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Perception of Equality in Health Care Services Using Health Insurance Card: A Case Study for Public Hospitals in Hanoi

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Abstract

Health insurance is an important tool to reduce the financial burden for people and beneficiaries when seeking medical treatment, making medical services more accessible. With their efforts, governments of all countries aim to develop this type of insurance for the entire population. Therefore, improving the quality of medical examination and treatment with health insurance cards is also one of the prerequisites to raising the level of social security protection for the people.

Therefore, people's awareness of this service is essential. This study aims to assess the perception of equity of participants in health insurance services by some public hospitals in Hanoi city based on the equity theory from Adam's process. Through factor analysis and reliability, the implication could be suggested for legislators to amend to improve the quality of medical examination and treatment services with health insurance cards in the current context.

Keywords: Equality, Healthcare, Health Insurance Card, Public Hospitals, Hanoi

JEL Code: G00, G02, G22

1. Introduction

Perceived equity refers to a person's judgment of whether an effort versus a result is acceptable or reasonable. Previous research has shown that perceived equity is one of the most important factors affecting human exchange (Bolino and Turnley, 2008) ^[4]. It has been found that a rational distribution of resources can increase people's trust and loyalty to the exchange.

In the insurance industry, the perceived treatment fairness of customers is an important issue because it has been found unfair by an insurance company (e.g., a fair amount) deductible) may enhance a customer's intent to commit insurance fraud. For example, research by Miyazaki (2009) ^[19] shows that the deductible amount affects the policy owner's perception of whether the claim is acceptable. An unequal distribution of results, on the other hand, can lead to very negative consequences. Therefore, service providers all strive to increase the fair perception of customers to maintain and develop their services (Sindhav *et al.*, 2006) ^[20].

Health insurance is one of the practical financial tools to help people get protection, health care, and equal access to health services regardless of their circumstances. Health insurance is based on risk sharing among members and redistribution of the insurance fund already contributed (Folland *et al.*, 2016) ^[11]. In Vietnam, health insurance is a form of compulsory insurance applied to the subjects specified in the law, a non-profit fund organized by the State (Congress, 2014) ^[8]. While participating in medical examination and treatment at hospitals, medical examination and treatment services at hospitals will be divided into two groups of subjects: voluntary medical examination and treatment and medical examination and treatment with health insurance cards.

The implementation of medical examination and treatment with the health insurance card is considered a form of welfare for the holders of the health insurance card when there is a risk of incurring treatment costs through a payment process following the law. Accordingly, health insurance is a distribution instrument that is both reimbursable and non-repayable. In other words, this is a form of conditional return and is not equivalent. As a result, many participants felt inadequate with the amount paid after the medical examination and treatment. This study aims to conduct a preliminary survey on the perception of equity based on Adams (1965) ^[2] of process equity theory of people who participate in medical examination and treatment with health insurance cards at some hospitals in Hanoi city. The research results can be a suggestion for legislators to amend the regulations to improve the quality of medical examination and treatment services with health insurance cards in the current

context.

2. Literature Review

Health Insurance

Health insurance is an important tool used to reduce the financial burden on people in general and those going for medical examinations in particular when providing medical care, thereby making medical services more accessible. Many international studies have shown that health insurance plays a positive role in people's access to and use of health services by reducing their financial burden when seeking medical care (Liu *et al.*, 2015) [18]. More importantly, health insurance directly prevents households from becoming poorer due to the burden of paying for medical care. The role of health insurance is also shown in many other studies, such as Fang *et al.* (2019) [9].

Theory of Fairness from the Process

Equity is a complex multidimensional concept derived from equity theory (Adams, 1963, Adams, 1965) [1, 2]. Other authors argue that the concept of equity is rooted in equity theory (Frederickson, 2015) [12], although the concept of equity itself is rooted in social and equity theory. Equity theory states that people are generally interested in whether the outcome of an exchange is fair from the point of view of the people involved (Colquitt *et al.*, 2001) [7], Carr (2007) [5] has developed a theory of total equity perception that includes a process from procedural, interaction, and delivery better to see the audience's assessment of service quality. The theory of fairness from the process identifies three factors influencing people's perception of fairness. Those factors are fairness in distributions, fairness in the process, and fairness in interaction. The concepts of the main factors can be summarized as follows:

Procedural Fairness

Organizational procedures represent the activities and policies that an organization uses to allocate resources (Carr, 2007) [5]. In implementing these procedures, Leventhal (1980) [17] identifies rules for procedural fairness, including consistency, neutrality, the accuracy of the information, and freedom from bias. Clients review a service that is procedurally fair through compliance with these rules. When the service procedure is fair, all customers receive the same service procedures. There is no bias in the application of service procedures (Carr, 2007) [5].

