ORIGINAL RESEARCH ARTICLE

Beforehand Enquiry About Health Care Practitioners and Delivery Places Among the General Population in A Rural District in An Indian Southern State- An Exploratory Factor Analysis

Neethu George[1]*, Rock Britto Dharmaraj[2], Aswin Arasukumar[3], Gokul Krishna Ekambaram[4], Gifty Miracline Jesupaul Thangaraj[5], Gokul Ravisubramanian[6], Gayathri devi Perundalaiyur Chandran[7], Gomathy Manju Prabhakaran[8]

[1-8]Dhanalakshmi Srinivasan Medical College Hospital, Perambalur, Tamilnadu, India

A B S T R A C T

Background: In recent years, many countries have embraced demand-driven healthcare systems, emphasizing patient choice and pre-enquiry in selecting healthcare providers. The purpose is to assess the occurrence and factors influencing beforehand enquiry of the general rural population regarding the health care practitioners and delivery places

Materials and methods: The study was a cross-sectional survey conducted over 2 months among 1100 participants in Perambalur district, Tamil Nadu. The study utilized a questionnaire gathering sociodemographic data and 20 questions about healthcare enquiries, including place/person of enquiry, information source, enquiry characteristics, and reliability. Bivariate analysis identified significant predictor variables, while principal component analysis with Varimax rotation determined core factors.

Results: The study found that 68.8% of participants (757 individuals) enquired about healthcare facilities and professionals before visiting. Core factors influencing these enquiries included healthcare professionals, hospitals, subjects, and cost concerns. Enquiries about healthcare places were mainly influenced by discussions with relatives, travel issues, and costs. Regarding healthcare professionals, characteristics such as communication skills, physician quality, previous patient experiences, and costs played significant roles in pre-enquiries.

Conclusion: Patient enquiries are influenced by diverse factors and may not always be rational. Providing truthful information is crucial to support informed decision-making in healthcare.

Key words: Beforehand enquiry, Health care practitioners, Healthcare delivery places

INTRODUCTION

The human quality of life significantly improved as medical practice evolved into an organized profession. Nevertheless, despite all these technological advancements, doctors/healthcare delivery places continue to be vital and their role in society hasn't changed. To have an impact on overall health behavior, transformation, and quality of life, every health marketing project must embrace the patient empowerment paradigm.[1]

People who are more informed about the updated service may make better judgments. Patient choice/enquiry is also an important component in empowering patients through increased decision-making and improved service delivery outcomes. In western countries the concept of patient choice is getting more importance due to many reasons. A more powerful customer may act on the options available to them and make wiser decisions.[1] The enquiries were predicted to increase patient responsiveness, efficiency (including cost reductions), quality, and equity of healthcare, among other factors.[2,3] Protecting and advancing the status of patients in healthcare was another objective of emphasizing patient choice.[4,5] The variables, such as service distribution, years in the field, price, and building structure, are important in supporting patients in selecting the hospital.[6,7] Patients' health literacy, self-efficacy, and awareness, also, influence their participation in healthcare decisions and subsequent care delivery.[8]

A doctor's availability on the internet platforms has also impacted the choice of doctor. Healthcare providers who are looking for new patients are now concentrating on their web marketing efforts. This holds true in case of urban or suburban areas.[9] In the medical industry in rural areas or most of the areas, good word of mouth or past reviews about the doctor or medical facility sustain a patient's peace of mind and belief in recovery.

With this background, the study was conducted to measure the occurrence of beforehand enquiry of the general rural population regarding the health care practitioners and delivery places and also to assess and explore the factors which influence the population's choice regarding health care practitioners and delivery places.

METHODOLOGY

Study design and setting: We conducted a cross-sectional study in the community within a period of a month (July 2022 - August 2022). The data was collected from the general population in the rural area through a door-to-door survey. We have collected data from rural area in the district where the subjects were taken as persons above the age of 18 years. Ethics committee approval was taken from the institution ethics committee [DSMCH - 232, 15/11/2022] and informed consent was taken before the start of the study. This clinical research was done following the ethical principles for medical research involving human subjects in accordance with the Helsinki Declaration 2013.[10]

Sample size calculation and sampling: The sample size was calculation was done based on the assumption that 50% of subjects would enquire beforehand about health care practitioners and delivery places and the minimum sample size came up with the formula n= $Z_\alpha^2 PQ/d^2$ [Z_α=1.96, P, assumed proportion of the population = 50, Q=1-P= 50, absolute precision=3]. The final sample size came up to 1068, approximately 1100. The subjects were collected using systematic random sampling. The line list of the households from rural field practice area of tertiary care hospital was collected which consisted of 17 villages in rural. Based on the sample size and proportion of households we have selected the number of households from each village by population proportion to size. This was then followed by systematic random sampling in selecting subjects from each village. In each village every 5th house was taken for data till the number is reached. Next house was selected if the sample was not present at the time of visit.

