An exploratory research study of the ideal medical systems based on the experiences of lay people in South Korea

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Abstract

Background: The worldwide paradigm shift from a medical-centered system to patient-centered care has caused the need for recognition of actual (practical) medical service from laypeople. In South Korea, intrinsic healthcare use characteristics such as the 'Herd Behavior' lead to the predominant use of metropolitan-based major hospitals causing inconveniences including long traveling: waiting hours but short treatment time. To define this issue, illustrating the individual's perceptions of an ideal health care system are should take precedence. This study aimed to explore and describe the perceptions of laypeople in South Korea of ideal health care services based on their experiences with medical service utilization.

Methods: This qualitative study was conducted using semi-structured interviews. Thirteen people were interviewed through three focus group interviews and one in-depth individual interview. The research question was to identify what medical services would be from laypeople's perspective. Qualitative data were analyzed using the thematic analysis method and visualized through a word cloud generated using MAXQDA software.

Results: Six themes were derived from the visualized words and an incremental analysis stage to explore perceptions of desirable medical services. Participants had difficulties finding a suitable hospital without expert guidance. Sometimes they felt like money-making objects, resulting in distrust of medical professionals. They expressed the desire for their essential needs to be met regardless of their economic status.

Conclusions: This study provides a portrait of laypeople's experiences related to health care services in the South Korean context, where medical services are predominantly provided by private hospitals with public insurance coverage. It is necessary to embrace users' perceptions related to this fundamental policy issue to improve the medical system by incorporating a stronger emphasis on people-centeredness.

1. Background

The World Health Report, published by the World Health Organization [1], noted that responding to public expectations for the health care system is a socially important goal. Furthermore, prioritizing patients' experiences and perceptions of health services is the first task in improving the quality of health care. This was presented as an essential factor in achieving patient-centered care [2].

In line with the trend for a paradigm shift towards patient-centered care, rather than an approach that focuses on medical institutions or medical staff, the Ministry of Health and Welfare in South Korea (hereafter, Korea) has established a basis for a patient-centered health care system, and the first "Patient Experience Assessment" was conducted in 2017. This was a large-scale survey of 10,000 participants over the age of 15 who had experienced the delivery of medical services and were selected by the stratified sampling method. The survey attempted to investigate respondents' experiences beyond their

current medical use [3]. Although these attempts reflected an effort to minimize the limitations of quantitative data, the measurement items were not able to show meaningful results except for the waiting time, the kindness of the hospital staff, and satisfaction ratings. This implies that satisfaction with medical services is difficult to quantify due to its inherent attributes.

It is difficult to obtain thorough answers through quantitative surveys that quantify and measure phenomena from a positivist perspective, and if patient satisfaction is measured using a Likert scale, patients are likely to report satisfaction unless there are unusual circumstances [4, 5]. Thus, a high level of satisfaction does not mean actual satisfaction. In other words, when there is no apparent dissatisfaction, a respondents' choice of "satisfied" on a questionnaire cannot be interpreted as meaning that actual satisfaction was measured. The questionnaire format has inherent limitations when standardized results are interpreted. Patients' satisfaction with medical services has nuanced attributes that cannot be easily quantified.

"Herd behavior" is a commonly used term in the health and medical field, and it is applicable for describing the characteristics of healthcare use in Korea, especially the imbalanced pattern where disproportionately many patients seek care at the "Big 5" leading hospitals in the major metropolitan area [6]. Excluding rare and intractable diseases, tertiary hospitals accounted for more than 50% of health insurance medical expenditures for cancer, cerebrovascular, and heart disease, as well as about 60% of non-insurance-covered health service expenditures for cancer patients from 2006 to 2010 [7]. The disproportionately high proportion of expenditures in a small number of extra-large hospitals compared to the sum of spending in other hospitals implies a low level of regional self-sufficiency for inpatient care services.

When patients travel to major metropolitan area from suburban or rural areas to use a medical institution, they incur fatigue by traveling for 3-4 hours or more, as well as additional travel-related expenses. Moreover, the average actual time with the doctor at tertiary hospitals was found to be only 4.2 minutes, while the average waiting time at outpatient clinics was shown to be 20.8 minutes [3]. Therefore, this phenomenon involves patients using large or specialized hospitals despite enduring long waiting times, hassle, and inconvenience. This issue has rarely been discussed in-depth from a public health or sociological perspective. It is therefore necessary to explore how patients or users perceive an ideal health care system.

Individuals' perceptions of an ideal health care system are challenging to elicit and conceptualize due to the complex experiences involved in using the health care system, which cannot be adequately revealed through simple surveys and analyses of fragmentary episodes. Medical use and the doctor-patient relationship encompass cultural, social, and institutional aspects. Research should be conducted considering the unique situation in Korea, patients' perspectives, and the context of the overall social environment.

2. Methods

1) Aim

The purpose of this study was to holistically explore images of a desirable medical system, as well as the phenomena that give rise to those perceptions, from a patient-centered point of view.

This study aimed to analyze the attributes and meanings of the ideal medical system and services through interviews that initially asked about “Good doctors” and “Hospitals I would prefer to visit,” which are internalized in the behavior and thoughts of interviewees in the context of the Korean medical system

2) Research question

The main research question was “What are the desirable aspects of medical services that users hope to experience?”.

3) Participants

In qualitative research, it is important to select participants who can provide rich information about their experiences in order to promote an in-depth understanding [8]. Participants who could express their relevant experiences vividly were selected using purposive sampling.

Interviews were conducted with members of the Citizen Council for Health Insurance, who were expected to have a significant interest in the health care system. The National Participation Commission system, operated by the National Health Insurance Service (NHIS), is a public participation system that presents the public's opinions on the health insurance system and plans to strengthen insurance coverage. This study was introduced to the 90 members who attended the eighth National Participation Committee, and the participants were those who responded that they were interested in taking part in the study.

In total, 13 members of the National Participation Committee participated in the study from September 8th to 11th, 2018. Face-to-face interviews were conducted for about 60 to 90 minutes over 5 sessions: 1 individual interview and 4 focus group interviews (FGI).