Interactive Fairness

An organization interacts with customers through its representatives. Several equity issues are relevant to the organizational representation. Interaction equity concerns the actions and behaviors of individuals that occur during service delivery (Sindhav *et al.*, 2006) [20] and focuses on the person-centered process of interaction and communication between source and recipient of equity (Bies, 2001) [3]. Specifically, interaction fairness was assessed by: (1) justification: providing explanations such that participants understood the rationale behind the decisions, (2) honesty: candidness, (3) respect: and polite behavior; and (4) ownership: behaving appropriately (Folger and Bies, 1989) [10]. Interactional justice examines fairness regarding exchanging information and communicating outcomes (Goodwin and Ross, 1992) [14]. Greenberg and Cropanzano (1993) [15] and (Colquitt, 2001) [7] present a two-way concept

of interactive justice, such as interpersonal and informational equity.

Distributive Justice

Distributive justice refers to the perceived fairness of outcomes. Distributive equity is defined as the equality of cognitive, affective, and behavioral responses to the distribution of outcomes from a source (Cohen-Charash and Spector, 2001) [6]. The important aspect is to compare with others in terms of the amount of money and benefits received after performing the service

3. Methodology

Based on an analysis of the research overview, this study uses three aspects of equity theory from the process to assess the participant's perception of the current healthcare service by health insurance card in Vietnam. This study is based on the suggestions of (Carr, 2007) [5] and (Adams, 1965) [2].

Most of the scales of the observed variables in the model are inherited from the scales available in previous review studies (Tseng, 2019, Carr, 2007) [21, 5]. The survey was conducted in the form of a face-to-face interview at a public hospital in Hanoi during the period from March to May 2023, with people coming for medical examinations and treatment with health insurance cards.

Based on the "Data Cleaning" results using SPSS22 data analysis software, 150 questionnaires were issued, but only 148 were valid and cleaned. After conducting the survey, collect and process the data. Collected data will be performed with descriptive statistical analysis, Cronbach Alpha reliability analysis, factor analysis, and correlation analysis to see the relationship between the fairness factors in the cognitive process of the participants.

4. Results

Descriptive Analysis

The results showed that 68 men and 80 women participated in the questionnaire. The number of women is higher than that of men, but not significantly (54.055% and 45.95%). Besides, the number of people over 50 is the largest number of respondents. In second place are the interviewees aged between 20 and 30 years old. This is a group of young workers with low income, so medical examination and treatment with health insurance cards are quite popular. The age structure of the sample is quite similar to the current state of medical care in practice.

Table 1: Demographic characteristics of Respondents

Variables	Category	Frequency	Percentage (%)
Gender	Male	68	45.95
	Female	80	54.05
Age	20 – 30	37	25.0
	31 – 40	18	12.2
	41 – 50	23	15.5
	above 50	70	47.3
Income	Under 5 million	62	41.9
	5 – 7 million	43	29.1
	7 – 10 million	25	16.9
	Above 10 million	18	12.2

From the descriptive analysis, we can see that: In terms of income, the proportion of people below 7 million accounted for a high proportion, with more than 70%, of

which people under 5 million dong/month accounted for 41.9%. With this income level, medical examination and health insurance card treatment are meaningful to them.

Cronbach’s Alpha-Reliability

In order to conduct the reliability test, Cronbach’s Alpha is used as the most popular and effective tool in SPSS analysis (Hair *et al.*, 2010) [16]. Table 2 demonstrates the result of Cronbach’s Alpha test. Hair *et al.* (2010) [16] also note that the Cronbach’s Alpha result should be equal to or higher than 0.7 (≥ 0.7) to be reliable enough for research. The Cronbach’s Alpha results in table 2 all meet these standard requirements, which means that every item in the questionnaire has a good level of reliability and can be accepted to use for this research.

Table 2: Cronbach’s Alpha Analysis

Variables and coding	Cronbach’s Alpha	No. of items
Interactive Fairness (IF)	0.850	4
Distributive fairness (DF)	0.802	3
Procedural Fairness (PF)	0.862	6

Factor Analysis

George and Mallery (2016) [13] emphasize that one of the most crucial steps when analysing data with SPSS is Exploratory Factor Analysis (EFA), which identifies the correlation among observed variables and examine the validity of the set of items.

