient, inadequate, or ambiguous information from healthcare professionals). The remaining two axes, communication access and emotional labor, recurred across all four groups but took different concrete forms: language barriers and unfamiliarity with interpreter services among migrant women, kiosk-mediated interactions and provider defensiveness among participants with disabilities, anticipatory anxiety about test results among older adults, and worry about cost questioning among low-income recipients. Two common facilitators also recurred across all four groups: proactive health-seeking behavior, including willingness to search for health information, and effective communication with healthcare providers. What differs between groups is the configuration and intensity of these common pressures, together with a set of group-specific barriers and facilitators described in the subsections below.

Reading across the table, three patterns become visible. First, the three common barriers (time pressure, financial constraints, and information asymmetry) appeared in every group, indicating that these are features of the encounter produced by the broader health system rather than artifacts of any single group's social position. Second, the unique barriers cluster around physician communication style and the doctor-patient dynamic: poor communication and authoritarian dynamics for older adults, defensive attitudes and patient passivity for persons with disabilities, incomplete explanations and authoritarian dynamics for low-income recipients, and language barriers compounded by defensive attitudes for migrant women. The specific form differs across groups, but the underlying issue (the physician's communicative posture) recurs throughout. Third, the unique facilitators are not entirely group-specific either: for instance, trust in the physician-patient relationship is named by older adults and low-income recipients, empathetic provider response is named by participants with disabilities and low-income recipients, and clear information provision is named in three of the four groups. These are not traits attached to a single group; they are levers the health system can supply or withhold.

Barriers and facilitators among older adults

Among older adults, several key factors were identified as barriers to healthcare communication and utilization. These include long waiting times, short consultation durations, physicians' authoritative attitudes, poor

Table 2 Key barriers and facilitators to healthcare communication and utilization among structurally marginalized groups

	Older Adults	Persons with disabilities	Low-income public assistance recipients	Migrant Women
Common Barriers	- Long wait times and short consultations - Financial constraints - Insufficient, inadequate, or ambiguous information provided by healthcare professionals			
Unique Barriers	- Poor communication with physicians - Complicated medical procedures - Authoritarian physician-patient dynamics - Emotional distress related to healthcare encounters	- Defensive attitudes from healthcare providers - Passivity among patients due to prior negative experiences or perceived marginalization	- Incomplete or unclear explanations from physicians - Authoritarian physician-patient dynamics	- Language barriers - Defensive attitudes from healthcare providers - Challenges in navigating complex medical systems and procedures
Common Facilitators	- Proactive health-seeking behaviors, including willingness to search for health information - Effective communication with healthcare providers			
Unique Facilitators	- Effective and collaborative communication with healthcare providers - Trust in physician- patient relationships - Provision of information by physicians or hospitals - Support from family members and caregivers	- Empathy and emotional support from medical staff - Clear and transparent communication about medical information - Empowerment of patients in clinical interactions, fostering active engagement in decision-making	- Trust in physician-patient relationships - Clear explanation of medical costs and procedures - Competent and supportive healthcare providers - Emotional support and empathic understanding from medical staff	- Supportive and collaborative interactions with physicians - Access to language interpretation services - Familial support and assistance in navigating the healthcare system

communication, insufficient information provision, complex medical procedures, and limitations within the healthcare system. These barriers were reported across all five older-adult participants, suggesting a shared pattern rather than idiosyncratic experience. These findings are further illustrated through participant-generated photographs. For instance, the left top image in Fig. 1 shows a crowded waiting area in a hospital, highlighting the difficulty of receiving adequate consultation time in an efficiency-driven medical environment. The presence of many patients waiting reduces the time physicians can spend interacting with each patient, potentially lowering the quality of healthcare communication. One participant remarked, "*Doctors are constantly seeing patients, and of course they end up responding mechanically and moving on*." This reflects a physician-centered approach focused on efficiency, which may ultimately undermine effective communication in healthcare.

The top right image of Fig. 1, taken by the participant on the morning she was travelling to the hospital to hear test results, shows a wet road and a high-rise building under a heavy sky. The participant explained that she had taken the photograph while waiting for a bus in the rain, and that the empty street and overcast weather were intended as a visual stand-in for the anticipatory anxiety she felt about the consultation. The image, in other words, is not a literal record of the hospital encounter but the participant's own visual metaphor for the emotional state described in the accompanying quote. The older adult who submitted the photo shared:

> *Going to the hospital always makes me anxious... especially when I'm going to hear test results. Even after the consultation, I don't feel completely relieved. I often have to get tested and then return later for the results, which don't come out immediately. It's frustrating, and I don't fully understand the process. (Older Adult #4, Female, 65 years old)*

The photos and narrative highlight the emotional barriers older adults face when accessing care. The participant's anxiety about test results and uncertainty surrounding procedures reflects a broader emotional burden associated with healthcare visits. These challenges constrain active participation in treatment, especially where systematic supports for health literacy are limited.