Table 1 provides a brief summary of the gender, age, residential area, and diseases of the 13 participants in the interview. The age of the participants was evenly distributed from the 20s to 60s, and the distribution of residential areas was intended to cover the whole country including S-metropolitan, G-province, K-city, J-province, D-city, and C-province. The participants were graduate students, housewives, office workers, counselors, and corporate presidents, corresponding to various occupational groups.

4) Data collection: Semi-structured interviews

The interview questions were asked in a semi-structured interview. The interview content and direction were outlined based on the ten main questions, but detailed questions within each broad range were flexibly asked within the context and flow of the interview. In addition, an introductory question was added so that the interviewee could first give an explanation about the experience of visiting a hospital, and at the end of the interview, the participants were allowed to freely talk about the research topic.

Interviews were held in a seminar room at a medical school, and each interview took about 1 hour to 1 hour and 30 minutes. In addition, during the waiting time (about ten minutes before each interview), participants used a pre-distributed notepad to draft their thoughts on the factors and characteristics of “Good doctors,” “Hospitals I would prefer to visit,” and “Desirable medical system.” Thus, participants were given the opportunity to organize their thoughts about a topic that might be considered rather difficult, helping them to express their thoughts actively during the interview.

Before asking about the ideal medical system, the interview questions consisted of main questions on the characteristics of a hospital where participants would want to go and a good doctor. Rather than initially asking about the ideal medical system, which might have been perceived as a rather abstract topic, we first talked about cases which hospital visits were or were not good experiences, as well as the characteristics of the doctors one would want to see and the hospitals where one would want to go based on the interviewees’ experiences.

The study explored the contours of what participants considered to be a desirable medical system by starting with a simple question asking about their recent experiences of hospital use. In the Korean context, this is a commonly accepted question that was familiar to the patients. Next, the interview proceeded to elicit their values by prompting them to elaborate upon their thoughts. The main interview questions were constructed after a discussion between a medical school professor and a Doctor’s degree in nursing. The two researchers have previously conducted a qualitative research together and published their study in a journal article. The interviewer acted as a facilitator during the FGI process and filled out field notes. The researchers held research meetings once every two weeks, and the interviews were stopped when theoretical saturation was reached according to an analysis of the main interview content. Finally, member-checking was conducted for those who participated in the interview.

5) Ethical considerations

The purpose of this study was explained to all interviewees before the interview. Written consent for the recording of the interview was obtained. After the interview, the recorded audio file was transcribed. The researcher used the transcripts only as research data, and in the process of writing the transcripts, the interview data were coded so they could not be traced to an individual.

6) Data analysis

Qualitative data analysis is derived from a different paradigm from that of quantitative data analysis, and qualitative data should be validated using other criteria due to the principle relativism. In addition to classical methods of qualitative data analysis, diversification or triangulation tests can be used for validation. In recent years, studies have attempted to conduct word cloud analyses using the method of text network analysis, which quantitatively analyzes text data [9, 10]. This analytical tool enables an intuitive understanding by expressing relative weights using font sizes in an image.

In this study, qualitative subject analysis was adopted as the main data analysis method, but descriptive content analysis using word frequency was partially performed for triangulation verification. However, an analysis of qualitative data that focuses primarily on the number of words, reflecting a technical and quantitative approach, there is a risk of generated fragmented results that are interpreted without reflecting the context, which is the most substantial advantage of qualitative data. Therefore, word frequency extraction was performed to minimize the difficulties of working with a large data set, but for the purpose of verification through triangulation.

In order to generate a word cloud from the transcribed qualitative data, a morphological analysis of word forms with meanings rather than word units is required; therefore, postposition, exclamations, and meaningless repetitive phrases were deleted. The refined data were entered into MAXQDA, a qualitative data analysis program, and a frequency analysis was performed using only words that appeared twice or more using the word cloud function.

Qualitative thematic analysis is a method of extracting concepts from detailed descriptions of phenomena, rearranging the relationships between each concept, and finally deriving a central theme through the steps of describing the relevant phenomenon. Data analysis was done using MAXQDA, faithfully open-coding and applying clustering procedures. After dividing the data into semantic units and combining common attributes again, the final themes were derived. The results of qualitative research provide in-depth insights into a specific phenomenon considering the overall situational context and reveal the essence of the phenomenon. This study was also written in a way that revealed the situational context for theme extraction.

3. Results

The process of deriving the results of this qualitative study involved the incremental stages of description, analysis, and interpretation. The results of the word cloud visualization (Figure 1, 2, 3) and thematic analyses (Table 2) were described and interpreted with reference to theories explaining the use of medical care and previous studies.

(1) Frequency analysis and visualization by area

The content of five interviews conducted with 13 members of the National Participation Committee were divided into three areas: “Hospitals I would prefer to visit,” “Good doctors,” and “Preferred health care

system.” A word cloud image was created to visualize words after frequency analysis.

The results of the first area, “Hospitals I would prefer to visit,” are shown in Figure 1. The most common word that appeared in this part of the interviews was “big” (12 times), followed in order by “patient” (8 times), “talk” (6 times), “person” (5 times), and “local” (5 times), accounting 18.8% of the total. The interviewees said that they used a nearby hospital for minor illnesses, but they preferred “big” hospital when they were seriously ill. Participants often did not know which hospital they should go to, but if a lot of other “people” used a certain hospital, they would perceive it as appropriate to go to that hospital. In addition, respondents wanted hospitals to be places that prioritized patients, provided patients a place to rest, and sincerely listened to patients.

In terms of physical accessibility, respondents stated that if people who live in the “countryside” have fewer options than those who live in S-city, which is why they often go to hospitals in S-city. For this reason, respondents indicated that the countryside was inadequate to live during old age or to have a second home such as a villa.

The second analyzed theme was “Good doctors,” and the results of the word cloud analysis are shown in Figure 2. In this theme, the most common extracted word was “kindness” (19 times), followed by “explanation” (17 times), “patient” (13 times), and “trust” (12 times). The four words accounted for 24.2% of the extracted words. These findings confirm that personal characteristics and qualities took precedence in the characteristics of a good doctor. In particular, the personal characteristic of “kindness” was desired, as well as the functional role of providing a detailed “explanation” to the patient and a relationship characterized by “trust.”

Finally, the results of the word cloud analysis of the desirable medical system are shown in Figure 3. The five most frequent words (“national,” “regulation,” “program,” “need,” and “benefit”) all appeared seven times, followed by “health insurance,” “benefit,” “linkage,” and “physician training system,” which appeared 5-6 times. These nine words accounted for 29.4% of the total.