Data collection tools: The objective of the study was assessed through the questionnaire containing sociodemographic data like age, sex, education, occupation, marital status, comorbidities [The subjects were asked to report the presence of comorbidities, such as diabetes mellitus and hypertension, for which they regularly take medications prescribed by a physician], and details of covid vaccination. The second part had questions related to enquiry regarding health care delivery places and persons- which place/person, source of enquiry, characteristics by which the enquiry happens and the reliability of these enquiries. The research started by thoroughly reviewing previous studies that detailed the factors that are obviously important for patients while making an informed choice in the context of both place and person to visit during health problem. A structured questionnaire was developed to assess these characteristics and employ them as factors of beforehand enquiry regarding place and persons to visit. The internal consistency of the questions was assessed by Chronbach's alpha which came to 0.94 and pilot testing was done among 20 subjects to assess the feasibility and for refining the questionnaire.

Data entry and analysis: The collected data were entered into Microsoft Excel (Microsoft Corporation, Redmond, WA), and analyzed using SPSS version 26 (IBM Corp., Armonk, NY). The descriptive analysis was analyzed using frequencies, mean, Standard deviation and percentage. Normality of the data was assessed with Shapiro Wilk test and histograms. The variables which do not follow normality distribution were assessed with non-parametric test- Kruskal Wallis and Mann Whitney U test. The exploratory factor analysis- principal component analysis was

used to consolidate the 20 items to essential components. The principal component analysis with Varimax rotation method of extraction has been used with the criteria of Eigen value greater than 1 to identify the factors that explain the maximum data variance. The extraction values denoted the quantity of variance for each variable that could be described by the factors. The factor analysis started with 20 characteristics and finally reduced to 4 core characteristics. The four identified characteristics accounted for 70% variance in the data and had Eigen values more than 1. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy for the four factors extracted was found to be 0.95. Also, Bartlett's test of sphericity was seen to be significant (χ^2 15151.64, p value<0.001). A scree plot was used to identify the core characteristics, which provides the Eigen value. If the value of any item or component was greater than one, then that item was considered an essential component of the scale. The scree plot shows the components on the X-axis and the corresponding Eigenvalues on the Y-axis.

RESULTS

Sociodemographic variables: The study was conducted among 1100 subjects with a mean age of 43.62 ± 14.73 years ranging from 18 years to 90 years. The other sociodemographic variables are shown in table 1.

Among the subjects searching for health-related information(n=402), 27(6.7%) searched once in a day, 21(5.2%) searched once in a week and 354(88.1%) searched whenever health condition arises.

Beforehand enquiry of health care places: In the study 757(68.82%) reported enquiring beforehand about the place to visit during health illness. Among the sources of enquiry, 562(74.2%) was from the word of mouth of relatives or neighbors, rest from the known health worker or health practitioner and internet source. The response of subjects regarding the correctness of the source, 172(22.7%) reported to be always reliable and the rest was sometimes. The table 2 showed the characteristics in terms of beforehand enquiry about places to visit. The table showed that majority of the subjects agreed to the aspect of discussion about the symptoms of disease with the kins 817(74.3%) and distance to travel 619(56.3%) in enquiring beforehand about the healthcare place to visit.