In contrast, the bottom pictures of Fig. 1 present photographs that illustrate facilitators of healthcare communication and utilization among older adults. Key facilitators identified in this group include the establishment of a trusting patient–physician relationship, the provision of sufficient information by physicians and healthcare institutions, smooth communication with physicians, and patients' proactive efforts to seek health-related information. These facilitators were endorsed by four of the five older-adult participants. The left bottom photo in Fig. 1 depicts effective communication with a physician, while the right photo captures a moment after the participant received positive feedback from their doctor ("*The doctor said everything is well-managed*!") which lifted their mood and led them to stop by a café for tea. Many older participants shared that communication with their physician not only provided exercise guidance but

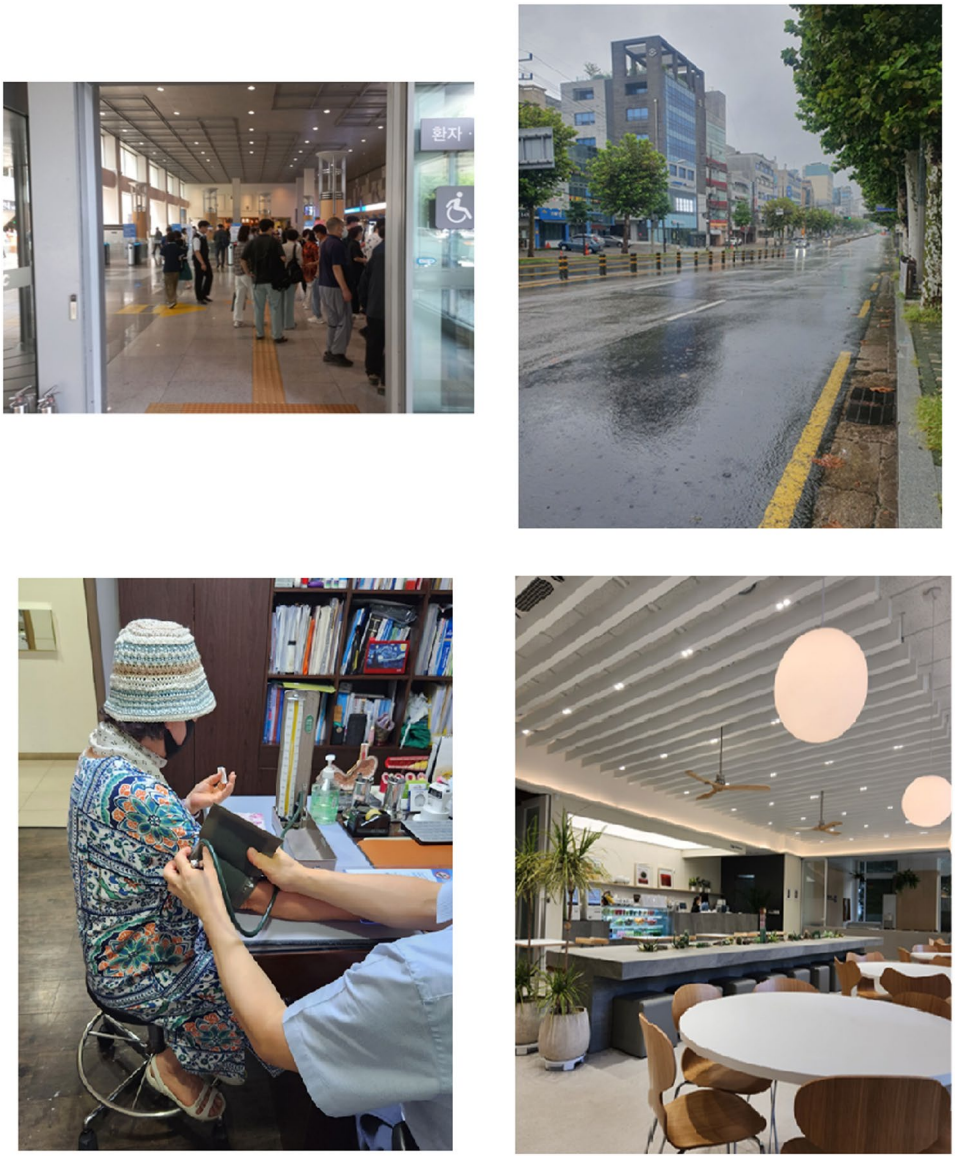


Fig. 1 Barriers and facilitators to healthcare communication and utilization among older adults

also boosted their confidence. This illustrates how trust and open dialogue between patients and providers can positively influence health management.

