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Identifying and Evaluating the Decision-Making Styles of Patients Referring to Specialty and Subspecialty Clinics in Iran

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Abstract

Background: Decision-making is a complex process, and many factors are involved in it. Identifying consumer decision-making styles provides insights that can serve a basis for managers to make decisions about how to deliver goods and services.
Objectives: This study aimed to investigate the decision-making styles of patients referring to specialty and subspecialty clinics in Iran.
Methods: In this study, a qualitative-quantitative approach was used. In the qualitative phase, through the Delphi method, important factors in patients' decision-making in selecting different clinics were identified in three rounds. In the quantitative part of the study, a questionnaire consisting of 48 questions was prepared using factors identified in the qualitative section. Finally, 460 questionnaires were collected. Exploratory factor analysis using varimax rotation was used to summarize factors and extract decision-making styles.
Results: The results identified 10 decision-making styles among patients referring to specialty and subspecialty clinics in Iran.
Conclusions: Compared to previous research and the list of decision-making styles (CSI), the results showed that the two styles of being/inclining and paying attention to entertainment/recreation were not found among patients referring to clinics in this study. Each of the three styles of perfectionism/high-quality sensitivity, brand sensitivity, and habitual loyalty shopping was identified in two separate dimensions, and the style of coercion/lack of choice was identified in this study for the first time.

Keywords: Decision-Making Styles, Specialty and Subspecialty Clinics, Consumer Behavior, Health Care Services

1. Background

Decision-making is a complex process, and many factors are involved in any decision-making process for purchasing (1). Consumers get information through various sources such as media, family, friends (word of mouth advertising), and previous purchasing experience of goods and services and make decisions based on the obtained information. Identifying consumer decision-making styles is an important issue that helps the consumers to make insights and use it as a basis for decision-making (2). Consumer decision-making style is defined as: "A mental disposition or tendency that describes consumer orientation toward choice" (3). Consumer literature introduces three methods for describing consumer styles: The psychographic/lifestyle approach, typology approach, and consumer characteristics approach. The psychographic approach identifies more than 100 attributes related to consumer behavior (4). The consumer typology approach defines the types of consumers (5, 6), and the consumer characteristics approach focuses on the cognitive and emotional orientation associated with consumer decision-making (7, 8). The "Consumer Decision-Making List (CSI)" is developed based on the consumer characteristics approach and is the most widely used of various methods to describe consumer decision-making styles (9-11). Various studies conducted in countries with different cultures using the CSI tool have consistently failed to confirm all of its eight dimensions and have stated that consumer decision-making styles are not constant across cultures and times (12). This instability in decision-making styles may be due to the overlap between particular cases (13). A review of various studies using the CSI tool (14-20) shows that most of these studies have identified the decision-making styles of individuals in purchasing goods and have not focused on services, especially health services. The quality determination in health service delivery is always accompanied by specific challenges, and a health service provider is a complex organization due to the subtle nature of the service and the combination of different professional human re-

sources (21).

This study investigated the decision-making styles of patients referring to specialty and subspecialty clinics in Iran. If the decision-making styles of patients referring to specialty and subspecialty clinics are identified, then decision-makers can improve services by considering these factors. As shown in Table 1, research shows that consumers in different countries and domains have different styles of decision-making.

2. Objectives

This study aimed to investigate the decision-making styles of patients referring to specialty and subspecialty clinics in Iran.

3. Methods

3.1. Participants

In the qualitative part, 14 individuals were selected as the members of the Delphi working group through non-probability sampling by the purposeful method. The members of the Delphi working group consisted of clinic managers and supervisors, as well as therapists working in the clinics consisting of physicians, nurses, and medical students in various training courses. In the quantitative part, the statistical population of the study included all patients referring to specialty and subspecialty clinics.

3.2. Study Procedure

The present applied study was done in the framework of a qualitative-quantitative approach using the Delphi and exploratory factor analysis methods.