Beforehand enquiry regarding health care professionals: In the study 440 (40%) reported visiting a government hospital doctor during illness, 343 (31.2%) to a private practitioner, 276 (25.1%) to private sector doctors and 41 (3.7%) for medical shop person. In the study 757 (68.82%) reported enquiring beforehand about the health care professionals before visiting. Among the sources of enquiry, 574 (75.83%) were from the word of mouth of relatives or neighbours, rest from the known health

Table 1: Sociodemographic profile

Variables	Total (n=1100) (%)
Gender	
Female	494 (44.9)
Male	606 (55.1)
Education	
Professional/postgraduate	76 (6.9)
Graduate	315 (28.6)
Diploma/ Intermediate	156 (14.2)
High School	206 (18.7)
Middle School	112 (10.2)
Primary school	40 (3.6)
No formal education	195 (17.8)
Occupation	
Agriculture	268 (24.4)
Business	189 (17.2)
Salaried	212 (19.3)
Daily wager	154 (14)
Retired/ Pension	43 (3.9)
Unemployed	234 (21.2)
Marital status	
Married for >10 years	618 (56.2)
Married for 5- 10 years	192 (17.5)
Married for < 5 years	95 (8.5)
Separated	2 (0.2)
Divorce	5 (0.5)
Widow/ widower	34 (3.1)
Unmarried	154 (14)
Reported Comorbidities	
Yes	404 (36.7)
No	696 (63.3)
Have you been diagnosed with covid?	
Yes	280 (25.5)
No	820 (74.5)
Vaccinated against COVID 19	
Yes	1058 (96.2)
No	42 (3.8)
Would you search for health-related information?	
Yes	402 (36.5)
No	698 (63.5)

worker or health practitioner and internet source. The response of subjects regarding the correctness of the source about health care practitioner, 146 (19.2%) reported to be always reliable and the rest was sometimes. Table 3 presents the characteristics among individuals regarding beforehand enquiry about healthcare professionals.

Beforehand enquiry core factors by a patient in case of both person and place to visit: To undertake this objective, the subjects were asked to rate the items of beforehand enquiry in the questionnaire as agree (1) or disagree (0). To find out the core characteristics for beforehand enquiry, factor analysis was used which helped to reduce the 20 items selected to essential components.

The table 4 shows the various characteristics and core factors derived from it by factor analysis. The core factors were classified as Core 1- Health care professional related, Core 2- Hospital related, Core 3- Subject related and Core 4- cost concerns with 6, 8, 4 and 2 characteristics in each core respectively. Figure 1 represented the scree plot in relation with the analysis.

Table 2: Characteristics of people in terms of beforehand enquiry about places to visit

	Agree (%)	Disagree (%)
Discuss my symptoms with my peers or relatives and take a decision	817 (74.3)	283 (25.7)
Enquires about the fees in general	540 (49.1)	560 (50.9)
Concerned about the distance of travel	619 (56.3)	481 (43.7)
Enquires about the previous patient experience in the hospital	524 (47.6)	576 (52.4)
Presence of free services	299 (27.2)	801 (72.8)
Importance to the hospital getup	383 (34.8)	717 (652)
Enquires more about the other staffs along with Doctor	285 (25.9)	815 (74.1)
Ease of transportation	474 (43.2)	625 (56.8)
Interested in the benefits obtained from the place	417 (37.9)	683 (62.1)
Concerned about the presence of delay in treatment	448 (40.7)	652 (59.3)

Table 3: Characteristics of people in terms of beforehand enquiry about healthcare professionals to visit

	Agree	Disagree
Search about my symptoms in internet before taking a decision of who to visit	454 (41.27)	646 (58.73)
Seek opinion in a medical shop and then take decision for whom to visit	399 (36.27)	701 (63.73)
Asks for physician quality and decides with it	433 (39.36)	667 (60.64)
Enquires about the fees of consultation before decision	416 (37.82)	684 (62.18)
Asks about the previous patient experience before decision	492 (44.73)	608 (55.27)
Needs a second opinion for whatever health condition I consulted	335 (30.45)	765 (69.55)
Observes the degree of the person before consulting or taking decision	394 (35.82)	706 (64.18)
Takes decision based on the gender of the Doctor	410 (37.27)	690 (62.73)
Explores about the communication skill of the Doctor and then take a decision	447 (40.64)	653 (59.36)
Probes about the place of residence of the Doctor and then take a decision	255 (23.18)	845 (76.82)