Additionally, several participants emphasized the importance of self-education about their own health. This self-directed information seeking enabled them to engage more actively in healthcare communication. One participant explained, highlighting how a supportive doctor-patient relationship, paired with the patient's own initiative, promotes active participation in health management:

> *When I have questions, I write them down and bring them to the appointment. The doctor always answers everything. Lately, I've been exercising a lot, so I asked what kind of exercises are good. The doctor recommended some, and even said I should include exercises for my knees—so I've started doing stair exercises. The doctor always tells me things are well-managed, which gives me confidence… That's why I want to keep exercising and maintain my health. (Older Adult #2, Female, 70 years old)*

Barriers and facilitators among persons with disabilities

Among persons with disabilities, key barriers to healthcare utilization included physicians' defensive or authoritative attitudes, insufficient information provision, financial burdens, and patients' passive communication styles. These were reported by all five participants in this group. The top-left photo in Fig. 2 captures the extremely

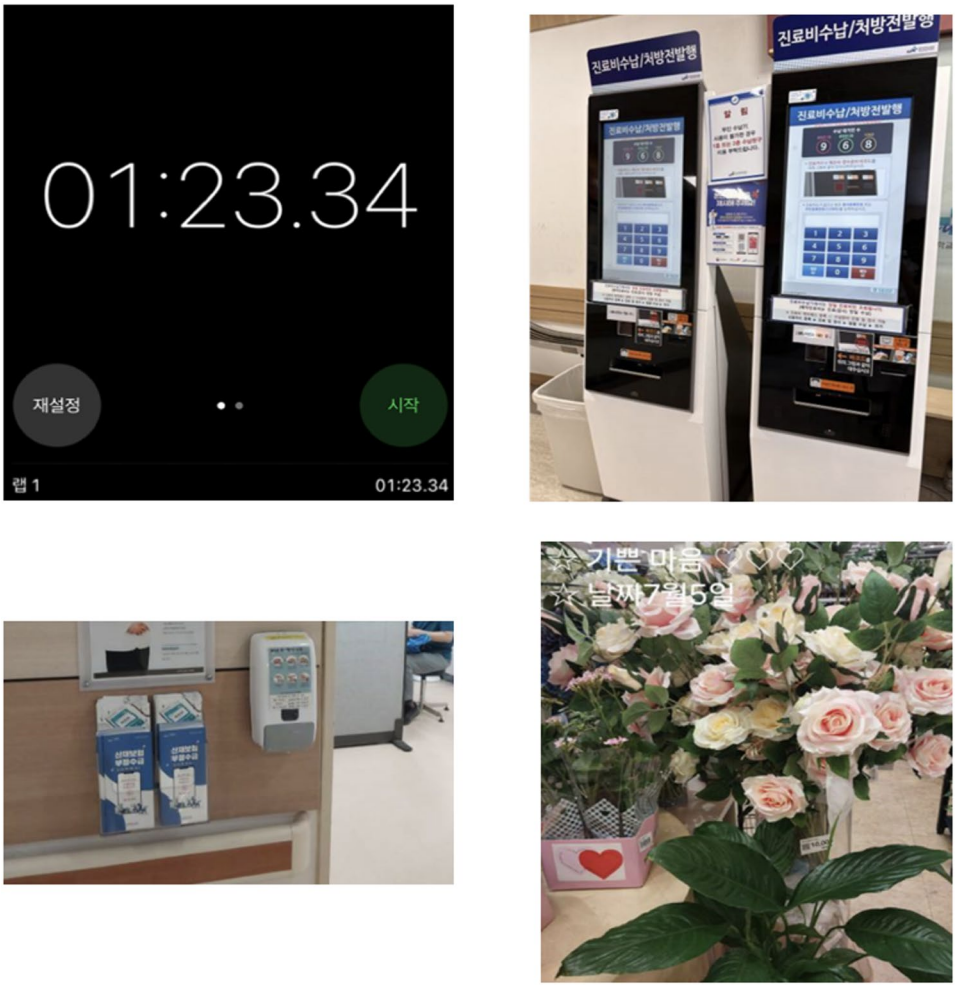


Fig. 2 Barriers and facilitators to healthcare communication and utilization among persons with disabilities

short consultation time, illustrating how such time constraints hinder patients' ability to ask questions or fully understand their health situation. One participant compared this rushed interaction to the fast-paced rhythm of the television show '*Show Me the Money*', where rappers compete in timed performances. Describing a consultation that lasted only 1 min and 20 s, the participant explained:

> *I try to ask my primary doctor questions when I can, but the consultation time is so short. I've never had a session last more than three minutes. Five or six minutes feels unusually long to me. So within that short time, I have to ask my questions, hear the results, respond—it all feels extremely rushed. I end up speaking quickly, and the doctor rushes to respond, too. That day, I took a photo and called it the 'Show Me the Money' shot—because that consultation was just 1 min and 20 s. (Disability #3, Female, 43 years old)*

The top-right photo depicts a hospital kiosk, which the participant used metaphorically to criticize the physician's communication style. The participant likened the process of operating the kiosk, where information appears only when prompted by a touch, to the way doctors only provide answers when patients explicitly ask, rather than engaging in proactive communication. This dynamic, the participant argued, inhibits communication in healthcare:

> *This is a photo of the hospital kiosk, which you use to make payments. You have to press buttons for any numbers or information to show up. For me, pressing the button is like asking the doctor a question, and the screen is like their answer. You only get a response if you initiate it. The doctor doesn't offer information unless I ask. There's no proactive explanation or support. That's why I took this picture. (Disability #1, Male, 28 years old)*

On the other hand, facilitators of healthcare communication identified in this group included empathetic attitudes from medical staff, patients' willingness to seek information, and their active communication. Three of five participants with disabilities reported at least one such facilitator. The bottom photos in Fig. 2 illustrate a participant's emotional response to a positive and compassionate interaction with their physician. In this case, the doctor stepped out of the consultation room to personally greet and speak with the patient, who was unable to enter due to limited mobility. The participant described the moment as follows, demonstrating how empathy and patient-centered communication can foster emotional connection and promote patient engagement in communication, even in highly vulnerable contexts:

> *That day, the doctor said the results would be out shortly, so I waited. But I couldn't go into the consultation room because of the long hospital bed. Then the doctor came out and greeted me, saying, 'It's been a while! You look better than before.' He shook my hand and said, 'Do you remember me?' Then we looked at the scan together. The tumor hadn't shrunk, but he said, 'Let's hang in there and do our best.' My chest felt tight with emotion. Usually, doctors only talk to the caregiver, not directly to a paralyzed patient like me. Smiling and speaking to me directly—that rarely happens. I left the hospital feeling genuinely happy. (Disability #4, Male, 55 years old)*

Barriers and facilitators among low-income public assistance recipients

Among low-income public assistance recipients, key barriers to healthcare communication and utilization included physicians' authoritative attitudes, one-sided or insufficient information provision, and financial burdens. All five participants in this group named at least two of these barriers; the cost-anxiety theme recurred in four of five narratives. Participants emphasized that due to time constraints during consultations, there was limited opportunity for detailed information exchange or empathetic communication. A perceived lack of empathy and disinterest from physicians further hindered the development of trust, leaving patients feeling unsupported. Several participants expressed a desire to be informed of approximate costs before undergoing treatment. However, a consistent lack of such information heightened financial anxiety. In particular, participants noted that physicians often deferred cost-related explanations to administrative staff, which undermined trust and contributed to uncertainty. For low-income public assistance recipients, cost uncertainty—especially when the necessity of certain procedures is unclear—can lead to deferred or avoided care and a more passive stance in decision-making.

These findings are further illustrated through participant-generated photographs. In the top images of Fig. 3, one participant photographed a clinic door labeled "Out of Office" and a doorknob, symbolizing their experience of communication breakdown and physician inaccessibility. Another participant submitted a photo of a "priority seat for mobility-impaired persons" (middle image), explaining that although the seat was intended for individuals like themselves, they often could not sit there. This image reflected their broader experience of emotional exclusion and lack of consideration in healthcare settings, particularly their perception of insufficient empathy and support from their primary care provider. One participant described:

> *Honestly, prescriptions can be written in two minutes. You go downstairs, pick up your meds, and you're done. Even when I do see the doctor, it never lasts more than five minutes—usually just one or two. They'll say things like, 'How have you been?' or 'Are you sleeping well?'—just small talk, really. And this is a psychiatry appointment. Sometimes I just go straight for the medication without the consultation. Why? Because it takes me two hours and 40 minutes round trip, and for what? A two-minute conversation? I don't even know if it's worth it." (Public Assistance #3, Male, 32 years old)*

In contrast, facilitators of healthcare communication and utilization in this group included patients' willingness to seek information, trust in the physician-patient relationship, physicians' proactive communication, and clear explanations of medical costs. The bottom image in Fig. 3 captures a participant's appreciation after receiving attentive and extended consultation from their physician. Despite a busy clinic, the doctor provided a relaxed, thorough consultation without being rushed by the next patient. The participant described:

> *There was no sense of urgency—even though there were others waiting. The doctor explained things without me even having to ask, and everything was explained at my level of understanding. It really makes a difference when you feel that your concerns are being addressed without being rushed. (Public Assistance #5, Female, 44 years old)*

This narrative highlights how empathetic and patient-centered communication, particularly when physicians offer clear explanations without prompting, can



Fig. 3 Barriers and facilitators to healthcare communication and utilization among low-income public assistance recipients

significantly enhance patient engagement and foster effective healthcare communication and utilization.