Regarding the desirable medical system, the words “direction” and “values” were prominently expressed. It can be said that it is “necessary” for the “nation” to be more actively involved in the provision and management of medical services deemed essential, to “regulate” those services, and to provide practical “programs in the long-term perspective.” Opinions were divided regarding whether policies should be implemented universally or prioritize those who need benefits more urgently according to income and disease severity. No definitive conclusions on this issue were reached during the interviews.

As a practical and specific measure for the health care system, respondents hoped that health insurance coverage would be expanded. They also hoped that treatments carried out individually at each hospital would be integrated with each other. The interviewees felt that hospitals did not treat patients in an integrative manner, and one of the solutions they discussed was the primary healthcare system. If patients’ medical and family history could be incorporated into the primary healthcare system, it would be possible to provide linked treatment.

(2) Thematic analysis

- 1- A. Hospitals people would like to visit: An adventure to find new medical services

As respondents began to think that their symptoms were related to a disease, they sought new treatment methods or other hospitals. This process was like a patient or caregiver embarking upon a new adventure on their own in the absence of an appropriate guide. In order to minimize the risk, they thought that it would be much more reliable to visit a familiar or frequently used hospital. In the Korean medical system, the process of searching for information about hospitals is the responsibility of patients who are ill—that is, medical service users.

Some people went through the process of visiting hospitals near their residence, identifying the medical department related to their symptoms by guesswork, or remembering hospitals close to home. Those who prepared meticulously in advance pre-identified the hospital they wanted to use by scrutinizing the attitudes of medical staff and the flow of hospital services while visiting the hospital with their family members or acquaintances. In addition, participants became familiar with the names of specialized fields and information on specialized hospitals through the mass media, as well as learning about hospitals' reputations and gathering anecdotal information from acquaintances. Many people also searched online for hospital-related information before going to the hospital, and the amount of information circulated through social networking services (SNS) has increased. Additionally, a service that provides outpatient appointments for tertiary hospitals has recently emerged.

1-A-a. Patients must have a high level of information acquisition.

As the internet and SNS have entered into widespread use, patients were able to obtain a large amount of information by searching blogs and personal websites before going to the hospital. A participant described spending three days and two nights looking for information while contemplating which hospital to visit due to her father-in-law's illness. The participant said that she could find detailed information about medical expenses, doctors' reputations, and hospital equipment through internet searches. However, the information obtained in this way is limited because it is not generally applicable, since each patient is unique in terms of disease progression and the conditions for which they receive treatment.

"Last year, one of my relatives had a severe illness—cancer—so I could feel it my bones for the first time in my life. I didn't have anyone who had cancer on my mother's or my father's side of the family. I didn't know anything about it because it was my first time seeing it. First, I had to find a hospital, so I went online for two nights and three days, then I was able to find all the information; the most experienced doctor in surgery, the most trusted hospital, the duration of waiting time, which steps to take to get admitted, all of this information was all over the internet." (Interview participant #13, Female, 50s)

1-A-b. Large hospitals require a personal connection to make an appointment

The interviewees expressed that if they thought they would eventually need to go to a tertiary general hospital for treatment due to painful symptoms, visiting a large hospital in the first place would ultimately save time and money. In other words, if presenting to a small hospital for treatment is likely to result in a referral to a large hospital, it would be better to save time and money by directly going to a larger hospital upon first recognizing their symptoms.

"If you go to a small hospital, they tell you to go to a bigger hospital. You end up going to a university hospital. It is exhausting and I spend all my money and time. I think it's better just to go to a big hospital in the first place (Interview participant #9, Male, 50s)"

Respondents living in the provinces said that they felt the difference in the quality of medical services provided by the major metropolitan area and local small and medium hospitals. They also believed that there were differences in diagnostic and treatment methods between large hospitals in the major metropolitan area and small and medium-sized hospitals in provincial areas even for the same disease. For the interviewees, the high quality of medical services was an important selection criterion that went beyond geographical accessibility and economic affordability. They said that one of the reasons they were reluctant to live in a rural area was because they were worried about not being able to receive treatment immediately if they became ill.

The most reliable hospitals in Korea are concentrated in the major metropolitan area, and as these tertiary hospitals have famous professors and medical staff in each department. However, it is difficult to make an outpatient appointment at a large hospital and the waiting period is long; thus, participants reported using the strategy of personally asking a hospital employee whom one knows through relatives to make an appointment.

The life insurance products provided by private companies now include a service that makes outpatient appointments at tertiary hospitals if a special contract is added at the time of subscription. If a specific disease is suspected, these services say that they would make an appointment for patients in a snap, giving them the option of making an outpatient appointment at three or four hospitals. Participants thought that it was not a loss to sign up for these services because they could receive substantial benefits even if they paid additional money. In fact, the participant who used the outpatient appointment service was ill, but said that this service, which was recommended by an insurance company, would provide substantial comfort.

"Even though it was difficult to make an appointment at a big hospital, it seemed that there was a system or a contact network that could do this right away within a few days. It seemed like there were a few seats saved for one life insurance company. The system was connected between a big hospital and a life insurance company. (Interview participant #13, Female, 50s)

1-B. Hospitals people would prefer to visit: The main hospital selection criteria

The main hospital selection criteria, such as accessibility, affordability, and quality, were indeed important criteria that the interviewees considered. In case of an emergency, participants hoped to go to a hospital that was geographically close and could be expected to respond quickly. Regarding terms of availability, it was possible to find out about “acquaintances” through hospital staff or the availability of price discounts. In addition, there was a tendency to seek tertiary hospitals or specialized hospitals that specialize in specific departments for diseases with a high degree of severity.

When participants did not have any hospital information, they went to a hospital where many other people went, or to a hospital equipped with cutting-edge facilities and equipment. Numerous factors were involved in the process of choosing a hospital.