Table 4: Factor analysis matrix

Rotated Component Matrix	Component			
	Core 1	Core 2	Core 3	Core 4
The communication skill of The Doctor	.810			
Physician quality	.793			
The previous patient experience about the person	.793			
The gender of The Doctor	.792			
The degree of the person before consulting	.784			
The place of residence of The Doctor	.776			
The transport easiness		.746		
The presence of delay in getting treatment		.746		
The previous patient experience about the place		.713		
The benefits you get from the place		.711		
The hospital get up		.618		
The distance of travel		.578		
The other staffs along with doctor		.773		
Free services		.764		
Opinion about my symptoms at a medical shop			.637	
Needs a second opinion for whatever health condition			.549	
Discuss my symptoms with my peers or relatives			.836	
Search about my symptoms in internet			.877	
The fees in general				.836
The fees of consultation of health care professional				.737

Extraction Method: Principal Component Analysis; Rotation Method: Varimax with Kaiser Normalization; The loading of each characteristic for each core is represented

The reliability of the core factors was checked with Cronbach's alpha where Core 1- Health care professional related, Core 2- Hospital related, Core 3- Subject related and Core 4- cost concerns had value of 0.91, 0.89, 0.66 and 0.74 respectively. While checking the interclass item correlation all characteristics were above 0.3 which makes the components more reliable. The figure 2 below shows the model developed from the study about the characteristics of beforehand enquiry on health care delivery places and professionals.

Inferential statistics: The analysis was done with the categorization of marital status as married/ unmarried and others (single, widow, widower, divorced and separated), education as nil/ school /higher (degree, diploma, graduate and postgraduate), and occupation as nil/stable (salaried, and retired with pension)/ unstable (agriculture, business and daily wager). The table 5 shows the association of each core with the demographic variables.
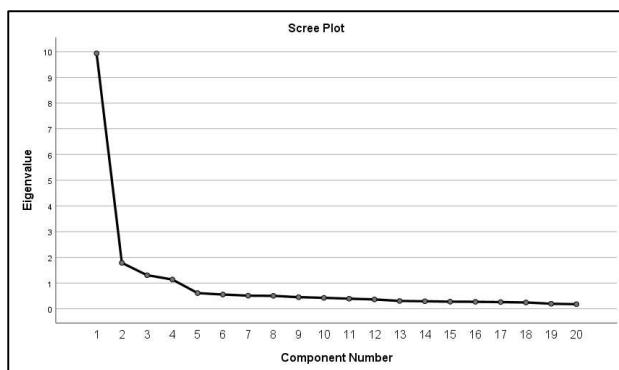
Figure 1: Scree plot illustrating the core components with eigen value more than 1

The table shows that core 1 that is health professional related factors are associated with younger age (r= -0.186, p value<0.05), higher education, absence of comorbidities and regular searching of health information. The core 2- hospital related factors were associated with younger age (r= -0.169, p value<0.05), higher education and regular searching of health information. The core 3- subject related or symptom related factors were associated with younger age (r=-0.24, p value<0.05), higher education, occupation, absence of comorbidities and regular searching of health information. The core 4- cost related factors were associated with stable occupation and presence of comorbidities.
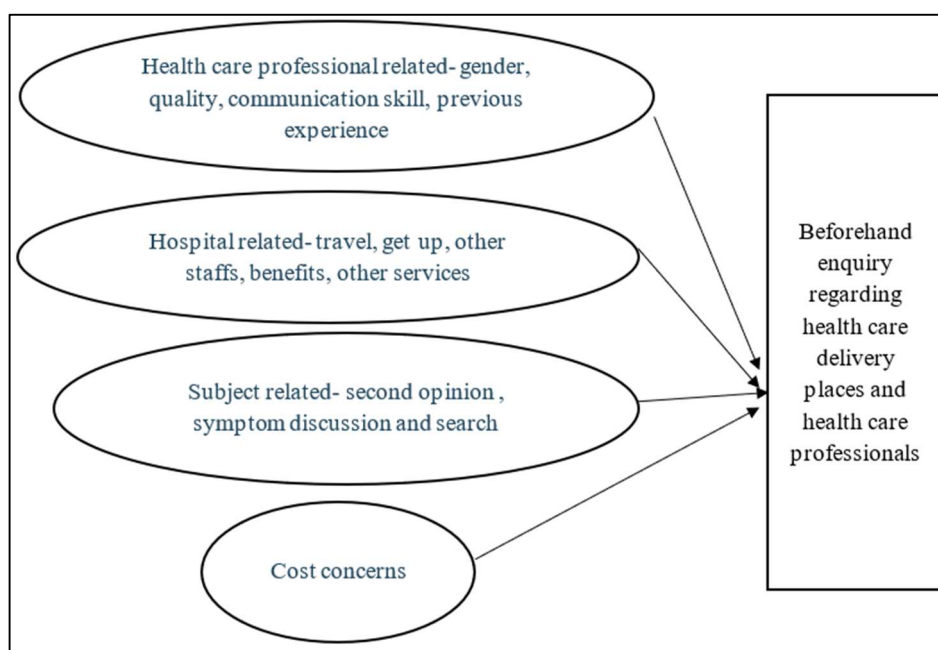