Barriers and facilitators among migrant women

Among migrant women, key barriers to healthcare communication and utilization included physicians' defensive attitudes, language and cultural barriers, long wait times, limited access to healthcare services, and complex medical procedures. Language barriers and unfamiliarity with interpreter services recurred in four of five migrant-women narratives; transportation difficulties were reported by two participants from rural areas. A particularly salient issue for this group was the language barrier. Many participants were unaware of the availability of interpretation services or had never used them, despite experiencing considerable communication challenges. This pattern is an awareness and access gap rather than an absence of services; interpretation provisions exist in some hospitals but are poorly publicized at the point of care. As one participant explained:

> *This is the first time I've heard of it. Even though I've lived in Korea for a long time, I didn't know interpretation services existed. When I go to the hospital, I just try to remember what I want to ask, go in and ask, and ask the doctor to speak more simply.*

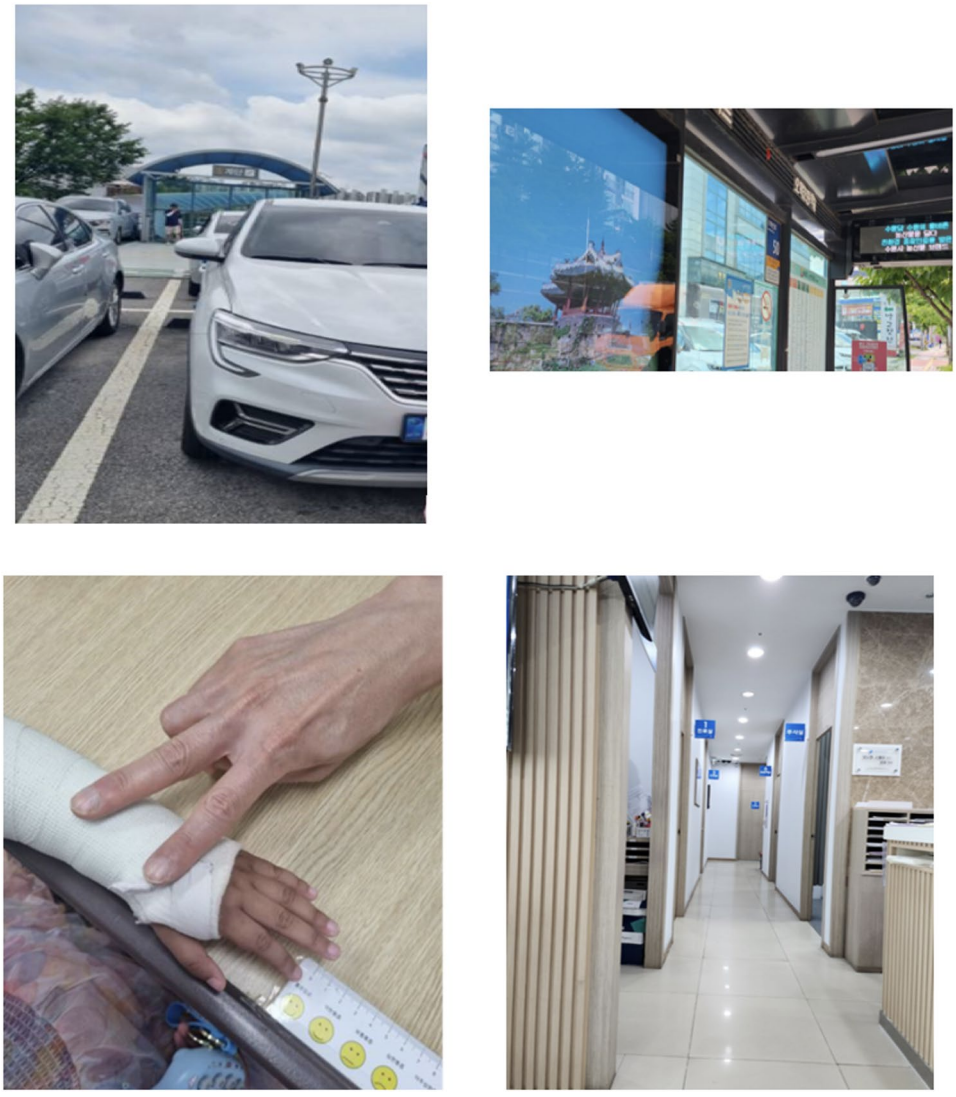


Fig. 4 Barriers and facilitators to healthcare communication and utilization among migrant women