1-B-a. More people flocking to crowded hospitals

An interviewee stated that when choosing a hospital, just like what occurs with trendy restaurants that have long lines, if many other people use a hospital, it seems that they must have a reason for doing so, so that others follow along even without knowing the exact reason. It seems that the larger the hospital, especially if it is considered to be a high-quality institution, the more crowded the hospital will be, and the more patients wait to be seen, the more patients will have a psychological expectation that there will be something worth waiting for at the hospital. In other words, even if the waiting time is long, the presence of many patients in the waiting room elicited a certain degree of trust. However, this tendency disproves the argument that there are few opportunities to obtain actual information about the hospital.

"So, I thought about why people are like that… You know those restaurants where people stand in line for a long time, and it’s not even delicious (laughs), but they still go and eat. They all stand in line because they expect something good while they’re waiting in line (Interview participant #12, Male, 50s)."

1-B-b. Fascinated by state-of-the-art facilities and equipment

Respondents stated that when large-scale capital had been invested and they encountered a large hospital with good facilities, such as advanced medical equipment, they expected that the hospital facilities and equipment would be rigorously managed. They said that seeing advanced medical equipment is a reminder that the hospital is well-managed. In contrast, if they encountered an old and discolored machine that had been used for more than ten years, they would doubt that disinfection procedures will be properly performed in the hospital.

“Usually, the good facilities are kept clean. Because they pour a lot of money into it. Who wouldn’t take care of it, because they have all fancy medical equipment? They’re trying to use it for a long time, I think all of the parts of management are linked together” (Interview participant #1, Female, 20s).

Since a short amount of time is spent interviewing the patient or performing a physical examination, and treatment is chosen based on blood tests and imaging, patients also focused on how the test results were obtained and whether the test was up-to-date to ensure credibility. This concern is reflected by the fact that the selection criteria also depended on the performance of the diagnostic modalities.

1-B-c. Last hope for a reputable hospital

The interviewees stated that they would like to receive treatment at a tertiary hospital if they had enough money and were given the opportunity to receive treatment. This reflected the earnest desire to solve the basic dilemma of living at the crossroads of death and life brought about by disease, rather than a simple desire for the best treatment in a state of severe disease. Rooted in their basic desire to live for themselves and their family, there was an expectation that a high-level general hospital in major metropolitan area like as S-city would provide excellent treatment, unlike other hospitals.

Respondents wanted to hold onto a thread of hope that, if they were diagnosed with a serious disease, they would be able to try innovative treatments by finding a hospital that provides leading treatment through clinical research. However, they also replied that they would be able to accept the judgment that treatment was impossible if the decision was made at a hospital considered to be among the best in the country. It was thought that patients’ treatment depended on the ability of each medical staff member to practice medicine and the systematic management of a tertiary hospital.

“If you are financially capable, then who wouldn’t want to go to a big hospital? First of all, money is important, but if their kid is sick, even if they don't have money, they all try to go to a big hospital. Trying everything that they could. If the best-known hospital says there’s nothing they could do, then they’ll accept the call." (Interview participant 11, Male, 50s)."

Although the medicine is advancing rapidly, research-oriented hospitals that can make new treatment attempts by combining cutting-edge medicine or the latest medical technology are considered to offer the best treatment in the current situation, with existing limitations.

2. Good doctors: The ideal medical team

The interviewees hoped that doctors would have professionalism in the clinical field. They hoped that doctors would be trained in a systematic education system and provide sufficient explanations to patients based on their expertise. They also hoped that based on regular treatment with a doctor with appropriate character, the patient could take the initiative in receiving treatment for a sufficient period of time and discuss the treatment directions to ultimately decide upon the optimal path forward.

2-a. Professional qualifications: The University where the doctor graduated from and major hospital experience form the basis for trust

The interviewees expected doctors to be human figures, while still having the expertise formed by performing treatment for many years based on their medical expertise and encountering various patient cases. In Korea, from the interviewees' perspective, a "professional" referred to a doctor with a university diploma displayed inside the hospital and experience in a large hospital. The presence of a doctor's name on a diploma from a prestigious university gave confidence in the fact that he/she was a specialist and that he/she would have a sense of personal vocation.

Most of all, doctors were expected to accept patients as individuals with their own consciousness and decision-making rights and participate in a common decision-making process by accurately conveying medical explanations about the patient's current condition. If a detailed explanation is provided using videos, images, or other modalities to explain why symptoms occur due to the current disease, anxiety disappears and the patient feels reassured. A doctor who provides reliable guidance on future treatment directions and accepts the family's opinions when making quick judgments in critical situations embodies as a good doctor.

2-b. Personality: Ensuring the patient's choice based on a mutual bond

The interviewees wanted doctors to move away from clerical and insincere attitudes when dealing with patients, to empathize with patients, and to build mutual trust. They hoped to form a long-term, close relationship with the doctor by meeting them several times a year at intervals of a month or more so that they could actively inform the doctor about changes in their condition and discuss those changes. Even beyond consultations related to specific disease-related conditions, respondents felt that regular visits with taking care of patient's recent affairs would help reduce the psychological distance between the doctor and the patient.

In order to build a trusting relationship and familiarity with each other, respondents expressed that regular appointments would be necessary. If the doctor was already familiar with the patient's personal or family history, they expected to receive appropriate treatment. The interviewees said that, if a primary care physician or dedicated physician system, which is not present in Korea, is established, the inconveniences caused by redundant examinations, history-taking, reviews of current symptoms during the first visit to a medical institution, misunderstandings, and incorrect prescriptions arising from a lack of understanding of patients' circumstances would disappear.

"Of course, a doctor who explains well is a good doctor. And a doctor who performs surgery quickly is also a good doctor, but in an emergency situation, making judgments quickly is important so that the

guardians can make a quick decision. And a doctor who respects the guardian's opinion is also good in my view. I don't know if you've experienced it before, but there aren't many doctors who explain it well. Most of the explanations are given by the nurses, or doctors only explain about the costly procedures that they want to perform. After the explanation of the procedures, if it feels like excessive care from the perspective of a patient or guardian, I don't want it. So, if I say that I will think about it, I felt like I was pushed away. Once the doctor told me that I needed an MRI, I told him that I had paid for an MRI from the last hospital and didn't understand why I need another MRI. Then the doctor told me to go to the last hospital to get treatment." (Interview participant #4, Female, 40s)

Furthermore, when patients visited a hospital, they felt that it was inappropriate for the doctor to just prescribe medication. They expressed their desire to return to the hospital and receive treatment from the doctor again, with examples including manual blood pressure measurements or simple procedures such as nasal irrigation.