Figure 2: Model on the characteristics of beforehand enquiry on health care delivery places and professionals

Table 5: Core factors and demographic variables

	Core 1		Core 2		Core 3		Core 4	
Age [a]	-.186*		-0.169*		-0.240*		0.051	
Gender [b]								
Male	2.16±2.44	1.00(0.00-5.00)	3.13±2.97	2.00(0.00-6.00)	1.87±1.32	1.00(1.00-3.00)	0.83±0.87	1.00(0.00-2.00)
Female	2.28±2.32	1.00(0.00-5.00)	3.15±2.82	2.00(0.00-6.00)	1.76±1.31	1.00(1.00-3.00)	0.92±0.89	1.00(0.00-2.00)
Education								
Higher Education	2.93±2.42*	3.00(0.00-5.00)	3.87±2.94*	4.00(1.00-6.00)	2.36±1.27*	2.00(1.00-4.00)	0.85±0.88	1.00(0.00-2.00)
School Education	1.47±2.06*	0.00(0.00-3.00)	2.38±2.58*	1.00(0.00-4.00)	1.32±1.08*	1.00(1.00-2.00)	0.88±0.85	1.00(0.00-2.00)
No education	1.53±2.22*	0.00(0.00-3.00)	2.46±2.81*	1.00(0.00-5.00)	1.22±1.18*	1.00(0.00-1.00)	0.89±0.92	1.00(0.00-2.00)
Occupation								
Unemployed	2.59±2.40#	3.00(0.00-5.00)	3.49±2.97	3.00(0.00-6.00)	1.76±1.30#	1.00(1.00-3.00)	0.66±0.86*	0.00(1.00-2.00)
Unstable	1.99±2.39#	1.00(0.00-5.00)	2.97±2.87	2.00(0.00-6.00)	1.71±1.32#	1.00(1.00-3.00)	0.89±0.89*	1.00(0.00-2.00)
Stable	2.24±2.35#	1.00(0.00-5.00)	3.12±2.88	2.00(0.00-6.00)	1.99±1.30#	2.00(1.00-3.00)	0.97±0.86*	1.00(0.00-2.00)
Co-morbidities								
Yes	1.78±2.12*	1.00(0.00-4.00)	2.83±2.51	2.00(1.00-5.00)	1.55±1.13*	1.00(1.00-2.00)	0.97±0.90*	1.00(0.00-2.00)
No	2.45±2.49*	2.00(0.00-5.00)	3.31±3.08	2.00(0.00-6.00)	1.97±1.38*	2.00(1.00-3.00)	0.81±0.86*	1.00(0.00-2.00)
Search for health-related information [b]								
Yes	2.79±2.30*	3.00(0.00-5.00)	3.67±2.77*	4.00(1.00-6.00)	2.36±1.17*	2.00(2.00-3.00)	0.81±0.87	1.00(0.00-2.00)
No	1.88±2.37*	0.00(0.00-4.00)	2.83±2.93*	2.00(0.00-5.25)	1.51±1.29*	1.00(1.00-2.00)	0.90±0.88	1.00(0.00-2.00)

*- significant p value <0.001
#- significant p value <0.05
a – Spearman correlation
b- Mann Whitney U test expressed as median (interquartile range)
c- Kruskal Wallis test expressed as median (interquartile range)
The age variables association by correlation, and other variables Gender, Education, Occupation, Comorbidities and would you search for health-related information were expressed in mean± standard deviation and median (interquartile range)

DISCUSSION

The study was conducted with an objective to assess the occurrence and influencing factors of beforehand enquiry of the General population regarding the health care practitioners and delivery places. The study showed that 757(68.8%) reported enquiring beforehand about the place and health care professionals before visiting.