I've never used any translation service." (Migrant #1, Female, 37 years old)

Echoing a theme found in other minority groups, many migrant women reported long wait times even with appointments, which contributed to dissatisfaction with the healthcare system and reduced their willingness to engage in healthcare communication. These experiences are visually captured in participant-submitted photographs. In Fig. 4, the top left and right images depict parking lot and bus stop, illustrating the transportation challenges participants faced when accessing healthcare services. One participant living in a rural area noted that the village bus was her only transportation option, requiring over an hour to reach the hospital: "*There's only a village bus from my house to the hospital. It takes one hour.*" (Migrant #2, Female, 47 years old).

In contrast, facilitators of healthcare communication and utilization among migrant women included physicians' collaborative communication styles, support and guidance from family members, and the use of interpretation services. One participant described how her doctor used simple words and visual explanations, such as CT images, to help her understand her condition. She submitted the bottom left photo in Fig. 4, describing how the doctor posed with a "V for Victory" sign, and explained that the doctor was always kind and attentive to foreign patients. She also referred to the doctor in the bottom right photo as someone who provided thorough and understandable explanations beyond the exam room door. The bottom-right photograph in Fig. 4 was taken by the same participant of her primary clinic's consultation-room door, partially open, and was offered by the participant as an image of an accessible and welcoming clinical

space, in deliberate contrast to the "Out of Office" door photographed by the low-income participant in Fig. 3:

> *That pediatrician knows I'm a foreigner and uses simple words, which makes things easier. At another clinic I went to when I was sick, the doctor showed me my CT scan and explained everything clearly—where the white areas were, which parts were fine, what was due to a virus, and what might have another cause. It helped me understand so much better. (Migrant #2, Female, 47 years old)*

These accounts show how physician empathy, the use of accessible language, and visual aids (e.g., scan images or internet visuals) can significantly enhance understanding and participation in healthcare communication. The same participant also emphasized how interpretation services and visual explanations further supported her understanding and ability to ask informed questions:

> *My friend told me about interpretation services for foreigners. That hospital had Chinese-speaking support, so I used it when my husband couldn't come with me. When I went alone, I asked the doctor questions, and they explained things simply. If I didn't understand, the doctor would even search for images online and show them to me. (Migrant #2, Female, 47 years old)*

These narratives show that simple language, interpreter access, and culturally aware practice support migrant women's engagement in care. They also point to the importance of providers initiating these accommodations, rather than waiting for patients to request them.

Discussion

This study found both shared and group-specific barriers and facilitators to healthcare communication and utilization among four structurally marginalized populations in Korea. Across groups, participants consistently described rushed consultations, unclear or insufficient information from providers, and interactions shaped by physician-led communication. Structural constraints such as transportation difficulties, inaccessible clinic interfaces, interpreter-access gaps, and limited cost information added another layer that made meaningful engagement harder. At the same time, participants' own proactive efforts—such as preparing questions in advance or seeking information independently—emerged as a consistent facilitator of more active participation in care.

These barriers point to structural conditions of care delivery rather than to relational shortcomings of individual physicians. In Korea, outpatient encounters often occur within a high-volume, fee-for-service-dominant healthcare system in which longer communicative work is weakly institutionalized [19, 20]. Recent Korean observational work documents brief outpatient consultations, particularly in follow-up visits, suggesting that time pressure is built into the encounter rather than simply reflecting an individual physician's communication style [21]. Related work from rural China also links consultation length to process and diagnosis quality in primary care [22]. This time-compressed environment interacts with physician-led expectations of clinical communication described in East Asian communication literature [17, 18] and may make it harder for patients—especially those with limited linguistic, financial, digital, or social resources—to ask questions, challenge incomplete explanations, or request accommodations. Comparative work on Asian aging societies further supports this structural reading by showing that healthcare delivery, long-term care, welfare, and community support require coordinated reform under rapid population aging [27]. Cross-cultural research on digital inclusion and healthy aging likewise shows that older adults' participation in health-related digital environments is shaped by socio-cultural, psychological, and infrastructural conditions rather than by individual digital skill alone [28]. We therefore interpret the recurring barriers of time pressure, financial uncertainty, and information asymmetry as modifiable features of the healthcare encounter rather than as deficits of either patients or physicians.