The interviewees said that they lost trust in medical staff when they came across media information about poor ethical behavior, including sexual assault and overtreatment by medical staff. In the interviews, respondents expressed a need for regulations that ensure character qualifications for medical personnel who directly deal with the human body. They also described their own needs and suggested practical policies. They proposed an entrance exam system requiring a personality test for final admission in addition to the evaluation of college entrance exam scores when applying to medical school. Furthermore, they recommended introducing a retirement age system, prohibiting doctors from serving when they cannot accept the latest medical knowledge or their memory is poor.

"Is there some kind of regulatory system like the medical retirement system? As long as the doctor has the ability to properly care for the patient, he or she can continue to treat the patient. However, I wish the regulations were strengthened when the doctors were not able to treat patients." (Interview participant #3, Female, 50s)

The interview participants hoped to have a relationship where doctors make eye contact and acknowledge the patient's existence. They said that the qualifications of the future artificial intelligence era are kindness and listening, which means that doctors are in the service industry. The interviewee had high expectations for doctors. The "human" attribute expected of doctors is added to the sense of ethics, morality, and sense of duty represented by the Hippocratic Oath, and when discussing the personality of a doctor, there are interview participants who compared a doctor to a "saint."

3-A. A desirable medical system: Discomfort under the current medical system

3-A-a. The journey to find the correct diagnosis

Interviewees had experiences of having to visit various hospitals or departments to find the correct diagnosis for their symptoms. Male interviewees in their mid-50s said that it is necessary to visit at least three hospitals in the vicinity to know the exact diagnosis. One of the interview participants went to her usual obstetrics and gynecology office due to stomach pain, and the obstetrician found that it was not a gynecological problem, but could not find the cause of the stomach pain. Despite the fact that she had recently visited a developing country in Southeast Asia, she spent a long time waiting for a diagnosis as she continued testing, even though it was a diagnosis that could be easily made.

"My right belly hurt, so I went to the obstetrics and gynecology clinic for medical treatment, because it was where I had my regular examinations. They did an ultrasound and kept pressing it and told me that nothing was wrong. It was really hurting… They told me if I was really concerned I should go see a general surgeon. So, I did, next thing I know I was hospitalized for appendicitis." (Interview participant #10, Female, 20s).

If a patient does not have a disease that is mainly diagnosed in a specific department, there are many cases in which a drug is prescribed only as a temporary measure without specific guidance, instructions, or a diagnosis suitable for their symptoms. Another participant stated that bleeding continued after defecation, so she went to the obstetrics and gynecology clinic and the internal medicine department for various tests, including endoscopy.

3-A-b. Hopeless waiting

Interviewees said that they experienced a situation where they were not welcomed by the medical staff, and did not receive a prompt response even when they arrived at the hospital emergency room in a situation where their symptoms were emergent. One interviewee said that she went to the emergency room for acute hepatitis and acute appendicitis, but after the busy medical staff did not pay attention to his symptoms or respond at all, she was eventually transferred to another hospital for treatment. However, she said that even at the transferred hospital, it took a long time from undergoing a test to receiving its results, so the time to receive the diagnosis felt long. From the point of view of the sick patient, he said that the waiting time felt very long.

"I was so sick, sweating, but a medical staff just told me that I had to wait without any advice or decision. I had to sit and wait for another hour. I think waiting was difficult." (Interview participant #10, Female, 20s)

3-A-c. Getting used to the view of patients as a revenue source

Hospital is a legal non-profit organization, but the hospital director, who has to operate the facility, is expected to seek profits. Therefore, market principles such as revenue generation are applied in hospital

settings. Consumers who use hospitals are also aware of this view, and if new drugs are prescribed or additional tests are carried out, they immediately whether it is over-care. The interviewees said the main focus when deciding treatment was on whether the patient would agree to undergo treatment or the treatment would earn money from the hospital's perspective, rather than on promoting full recovery.

“I get used to it by thinking "It's just people who do business." I think to myself that this is unfair and why is it all such a high price? But then, all the medical equipment is brand new, the hospital is located in a downtown area, and the doctor’s profile is all fancy, then it's a way to get a little more money… and they hire one or two more employees… um…. If you’re doing business in the neighborhood, then the doctor might not need more employees. I asked them why is the price different from this clinic and others, the doctor would just tell me that the manufacturing company is different…. the material is different. Honestly, I've never heard of an explanation of why the price is so expensive. The hospital staff just ask “Are you just going to receive the treatment in here [my hospital] Or not?” and that’s it! They only care about whether if the patients get a medical procedure in their hospital or not.” (Interview participant #1, Female, 20s)

3-B. A desirable healthcare system: A harsh response within the current system

3-B-a. Turn to silence

When going to the hospital to see a doctor, patients thought that they should refrain from speaking excessively because they could be misunderstood as challenging the authority of medical professionals if they speak their opinions hastily. Patients suffering from physical symptoms, even if they have suspected or predicted disease names, are concerned about the possibility of intruding on medical personnel's territory, which could lead to unpleasantness. Thus, due to fear of hurt feelings, they did not talk to the doctor about the condition they were concerned about and instead quietly searched the internet before and after treatment or talked with people around them. Participants described a situation in which expressing knowledge of health care as an ordinary person or as a non-medical person is actually a disadvantage for receiving care.

"I can't talk enough when I see a doctor – they are supposed to listen to my words and give me additional explanations, but when I visit doctors, doctors are like, "we are specialists, and the patients are not." I had pain in my ear and I thought that I had otitis media- But, we can't mention that I might have otitis media. It’s like, why otitis media should be diagnosed by the doctor, who are you to make the call? - So, I have to keep quiet when I meet the doctor. When I say, "I think it is -," they say something. “Why don’t you be the doctor here?” It's harsh.” (Participant 11, Male, 50s)

3-B-b. Treatment that the patient chooses arbitrarily

In one hospital, the medical departments were divided into sections, so that patients had to choose which department to visit based on their symptoms, and the institution did not provide integrated care for the disease.