The study had showed that the characteristics which majorly influenced the beforehand enquiry regarding health care places include the discussion with the relatives, travel issues and cost factors. Further analysis showed that significantly increased enquiry happens with younger age, higher education and among subjects with habits of regular web searching of health information. This result is almost in sync with previous studies where Bahadori et al found that the staff and clinic environment favored most in choosing a particular clinic. Also, the recommendation by the friends/families and cost also played a major role according to the study. The study didn't show any significant change in terms of age but males seemed to influenced by the personnels in the clinic as a choosing factor.[11] Lux et al showed that recommendations from family, hospital atmosphere and previous personal experience can be the factors which influences the choice of a health care place.[12] Miller and May reported the significance of improved standards of cleanliness and decent hospital food as the factors in hospital choice through a qualitative survey.[13] In our study only 25.9% were concerned about office staff and 39% enquired about physician quality before the visit. This contradicts by Arora et al where the importance of physician's proficiency and the part of staff is significant in the choice of a physician by the general population.[14] In a study done in rural China have shown that doctor-patient communication, positive perceptions regarding environment, and physician ability are factors which influence people to access health care facilities frequently.[15] A systematic review to assess factors influencing health system access showed that subjects with higher education always choose about the facilities and is inked with the health literacy.[16] Bojanapu et al. emphasized that the primary determinants in hospital selection include trust in both the hospital and attending physicians, infrastructure quality, and supplementary services. They further noted the importance of certified standards of care, as well as academic and research affiliations.[17]

A Chinese study showed that factors such as disease severity, medical staff, transportation convenience, equipment, and drug availability were crucial when choosing health care facilities.[18] A study done in 2008 showed that facilities which provided more number of services and with an agreeable credential was the influencing factor for health care access.[19] Robertson and Burge found that older age, female gender and subjects with higher education would choose the health care delivery places. Also factors like previous patient experiences, distance and lack of accessibility to the internet plays a major role in selecting health care places.[20] Singh et al. demonstrated that the criteria influencing hospital selection include proficient medical and support personnel, availability of emergency and laboratory services, the hospital's reputation within the community, service affordability, geographical location, and infrastructure quality.[21] A scoping review observed that patients tend to prioritize their past healthcare experiences and recommendations from general practitioners over comparative data. Furthermore, they consider a range of provider characteristics, not just outcome indicators, when making decisions.[22] Jiang et al. indicated that the primary factors influencing the choice of healthcare facilities are the approachability of doctors and the availability of tests and examinations.[23] The findings across all studies, including this one, were largely congruent regarding the selection of healthcare delivery platforms. While responses may align, the varying priority of reasons can be attributed to differences in settings, socioeconomic status, and the diversity of healthcare systems.

The study showed that the characteristics which majorly influenced the beforehand enquiry regarding health care professionals were in terms of communication skill, physician quality, previous patient experience and cost involved. Bernard et al found that "Approach to patient care" and "Interpersonal skills/communication" as influencing the population's choice of a health care practitioner.[24] In the study 410(37.3%) had reported enquiring beforehand about the gender of the health care professional where females reported to be more in enquiring [38.1% vs. 36.6%]. In a study by Ahmad et al the female physician preferences was found under various situations- emotional problems, general health care, gender-sensitive inspections and life-threatening situations.[25] This result goes with the affirmation of increased seek of support from same gender outside the family environment in case of private or usual problems by the female gender. Another study have shown that, there was a strong link between doctors' communication abilities- spending time and explanations and how satisfied patients are with their diagnoses and treatments.[26] A review have showed that healthcare personnel's knowledge, behaviour, two way interaction and acknowledging the patient's presence may influence the decision making.[27] Harris in 2003 suggested the use of information from previous experience about a particular physician have a positive role in choosing or alternating healthcare practitioner.[28] Chandra et al. demonstrated that patient satisfaction correlates positively with factors such as patient trust, doctors' interpersonal skills, and communication, while it is negatively impacted by waiting time.[29] Yu et al showed that patients prioritize healthcare services with positive treatment outcomes, accessible healthcare facilities within a one-hour travel time, and effective communication with physicians. Additionally, continuity of care and minimal waiting time are also significant predi-

ctors.[30] Jiang et al. proposed that healthcare facilities are most valued for having skilled doctors and providing excellent service, while the least appealing aspects include unfriendly practitioners and long waiting times.[23] The variations in responses for choosing a particular healthcare practitioner can indeed be attributed to the diversity among the populations involved in the studies, as well as differences in their levels of health literacy.