Group-specific patterns surfaced some important differences in how shared barriers were experienced. Older adults often spoke about emotional distress and difficulty understanding health information, but they also drew strength from long-standing relationships with their doctors, encouragement from positive feedback, and a genuine willingness to look for health information on their own. Participants with disabilities frequently encountered passive or defensive responses from providers, yet described meaningful improvements when clinicians showed empathy and treated them as people with their own histories and needs rather than as a diagnosis. Low-income participants receiving public assistance struggled with vague explanations and worried constantly about what care would cost them; when providers were upfront about costs and treated them with respect, they felt more able to take part in decisions about their own care. Migrant women ran into language and cultural barriers, limited interpretation support, and healthcare procedures that were hard to follow. What helped was simpler, more collaborative communication, visual aids, support from family members, and access to interpreters when those services were actually available.

These findings align with earlier work showing that structurally marginalized populations often deal with hurried, unclear, or one-sided communication that gets

in the way of using healthcare effectively, though our results also point to differences worth noting. Echoing studies on older adults and persons with disabilities, our findings highlight how much trust, empathy, and straightforward explanations matter [56–58]. Studies from both Western and non-Western settings also show that language assistance requires active integration into care workflows, not only formal availability [59–61]. Our findings indicate that, in Korea, interpreter supports may exist in some hospitals but remain poorly known to the patients who need them. This is an awareness and access gap rather than an absence of services, and it sharpens the case for active integration of interpreter referral into routine front-desk and consultation workflows. Methodologically, this study adds to a small but growing photovoice literature in healthcare by using the approach across four marginalized groups within a single study design, which is uncommon in the Korean context. Moving beyond traditional interviews or surveys, photovoice enabled participants to express the emotional and contextual nuances of their experiences while actively shaping the research process, yielding distinctive insights into how communication influences healthcare utilization.

The emphasis on agency found in our study, however, requires an important qualification. Patients who prepared questions, sought out information, or asked for cost estimates reported better communication, and this was true across all four groups. However, this kind of activation is not evenly available. It depends on health literacy, formal education, language, cultural capital, and the energy a patient has to spare, which means the patients who would benefit most from it tend to have the fewest resources to draw on. Recommending activation as a universal strategy therefore risks shifting responsibility onto patients with the least social and cognitive bandwidth. The policy implications of our findings should be structural first (extending consultation time, integrating interpreter services, standardizing how costs are communicated) and behavioral second (asking patients to prepare better).

This study offers important insights for advancing equity in healthcare communication and utilization, particularly for marginalized populations. Across all four groups, participants consistently identified systemic barriers—such as long wait times, brief consultations, and the lack of transparent cost information. These challenges are not merely isolated inconveniences but symptoms of broader structural shortcomings in the healthcare system. Policy-level reforms (such as extending consultation time for high-need patients and adopting standardized protocols for communicating treatment costs) may help reduce these disparities and enhance patient-centered care. In particular, the absence of clear cost information emerged as a critical factor undermining patients' ability to make informed choices and leading to care avoidance due to financial uncertainty [62].

Beyond structural reform, our findings point to the need for cognitive and relational shifts within clinical encounters. Participants frequently described their interactions with healthcare providers as rushed, unilateral, or marked by an overly authoritative tone. These dynamics not only eroded trust but also limited patients' understanding of their health conditions and their involvement in treatment-related decisions [23]. Such physician-led communication styles have been described in East Asian healthcare communication literature [17, 18], but they should be understood as interacting with contemporary institutional incentives rather than as a purely cultural legacy. In Korea, these dynamics may be further intensified by brief consultations and a per-visit reimbursement model that rewards volume more clearly than communicative time [19–21]. Unlike healthcare systems where SDM has been institutionalized through decision aids, training, and policy incentives, Korea has yet to implement SDM systematically [29–31]. Our study underscores the need to lay the groundwork for SDM by identifying communication barriers and facilitators specific to the Korean context. Promoting SDM will require targeted provider training in empathetic, patient-centered communication and cultural humility to foster inclusive, respectful, and equitable patient-provider relationships, particularly for marginalized patients whose voices are often overlooked in clinical settings.

At the group level, more targeted approaches make sense. For older adults and people with limited health literacy, the recurring issues were emotional distress and trouble making sense of medical procedures or terminology. Pre-visit education sessions, simpler health information with visual support, and more attention to emotional reassurance could help these patients feel more confident and more able to take part in conversations with their providers. For migrant women, language and cultural barriers stood out the most. Interpretation services existed in some settings, but many participants either did not know about them or could not actually get to them. This points to the need for healthcare systems to build in and actively promote services that are tailored to patients' languages and cultural backgrounds, including on-site interpretation, multilingual signage, and training for providers on communicating across cultures.