The Delphi method was performed in three rounds. In the first round, a list of factors based on background research was prepared, and a 40-question five-point Likert-type questionnaire was prepared in two parts. In the first part of the questionnaire, the respondents commented on the extent to which each of these factors influenced the patients' decision to use different clinics. In the second part, the respondents were asked to list the factors that are involved in patient decision-making other than those listed in the first part of the questionnaire. They added a total of 32 new factors. In the second round of Delphi, all new factors raised in the first round were prepared in a questionnaire with five-point Likert scales, and the respondents were asked to complete it. In the third round, the questionnaire was prepared using a set of factors identified by respondents in the first and second rounds as important factors in patient decision-making in choosing different clinics. For each factor, the average response of the group members in previous rounds was recorded. At this point, the respondent was asked to reiterate his opinion on the extent to which each of the factors could influence patient decision-making in referring to different clinics by choosing one of the available options. Finally, the final questionnaire survey showed that respondents confirmed the influence of 24 factors (out of 40 factors identified based on the background research) in the decision-making of patients, as well as 24 out of 32 new factors introduced in the second round. Then, in the quantitative part of the study, a questionnaire consisting of 48 questions using the factors identified in the qualitative section was prepared to collect data for exploratory factor analysis to summarize the factors and extract decision-making styles.

3.3. Statistical Methods

Due to the unlimited statistical population, the sample size was 384 people based on the Cochran formula. Physical validity and content validity were used to assess the validity of the questionnaire. Exploratory factor analysis using varimax rotation was used to summarize factors and extract decision-making styles, and all factor loads of more than 0.4 remained in the factor matrix. The Bartlett test and the KMO test were used to test the adequacy of the variables. To investigate the reliability of the questionnaire, Cronbach's alpha coefficient was calculated after applying exploratory factor analysis and identifying patients' decision-making styles, the results of which can be seen in Table 2.

4. Results

4.1. Identifying Factors Influencing Patient Decision-Making

The factors identified in the qualitative part of the study are shown in Table 3 as influencing factors in patient decision-making in choosing a clinic.

4.2. Determining Patient Decision-Making Styles

The data obtained from the sample in the quantitative part of the study were first analyzed using descriptive statistics in terms of demographic characteristics, and then exploratory factor analysis was used to determine decision-making styles.

• Demographic description of the statistical sample

The distribution of special variables in the statistical sample is presented in Table 4.

• Exploratory factor analysis

Exploratory factor analysis was used to determine patient decision-making styles. The purpose of the exploratory factor analysis was to classify the identified variables into several factors. The KMO index and the Bartlett test were used before factor analysis to ensure data fit. The

Table 1. Results of Various Research in Identifying Consumer Decision-Making Styles

Researchers	Identified Styles (I.S.)	No. of I.S.	Country	Product
(11)	Perfectionist/high-quality sensitivity, confusion among choices, instant purchases without a pre-program, habitual and brand loyalty shopping, sensitivity to fashion, leisure shopping, rational decision-making	7	Australia	Daily needs
(22)	Quality, planning, and ambiguity	3	Iran	Toothpaste
(20)	Sensitivity to famous brands, fun, and demanding shopping and price sensitivity	7	Iran	Sporting goods
(19)	Sensitivity to quality/idealism, sensitivity to the brand of the store and the store, pleasure and willingness to shop for fun, tenderness without planning and intent, sensitivity to new and trendy goods, habituation and loyalty to a brand, confused/price-driven consumers	7	Iran	Home appliances
(17)	Brand sensitivity, sensitivity to new and trendy, price and value sensitivity, idealism, unplanned tendencies, habituation and loyalty to a brand, pleasure, confusion over choices, hatred of shopping, scheduling/time allocation	10	Iran	Daily needs

Table 2. Research Questionnaire Information

Variable	Alpha Coefficient	No. of Questions
Perfectionist/sensitive to the quality of health care	0.835	11
Perfectionist/sensitive to public service quality	0.763	5
Brand sensitive clinic	0.733	5
Cost-sensitive service	0.722	4
Confused among various choices	0.816	5
Brand-sensitive physician	0.705	3
Referral to a physician/habit	0.762	4
Visiting the clinic/loyalty	0.707	3
Immediate decision/low accuracy	0.814	3
No choice	0.711	3

KMO index value was 0.74, and the Bartlett test was significant, thus confirming that the data were fit for factor analysis. The results of the exploratory factor analysis are shown in Table 5. It should be noted that all factor loadings above 0.4 remained in the factor matrix, and two of the identified factors (numbers 4 and 38 in Table 3) were removed due to factor loads below 0.4. The results showed that the identified 10-style model explained 79% of the patients' decision-making variance, indicating its validity.