This study aimed to investigate patients' pre-selection inquiries about healthcare facilities and providers, offering unique insights into the choices made by the general population within a community. Patient preferences are influenced by context and evolve over time, necessitating further research to fully comprehend the factors guiding actual decision-making. Each individual within different environments possesses distinct enabling variables, service needs, and predispositions that warrant comprehensive exploration. Qualitative studies can provide deeper insights into various choices and their predictors across different contexts and levels of severity. Moreover, patients rely on a range of information sources, including comparative data, to make decisions, leading to sometimes contradictory outcomes between stated and revealed preferences. Establishing an accessible information platform by the government sector concerning healthcare establishments and providers could enhance patients' health literacy and decision-making processes.

The study's limitations lie in its reliance on a newly validated questionnaire for data collection, potentially impacting the objectivity of the findings. Additionally, the identity of the investigators may have influenced respondents' answers. Sampling from an area with ample medical facilities could have skewed results, and the exclusion of social and cultural factors represents another significant limitation in understanding inquiries.

CONCLUSION

In the study, over half of the participants sought information prior to selecting healthcare providers or facilities. The investigation revealed that factors significantly influencing pre-selection inquiries for healthcare facilities included discussions with relatives, travel logistics, and cost considerations. For healthcare professionals, the key factors were communication skills, physician competence, previous patient experiences, and associated costs. The study identified notable diversity in preferences, which can be partially attributed to factors such as age, income, educational attainment, occupation, presence of additional medical conditions, and engagement in seeking health-related information.

REFERENCES

1. Ben Ayed, M., El Aoud, N. The patient empowerment: A promising concept in healthcare marketing. International Journal of Healthcare Management, 2017;10(1): 42–48. https://doi.org/10.1080/20479700.2016.1268326

2. Buntin MB, Damberg C, Haviland A, Kapur K, Lurie N, McDevitt R, Marquis MS. Consumer-directed health care: early evidence about effects on cost and quality. Health Aff (Millwood). 2006 Nov-Dec;25(6):w516-30. doi: 10.1377/hlthaff.25.w516. Epub 2006 Oct 24. PMID: 17062591

3. Grytten J, Sørensen RJ. Patient choice and access to primary physician services in Norway. Health Econ Policy Law. 2009 Jan;4(Pt 1):11-27. doi: 10.1017/S1744133108004623. PMID: 19099615.

4. Ranerup A, Norén L, Sparud-Lundin C. Decision support systems for choosing a primary health care provider in Sweden. Patient Educ Couns. 2012 Mar;86(3):342–7.

5. Chauhan V, Sharma A, Sagar M. Exploring patient choice in India: A study on hospital selection. Int J Healthc Manag [Internet]. 2021; 14(2): 610–20. Available from: https://doi.org/10.1080/20479700.2019.1679520

6. Mosadeghrad AM. Factors Affecting Medical Service Quality. Iran J Public Health. 2014 Feb;43(2):210–20.

7. Mosadeghrad AM. Factors influencing healthcare service quality. Int J Heal policy Manag. 2014 Jul;3(2):77–89.

8. Poureslami I, Tregobov N, Shum J, McMillan A, Akhtar A, Kassay S, et al. A conceptual model of functional health literacy to improve chronic airway disease outcomes. BMC Public Health. 2021 Jan;21(1):252.

9. Bujnowska-Fedak MM, Węgierek P. The Impact of Online Health Information on Patient Health Behaviours and Making Decisions Concerning Health. Int J Environ Res Public Health. 2020 Jan;17(3).

10. World Medical Association Declaration of Helsinki: ethical principles for medical research involving human subjects. JAMA. 2013 Nov;310(20):2191–4.

11. Bahadori M, Teymourzadeh E, Ravangard R, Nasiri A, Raadabadi M, Alimohammadzadeh K. Factors contributing towards patient's choice of a hospital clinic from the patients' and managers' perspective. Electron physician. 2016 May; 8(5): 2378–87.