KMO and Barlett’s Test

In this research, the KMO and Barlett’s Test for independent variables is conducted as the result is illustrated in the Table 3. As shown, the KMO value is 0.861 ($0.5 < 0.861 < 1$) and the sig. value is 0.000 (< 0.05), that means these values satisfied the conditions in the study (Hair *et al.*, 2010) [16]. In addition, after implementing the rotation matrix, we got the followings: every determinant with factor load > 0.5 , Eigenvalues is $1.215 > 1$, and the Variance explained = 67.569

%. It demonstrates that the factor analysis of the research data is appropriate.

Table 3: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.861
Bartlett’s Test of Sphericity	Approx. Chi-Square	1026.023
	Df	78
	Sig.	0.000
Total variance Explained		67.569
Total Eigenvalues		1.215

Correlations

The Pearson correlation analysis results show a strong correlation between the components in the process of equity perception (Carr, 2007) [5]. The results show that these variables all have statistically significant correlation coefficients. Procedural fairness and interaction fairness have a significant-close correlation, as shown by the Pearson coefficient of 0.642. In addition, procedural justice is also associated with the perceived fairness of distribution, with a statistically significant 0.444 correlation. This result shows that the components of the fairness theory from the process are related to each other in the participants' perception of medical examination and treatment with the health insurance card.

In addition, the descriptive statistics on the average value of the scales show that the level of fair perception of the medical examination and treatment process is still low. The detailed results are shown in the following table:

Table 4: Descriptive Statistics

	Mean	Std. Deviation	N
IF	2.48	.891	148
PF	2.47	.839	148
DF	3.08	1.064	148

Table 5: The results of correlations

		IF	PF	DF
IF	Pearson Correlation	1	.642**	.332**
	Sig. (2-tailed)		.000	.000
	N	148	148	148
PF	Pearson Correlation	.642**	1	.444**
	Sig. (2-tailed)	.000		.000
	N	148	148	148
DF	Pearson Correlation	.332**	.444**	1
	Sig. (2-tailed)	.000	.000	
	N	148	148	148

** . Correlation is significant at the 0.01 level (2-tailed).

5. Discussion

The research results show that it is not a distribution or fairness outcome, instead, the fairness process is a factor that is strongly related to the components of the participant's perceived fairness process. A transparent, well-informed decision-making process also positively affects perceptions of fairness (Frederickson, 2015) [12]. This factor refers to the availability of information/data and the smooth access of information by stakeholders. The study proposes many solutions to raise the fair awareness of customers about health insurance services, including:

Assessing the frequency of service use to monitor usage rates and survey patient satisfaction is an important job to ensure sound management of the social insurance agency. Therefore, in addition to information from financial statements, Vietnam Social Security needs to issue several additional reports to provide information on the performance of the insurance agency. The report includes indicators related to different areas of access to health services, quality of health services, efficiency in payment, awareness of beneficiaries about rights and responsibilities, and indicators of effective activities of the social insurance agency. This information should be made publicly available to participants and healthcare providers to assist them in decision-making and to monitor the insurance agency in performing its duties.

Increase investment in the development and modernization of infrastructure of the social insurance industry, especially information technology infrastructure. Infrastructure is an important factor determining the performance of a unit, an industry, or the whole economy. The lack of information will make management inefficient in the management activities of health insurance funds in the current market conditions. Therefore, equipping with modern information technology will help Vietnam Social Security facilities to analyze and forecast accurately, making timely measures to manage revenue, expenditure, balance, and investment fund. In addition, it is necessary to promote the application of information technology in medical examination and treatment payment services through online applications to

improve publicity and transparency, helping participants understand the process and procedures. This result leads to raising the awareness of fairness for the participants.

6. Conclusion

Process fairness has been studied and applied in many fields, such as employee evaluation, appointment or dismissal and Marketing (complaint settlement, warranty), conflict and resolution, and public management (resolving conflicting complaints with citizens, businesses, and rating public institutions) (Cohen-Charash and Spector, 2001, Frederickson, 2015, Miyazaki, 2009) ^[6, 12, 19]. This study has applied the theory of process equity and succeeded in a preliminary assessment of the components' perceptions of fairness in the process of health care services with health insurance cards but still does not go deep into the analysis of the hidden intrinsic factors of the Further studies may clarify this aspect.

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