Interview participant #13 visited orthopedic clinics and received only X-ray tests, which are considered necessary, although she preferred to receive medical treatment from an oriental medical clinic for back pain. The interviewee said that she visits orthopedic clinics only to see if there are any remarkable abnormalities in her bones, and that she has decided not to receive orthopedic physical therapy for a condition that was not treatable. Instead, she hoped to receive treatment for back pain from an oriental medicine clinic. The patient dealt with her disease in an integrated way by arbitrarily and selectively receiving care that she thought was necessary.

“Last week, I went to the nearest hospital to see an orthopedic surgeon, and then I went to have an X-ray to see that there was nothing wrong with my bones. I went there only to get an X-ray. After checking that there were no problems with the bones, I immediately went to the oriental clinic (laughs), I went to the oriental clinic and received treatment for a week last week because I don’t need to drag it for a long time.” (Interview participant #13, Female, 50s)

3-C. A desirable healthcare system: Utopia

3-C-a. Attempt to induce doctors to provide essential and basic care

The interviewees stated that they perceived qualitative and quantitative differences in medical care between S-city and the provincial areas are largely different, and that it is difficult to expect this gap to be reduced even though people pay the same insurance premiums nationwide. However, respondents believed that the medical gap between local areas and major metropolitan area s, such as S-city could be resolved through government regulations self-originated solutions from within the medical profession.

"The gap between local and major metropolitan area s is something that even the president of this country can't solve. This is an avoidable phenomenon, but from the doctor's view, it seems that some regulations should be followed by doing an aptitude test or something like that.” (Interview participant, Female, 50s)

Many medical practitioners prefer to go into the fields of dermatology and plastic surgery, which do not always directly involve life-threatening conditions, and medical students are reluctant to perform essential surgeries in urgent situations such as heart disease and severe trauma. The interviewees agreed that active incentives and regulations should be tried to encourage medical staff to work at clinics that provide essential services (e.g., cardiothoracic departments) and to increase the distribution of talented personnel in local areas.

3-c-b. Equal use of medical care regardless of power and wealth

The interviewees expressed that patients should not receive care according to their power or wealth; instead, they should choose hospitals based on the guidelines and receive appropriate medical treatment according to their condition.

Respondents hoped that it would be possible to implement a structure wherein a single clinician could consistently handle the healthcare and welfare needs that arise as a person grows older. In the current medical system, doctors who provide longitudinal primary care are specialists that only a few wealthy people can enjoy. Instead, participants hoped to have a designated primary care physician who would provide care from birth to old age and refer patients to specialists as necessary.

“People like me don't have a consultant, a doctor who knows... I thoroughly looked for them, but couldn't find them. (Interview participant #8, Male, 50s)

Interviewees said they would not visit the public health centers that have been established nationwide. They perceived the doctors employed at public health centers less reliable since they have relatively little experience and are more strongly aware of their role as administrative agencies in carrying out administrative work. In addition, participants perceived the health checkups provided every other year through the Health Insurance Corporation as unnecessary since they only provided minimal and simple medical services. Considering an interviewee’s age group and genetic risk factors, she had to apply for additional tests such as endoscopy and ultrasound; thus, she went to the hospital only when she felt that it was necessary.

People who pay health insurance premiums want medical services to be provided to those who absolutely need them, but when they feel that they are being wasted, they complain about the unnecessary waste of money. One of the interviewees hoped that a powerful government would actively intervene to adjust the prices of hospital health services using economies of scale, allowing people to benefit. He expressed his willingness to pay public insurance fees if he believed that it would be equally effective as private insurance.

"Then if I pay 10,000 won [$10] here, I can get a bigger benefit if I pay 10,000 won here. Because the NHS can attract more people - even if you sign a contract with S-university, you can lower the 10,000 won bill to 5,000 won. That's why it's possible. But I paid 500,000 won, but I don't have to do it if I get benefits here and there, and if the person who walks in gets benefits, I don't have to do it. I paid for Korean health insurance to get fast and speedy treatment. It's a matter for health insurance to think about. Before we run out of health insurance, the private insurance company is making a living. If the money goes up a lot, the public will get a lot of money. If the money goes up, the people will get a lot of money. If it comes out, they can give other benefits to ordinary people. We actually invested 500,000 won, but we were treated

more than that, and with that extra money, we could afford to give aid to the lower class again." (Interview participant #9, Male, 50s)

In wasting unnecessary medical expenses for so-called "Nylon [fake]" patients; Patients admitted to the hospital for insurance reimbursement even though the actual injury is not serious, the interviewees thought that small groups were more problematic because of the loopholes in the system, which are bound to exist everywhere. In their opinion, the system could not improve without reflecting the opinions of the people themselves, and a desirable medical system could be properly established only when the people's consciousness matured. Nevertheless, it would be necessary to anticipate specific factors that could cause this moral hazard before proposing a policy and to closely evaluate the side effects of the policy.

3-c-c. Control mechanisms of medical institutions themselves

The interviewees thought that along with the government's efforts, hospitals should also make efforts to reform themselves. They thought that clinicians could change their attitudes and improve the quality of health care by educating themselves on protocols. Participants clearly articulated the idea that the hospital staff was kind because of the well-established hospital education system. They thought that the quality of a hospital could be ensured only if the hospital itself had the ability to collect and reflect patients' opinions.

4. Discussion

An analysis of interviews about the characteristics of hospitals, good doctors, and a desirable health care system showed that patients in Korea took the risk of exploring hospitals that they thought were suitable for themselves without integrated guidance. Using their own strategies accumulated through medical experience as patients, participants tried to gather the combination of health services they needed in order to use the hospital in the way that they considered most appropriate and efficient for themselves. This strategy was applied by patients who grew desperate under conditions of illness without any systematic guide to hospital usage.

Since there was no primary care physician or systematic guidance, it seemed essential for most of the interviewees to obtain information about the hospital through internet search or acquaintances before visiting the hospital. Although the Health Insurance Review Agency (HIRA) has provided hospital assessment information since 2000 at government level [11], it has become common for people to draw upon their networks of acquaintances rather than using official information.

Without receiving proper information about the hospital, the general public patients in Korea preferred large hospitals because they did not have an understanding of primary medical institutions [12]. The finding of this study also found that general public preferred large hospitals. Rather than lack of

understanding of primary medical institutions, participants expressed a reasonable preference for receiving care at a higher-level general hospital that would be expected to be equipped with state-of-the-art medical equipment and to employ specialists with an above-average educational background. This suggests that web data that provides detailed and systematic information about medical institutions should be built first, and a guide using that data is necessary.