5. Discussion

The results show that there are 10 decision-making styles among patients referring to specialty and subspecialty clinics in Iran. Compared to previous research and the list of decision-making styles (CSI) presented by Sprols and Kendall (1986), the results showed that there were two ways of being/inclining and paying attention to entertainment/recreation among patients referring to clinics. Considering the nature of health care is justified, people go to service centers when they have a health problem, and the decision to go to a health center for entertainment is meaningless. The results also showed that each of the three styles of perfectionism/high-quality sensitivity, brand sensitivity, and habitual loyalty shopping among clinicians was identified in two separate dimensions such that in the perfectionism/quality sensitive style, in addition to being sensitive to the quality of health care, clinicians also care about the quality of public services, such as the treatment of staff and medical staff, the ease of processes, accessibility, cleanliness of equipment, and speed of service. In the brand sensitivity style, patients were sensitive to both the service center brand and the physician's personal brand and may decide on each of these factors, and in the habitual and fidelity shopping style, patients may also be habitual. Three styles of instant purchase with no prior program/low accuracy, confusion among different choices, and price sensitivity are in line with the styles identified in previous research, and the style of coercion/lack of choice in this study was identified for the first time. The former is not seen and is due to the specific nature of health care, and in certain cases, patients have no choice and have to see a particular clinic or physician.

One of the most important limitations of this study

Table 3. Factors Influencing Patient Decision-Making

No.	Identified Factors	No.	Identified Factors
1	Quality of health care	25	See a doctor by habit
2	Good and perfect choice	26	Resistance to changing the physician
3	Quality of health care delivery	27	Loyalty to the physician brand
4	Comparison of quality of health services	28	Need for special services
5	Service provider center	29	Financial problems
6	Standards and expectations	30	Inaccessibility
7	Threshold for patient satisfaction	31	Lack of information about clinics
8	The importance of the reputation of the clinic	32	Different recommendations
9	Imitating the behavior of others	33	Doctor's reputation
10	The role of advertising	34	Imitating the behavior of others
11	Importance of specialty centers	35	Personal brand of the doctor
12	Sensitive to cheap services	36	Advice from a physician by the onus
13	Pay attention to cost versus value	37	Advice from clinics by those around
14	Not paying attention to the cost of services	38	Lack of information about the disease
15	Pay attention to cost versus quality	39	Attitude of staff and medical staff
16	Cost control	40	Clean equipment
17	Unplanned lookup	41	Ease of processes
18	Sorry after the visit	42	Speed of public services
19	Speed of decision-making	43	Access
20	Confused at the choice	44	Speed of health care
21	Difficult to choose	45	The existence of various specialty services
22	Going to the clinic out of habit	46	Service time
23	Resistance to clinic change	47	Accuracy of diagnostic services
24	Loyalty to the clinic brand	48	Subsidiary health services

Table 4. Demographic Characteristics of the Respondents

	No.	Percentage
Gender		
F	285	62
M	175	38
Age		
20 - 30	58	12.6
31 - 40	225	48.9
41 - 50	177	38.5
Education		
High school	231	50.2
Under graduate	70	15.2
Bachelors' degree	107	23.3
Masters' degree	52	11.3
Marriage		
M	335	72.8
S	125	27.2
Income of family (Rials)		
Lower than 20 M	85	18.5
20 - 30 M	109	23.7
30 - 40 M	148	32.2
More than 40 M	118	25.7

is the use of a questionnaire that may affect the quality of data collected due to the inherent characteristics and general dislike of Iranian respondents. Another important limitation is the way of data collection since the data were collected from patients at the time of referral to the clinic; the response conditions of the patients may have affected

Table 5. Decision-Making Styles

No.	Identified Styles	Related Factors	Special Amount	Percent of Variance
1	Perfectionist/sensitive to the quality of health care	1-2-3-5-6-7-44-45-46-47-48	9.12	19.01
2	Perfectionist/sensitive to public service quality	39-40-41-42-43	4.19	8.73
3	Brand-sensitive clinic	8-9-10-11-37	4.09	8.52
4	Cost-sensitive service	12-13-14-15-16	3.76	7.84
5	Confused among various choices	20-21-31-32	3.52	7.33
6	Sensitive to the physician's personal brand	33-34-35-36	3.36	7.00
7	Referral to a physician/habit	25-26-27	2.93	6.11
8	Visiting the clinic/loyalty	22-23-24	2.64	5.50
9	Immediate decision/low accuracy	17-18-19	2.39	4.98
10	No choice	28-29-30	2.19	4.56

the quality of the data and thus the results of the analyses. In future research, it is suggested that patient decision-making styles be discussed in other medical centers, such as hospitals or private offices, and other countries.

Footnotes

Authors' Contribution: Study concept and design: M. N., M.GH., and M. F.; analysis and interpretation of data: M. GH., and M. F.; drafting of the manuscript: M. F., and M. N.; critical revision of the manuscript for important intellectual content: M. N.; statistical analysis: M. GH., and M. F.

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