This study supports the use of photovoice in capturing patient experiences, especially among those whose voices are often excluded from traditional healthcare research. It enables patients to visually and narratively express concerns that may be difficult to articulate in formal interviews or surveys. Despite this significance, several limitations should be acknowledged. First, the sample size may not capture the full diversity within each

group, including variations in disability type, immigration status, and rural versus urban residence. Second, the upper recruitment bound of 80 years excludes the oldest old, whose experiences with consultation length, digital interfaces, and information processing may differ from those of younger older adults; we make no claim that age limits the capacity to communicate. Third, the Korean-language inclusion criterion for migrant women selected out the participants most exposed to acute language barriers; our findings on linguistic exclusion are therefore conservative. Fourth, the four-group design treats each participant as a member of a single category and does not capture intersectional experience; older migrant women, disabled low-income recipients, and similar combinations are likely to face compounded barriers that are not visible in a four-group cross-sections [63, 64]. Fifth, one of the three photovoice prompts asked participants to photograph their emotional state during communication, which may have primed negative framings; future work could counterbalance this with prompts that elicit positive encounters explicitly. Sixth, participants varied in their confidence and skill with smartphone photography; although orientation and technical support were offered, this is a real source of variation in the corpus and a reason to consider a short digital-literacy module in the orientation of comparable future studies. Last, despite careful translation, certain nuances in the migrant women's narratives may have been lost.

Building on the findings of our study, we offer several suggestions for future research. First, to examine the generalizability of the themes identified here, future studies could develop and validate survey instruments that assess barriers and facilitators to healthcare communication and utilization among larger and more diverse samples of minority patients. Second, longitudinal photovoice studies could provide valuable insights into how patients' experiences with healthcare evolve over time, particularly after significant diagnoses or treatment decisions, identifying factors that facilitate or hinder sustained engagement. Third, future research should broaden the scope to include other structurally marginalized populations, such as sexual minorities (who may face discrimination and stigma), individuals experiencing homelessness, children and adolescents, and those living with mental health disorders. Fourth, intersectional designs that recruit participants who sit at the overlap of two or more of these categories (older migrant women, disabled basic livelihood recipients) would extend the structural reading offered here [63, 64]. Fifth, integrating a short eHealth or digital-literacy session into the photovoice orientation could narrow the participant-skill gap noted in the Limitations.

Conclusions

This study contributes to the literature by (1) contextualizing healthcare communication in Korea as an East Asian healthcare setting where high-volume outpatient care, fee-for-service incentives, brief consultations, and uneven communication supports intersect; (2) identifying both cross-cutting and group-specific barriers and facilitators across four structurally marginalized groups; and (3) showing how photovoice can capture not only barriers to communication and utilization but also the unequal conditions under which patient agency becomes possible. The study extends healthcare research beyond Western contexts and shows the value of participatory visual methods for health equity and policy development.

Three concrete next steps follow from the findings. First, an SDM curriculum tailored to the Korean clinical encounter could be piloted in selected outpatient clinics serving high-need populations. Second, interpreter services should be integrated into reception protocols at hospitals with a high migrant catchment, with multilingual signage and an opt-out (rather than opt-in) referral. Third, photovoice itself could be embedded as a standing patient-experience instrument in hospital quality programs, with periodic co-design sessions involving the four populations studied here.

Abbreviations

CT	Computed tomography
IRB	Institutional review board
KRW	Korean won
SDM	Shared decision-making
USD	United States dollars

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Author contributions

SHJ, GEB, and SHY designed the study. GEB, SHJ, and JYL conducted the interviews. GEB and SHJ analyzed and interpreted the data, with input from JYL and SHY. SHJ drafted the manuscript. SHY and GEB revised the manuscript for important intellectual content. All authors read and approved the final manuscript.

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Data availability

Due to the identifiable and sensitive nature of photovoice data, the photographs and narratives cannot be shared publicly.

Declarations

Ethical approval

The study protocol was approved by the Institutional Review Board of the authors' institution, Korea University (KUIRB-2024-0156-04), in accordance with the Declaration of Helsinki. All participants provided written informed consent after being informed of the study's purpose and their rights. Participation was voluntary, and participants could withdraw at any time.

Consent for publication
Written informed consent for publication was obtained from all participants. The photographs included in this manuscript do not contain any identifiable personal information.

Generative AI and AI-assisted technologies in the writing process
During the preparation of this work, the authors used Claude (Anthropic) for language editing and proofreading. After using this tool, the authors reviewed and edited the content as needed and take full responsibility for the content of the publication.

Competing interests
The authors declare no competing interests.

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