The information asymmetry between patients and medical staff is a feature of health care that causes the price of health care to be adjusted by consumers, who are the patients. In order to reduce the information gap relative to medical staff, patients search the internet and consult acquaintances about hospitals or their symptoms even before visiting the hospital. However, these methods are limited from a medical standpoint. From the patient's view, the best explanations are provided if clinicians use detailed descriptions and easy-to-understand images that provide specific medical information related to their condition.

The professionalism of doctors has traditionally been achieved by self-regulation [13]. These steps include maintaining the number of medical school admissions and internal regulations through professional associations. In Korea, through this internal control system, doctors have built social reputation and credibility as a profession. However, the recent spread of information on hospital incidents and the active sharing of information among patients through online social networks has also led to a desire for regulation of professional jobs based on their voices [14].

Bendapudi et al. [15], who studied patients' perceptions of ideal physicians, described what patients expected of physicians in doctor-patient relationships as "technical competence" and "interpersonal competence." Technical competence is the ability to understand an illness and explain it from a patient's perspective, and interpersonal competence is the attitude of the medical staff toward the patient. In this study, similar characteristics that patients expected from doctors were extracted, and it is notable in Korea that it is difficult to build trust due to the restrictions of the institutional environment. The participants of the present study expressed the desire for long-term relationships with doctors who would understand their conditions on an individual level.

Accessibility ranks highest among the characteristics of the health care system that patients with chronic conditions consider ideal, according to a study conducted in Australia [16]. Unlike Australia, where hospitals and outpatient offices are located in a radius close to patients' residential areas, in Korea, there is a greater desire for quality care at reliable tertiary hospitals and equal opportunities than for improved accessibility.

The participants also stated that it is bittersweet to face a situation in which the for-profit aspect of medical staff and operating profits are prioritized over their right to live. With more than 60% of healthcare institutions having commercial ownership, there is a need for a strategy to distinguish whether a treatment is recommended for strictly medical purposes or for-profit [17]. As participants discovered by exploring at least three hospitals for accurate diagnosis, unnecessary medical services suspected of being unnecessary diagnostic tests and excessive treatment are rampant, and receiving hospital care

itself is inefficient. These points characterize the context in which Korean medical services are covered by public insurance but are mainly provided by private hospitals.

In the United States, most of the medical system is still operated by private hospitals, but there are active attempts by the state to create and provide private hospital associations. Statewide Health Information Network-New York (SHIN-NY) builds an integrated information system in New York that connects Regional Health Information Organizations (RHIO) and shares information on individual patient units [18]. Through this, they can establish a basis for medical exchange and pursue mutual work.

The interviewees hoped that the waste of health care would be minimized as the people of the nation are responsible for paying insurance premiums in this health care system. Rather than encouraging regular checkups run by the National Health Insurance Corporation to be at a basic level, it seems urgent to establish more definite and practical systems such as tailored medical checkups according to individuals' stages in the life course. It is emphasized that specific health checkup plan for each life cycle program for each infant, adolescent, young adult, and the elderly is needed.

In addition, due to the nature of the system of national health insurance premiums, participants were aware of the public nature of health insurance premiums and were particularly interested in waste-free, efficient operations and financial distributions. In Canada, where all medical systems are operated by the public, an innovative program is in progress with a system where patients apply for treatment and then adjust and refer to them through a web-based primary care system [19]. This study suggests that it is necessary to establish an Integrated Delivery System (IDS) tailored to the Korean context: although public health insurance exists, medical services are provided by private medical institutions. The findings of this study have important implications that community resources and medical resources (primary care, hospital) should be integrated, and close cooperation is essential according to the needs of the general public.

The subjects included in this study were members of a public participation committee; thus, the interviews were conducted among patients who had a long history of hospitalization or who often visited outpatient areas without serious diseases. As the interviews mostly focused on outpatient care, the generalizability of the results is limited.

5. Conclusion

This study shows the perceptions of an ideal medical system from a patient-centered view by asking the following three questions to quantify and extract themes for nuanced attributes: (a) Hospitals I would prefer to visit; (b) Good doctors; (c) Preferred health care system.

Results of the most frequent words were (a) "big," (b) "kindness", "explanation," (c) "national," "regulation," "program," "need," and "benefit." It can be derived from these common words and the interviews that patients preferred large hospitals because of the expectation of high quality ("state-of-art")

medical equipment and specialists with high educational background, which is their perception of an ideal medical system.

Though there is official information from the government's organization such as HIRA's hospital assessment information, it was general for the participants to use the internet to search for information or personal acquaintances. Therefore, to deal with the phenomenon of the predominant use of only major ("Big 5") hospitals, detailed and systematic information about the primary medical institutions on the internet; detailed descriptions and comprehensible images of specific conditions are necessary. Building an intimate doctor-patient relationship through increasing technical competence and interpersonal competence was also shown crucial, which was hard to build because of South Korea's institutional environment.

Another ideal medical system for the patients was the distinction of for-profit treatment or medical purposes treatment. Participants replied that they explored at least three hospitals to distinguish between the two institutions. This can be seen as the result of a national healthcare system paid by nationals but commercialized hospitals run by businesses- an Integrated Delivery System integrating community and medical resources can be the answer to this issue. Also, for efficient operations and financial distributions of the national healthcare insurance premium, practical and palpable systems for individuals should be sought.

Abbreviations

NHIS: National Health Insurance Service

HIRA: Health Insurance Review Agency

SHIN-NY: Statewide Health Information Network-New York

RHIO: Regional Health Information Organizations

IDS: Integrated Delivery System

IDI: Individual Interview

FGI: Focus Group Interview

Declarations

a. Ethic approval and consent to participate

This study was conducted according to the guidelines of the Declaration of Helsinki and approved by the Seoul National University Hospital Biomedical Research Institute (IRB No. 1803-066-929) on January 31st, 2018. Data collection was conducted after receiving approval from the ethics committee. Written

informed consent was obtained from all the respondents to publish this paper before they participate this study.

b. Consent for publication

Not applicable

c. Availability of data and materials

The qualitative data generated and/or analyzed during the current study are not publicly available due to participant's privacy but are available from the corresponding author on reasonable request.

d. Competing interests

All authors declare that they have no competing interests.