12. Lux MP, Fasching PA, Schrauder M, Löhberg C, Thiel F, Bani MR, et al. The era of centers: the influence of establishing specialized centers on patients' choice of hospital. Arch Gynecol Obstet. 2011 Mar;283(3):559–68.

13. Miller L, May D. Patient choice in the NHS How critical are facilities services in influencing patient choice? In: Sheffield Hallam University Research Archive. 2006. p. 354–64.

14. Arora R, Singer J, Arora A. Influence of key variables on the patients' choice of a physician. Qual Manag Health Care. 2004;13(3):166–73.

15. Yin S, Hu M, Chen W. Quality Perceptions and Choice of Public Health Facilities: A Mediation Effect Analysis of Outpatient Experience in Rural China. Patient Prefer Adherence. 2022;16:2089–102.

16. Liu Y, Kong Q, Yuan S, Van De Klundert J. Factors influencing choice of health system access level in China: A systematic review. PLoS One. 2018; 13(8):e0201887 DOI: 10.1371/journal.pone.0201887.

17. Bojanapu S, Mathur M, Jacob J, Sharma A, Nundy S. Patient preference for a particular hospital: A prospective questionnaire-based investigation from India. Curr Med Res Pract 2020;10(6): 260-265. DOI: 10.4103/cmrp.cmrp_55_20

18. Liu Y, Zhong L, Yuan S, Klundert J van de. Why patients prefer high-level healthcare facilities: a qualitative study using focus groups in rural and urban China. BMJ Glob Heal [Internet]. 2018 Sep 1;3(5):e000854. Available from: http://gh.bmj.com/content/3/5/e000854.abstract

19. Roh C-Y, Lee K-H, Fottler MD. Determinants of hospital choice of rural hospital patients: the impact of networks, service scopes, and market competition. J Med Syst. 2008 Aug; 32(4): 343–53.

20. Robertson R, Burge P. The impact of patient choice of provider on equity: analysis of a patient survey. J Health Serv Res Policy. 2011 Apr;16 Suppl 1:22–8.

21. Singh S, Lakshmi V, Somu G, Kamath R. Determinants of Hospital Choice among Patients and Perceptions of the Same among Hospital Employees in a Tertiary Care Corporate Hospital in Mumbai, India. Open Public Health J. 2022; 15(1): 1–17.

22. Victoor A, Delnoij DM, Friele RD, Rademakers JJ. Determinants of patient choice of healthcare providers: A scoping review. BMC Health Serv Res [Internet]. 2012;12(1):1. Available from: BMC Health Services Research

23. Jiang S, Gu Y, Yang F, Wu T, Wang H, Cutler H, et al. Tertiary hospitals or community clinics? An enquiry into the factors affecting patients' choice for healthcare facilities in urban China. China Econ Rev [Internet]. 2020;63:101538. Available from: https://www.sciencedirect.com/science/article/pii/S1043951X20301358

24. Bernard ME, Sadikman JC, Sadikman CL. Factors influencing patients' choice of primary medical doctors. Minn Med. 2006 Jan; 89(1):46–50.

25. Ahmad F, Gupta H, Rawlins J, Stewart DE. Preferences for gender of family physician among Canadian European-descent and South-Asian immigrant women. Fam Pract. 2002 Apr; 19(2): 146–53.

26. Biglu M-H, Nateq F, Ghojazadeh M, Asgharzadeh A. Communication Skills of Physicians and Patients' Satisfaction. Mater Sociomed. 2017 Sep;29(3):192–5.

27. Vahdat S, Hamzehgardeshi L, Hessam S, Hamzehgardeshi Z. Patient involvement in health care decision making: a review. Iran Red Crescent Med J. 2014 Jan;16(1):e12454.

28. Harris KM. How do patients choose physicians? Evidence from a national survey of enrollees in employment-related health plans. Health Serv Res. 2003 Apr;38(2):711–32.

29. Chandra S, Ward P, Mohammadnezhad M. Factors associated with patient satisfaction in outpatient department of Suva sub-divisional health center, Fiji, 2018: A mixed method study. Front Public Heal. 2019;7(JUL):1–10.

30. Yu X, Bao H, Shi J, Yuan X, Qian L, Feng Z, et al. Preferences for healthcare services among hypertension patients in China: a discrete choice experiment. BMJ Open. 2021 Dec; 11(12): e053270.