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f. Author’s contributions

Conceptualization, S-Y.Y; methodology, S-Y.Y and E.E.S; validation, S-Y.Y and J-Y.K; formal analysis, S-Y.Y and J-Y.K; investigation, S-Y.Y, S.L; resources, S-Y.Y and S.L; data curation, S-Y.Y and S.L; writing—original draft preparation, S-Y.Y and J-Y.K; writing—review and editing, , S-Y.Y , E.E.S, S.L and J-Y.K; visualization, , S-Y.Y and J-Y.K; supervision, E.E.S; J-Y.K is the guarantor. All authors have read and agreed to the published version of the manuscript.

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References

1. WHO: The World health report : 2000 : health systems : improving performance. World Health Organization 2000:215.
2. OECD: Improving Value in Health Care; 2010.
3. Shin JW, Jo BH, Choi BR, Kim HS, Kim KH, Shin JY, Jo SK, Ko KJ: 2017 Medical service experience survey: Ministory of Health and Welfare. 2017.
4. Carr-Hill RA: The measurement of patient satisfaction. J Public health 1992, 14(3):236-249.
5. Crow H, Gage H, Hampson S, Hart J, Kimber A, Storey L, Thomas H: Measurement of satisfaction with health care: Implications for practice from a systematic review of the literature. J Health technology assessment 2002.
6. Kang H: Policy direction for decreasing the concentration of patients to extra-large hospitals. In: Health Welf Policy Forum: 2014; 2014: 65-76.
7. Oh Y: Changes and prospect of health care in 2011. In: Health Welf Policy Forum: 2011; 2011: 14-23.
8. Sandelowski M: Sample size in qualitative research. J Research in nursing health 1995, 18(2):179-183.
9. Park CS: Using text network analysis for analyzing academic papers in nursing. J Perspectives in Nursing Science 2019, 16(1):12-24.
10. Park Y-E: Uncovering trend-based research insights on teaching and learning in big data. J Big Data 2020, 7(1):1-17.
11. Health Insurance Review and Assessment Service [http://www.hira.or.kr/re/diag/getDiagEvlList.do]
12. Jung H, Jo M-W, Kim HJ, Jang WM, Eun SJ, Lee JY: General Public's Perspectives on Medical Doctors and Local Clinics in South Korea. Int J Environ Res Public Health 2019, 16(11):2030.
13. Chestnut DH: On the road to professionalism. J Anesthesiology 2017, 126(5):780-786.
14. Kim DK: Medical professionalism in neoliberalism. J Korean Medical Science 2019, 34(18).
15. Bendapudi NM, Berry LL, Frey KA, Parish JT, Rayburn WL: Patients' perspectives on ideal physician behaviors. In: Mayo Clinic Proceedings: 2006: Elsevier; 2006: 338-344.
16. Sav A, McMillan SS, Kelly F, King MA, Whitty JA, Kendall E, Wheeler A: The ideal healthcare: priorities of people with chronic conditions and their carers. J BMC Health Services Research 2015, 15(1):1-10.
17. Kim AM, Cho S, Kim HJ, Jung H, Jo M-W, Lee JY, Eun SJ: Primary care Patients' preference for hospitals over clinics in Korea. Int J Environ Res Public Health 2018, 15(6):1119.
18. Kern LM, Barron Y, Abramson EL, Patel V, Kaushal R: HEAL NY: Promoting interoperable health information technology in New York State. J Health Affairs 2009, 28(2):493-504.
19. Putera I: Redefining health: implication for value-based healthcare reform. J Cureus 2017, 9(3).

Tables

Table 1

Overview of the interview participants

No.	Type of interview	Gender	Age	Area of residence	Underlying disease
1	IDI	Female	20s	S-metropolitan	Colon disease, periodontal disease, eye disease
2	FGI 1	Female	50s	J-province	Degenerative joint disease/parent: hip joint disorder
3		Female	50s	G-province	Parent: Parkinson's disease
4		Female	40s	Unknown	Father: stroke
5		Male	50s	S-city	Mother: cerebrovascular disease
6	FGI 2	Female	60s	D-city	Hypertension, stomach cancer
7		Male	60s	G-province	-
8		Male	50s	G-province	Otitis media with cholesteatoma, hypertension
9	FGI 3	Male	50s	C-province	-
10		Female	20s	K-city	Acute appendicitis
11		Male	50s	D-city	Otitis media / Child: Acute hepatitis
12	FGI 4	Male	50s	S-city	-
13		Female	40s	S-city	Lumbar disc herniation / Spouse: diabetes / Child: rhinitis / Acquaintance: tumor

IDI individual interview, FGI focus group interview.

Table 2

Emerged themes on the ideal health system from laypeople

Themes and sub-themes
1- A. Hospitals people would like to visit: An adventure to find new medical services
1-A-a. Patients must have a high level of information acquisition.
1-A-b. Large hospitals require a personal connection to make an appointment
1-B. Hospitals people would prefer to visit: The main hospital selection criteria
1-B-a. More people flocking to crowded hospitals
1-B-b. Fascinated by state-of-the-art facilities and equipment
1-B-c. Last hope for a reputable hospital
2-A. Good doctors: The ideal medical team
2-A-a. Professional qualifications: The university where the doctor graduated from and major hospital experience form the basis for trust
2-A-b. Personality: Ensuring the patient's choice based on a mutual bond
3-A. A desirable medical system: Discomfort under the current medical system
3-A-a. The journey to find the correct diagnosis
3-A-b. Hopeless waiting
3-A-c. Getting used to the view of patients as a revenue source
3-B. A desirable healthcare system: a hardened response within the current system
3-B-a. Turn to silence
3-B-b. Treatment that the patient chooses arbitrarily
3-C. A desirable healthcare system: Utopia
3-C-a. Attempt to induce doctors to the essential and basic care department
3-C-b. Equal use of medical care regardless of power and wealth
3-C-c. Control mechanisms of medical institutions themselves

Figures

Figure 1

Results of word cloud analysis: Hospitals people prefer to visit

Figure 2

Results of word cloud analysis: Good doctors

Figure 3

Results of word cloud analysis: Desirable healthcare system