EXPLORING CHANGES REGARDING BEHAVIOR IN SEEKING MEDICAL TREATMENT IN TAIWAN IN THE POST-COVID-19 ERA

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Abstract

The spread of COVID-19 has changed the original way of life of human beings, and the immediate change is the behavior of seeking medical treatment. This study used a questionnaire survey to investigate Taiwanese medical treatment behavior changes after the epidemic. The results show that Taiwanese are very self-conscious when choosing the hospital or clinic they want to go to, with their convenience as the primary consideration. They only consider obtaining good services and medical equipment and using suitable medical equipment for treatment. Therefore, enhancing quality services and equipment in hospitals or clinics is one of the operational strategies under COVID-19. A closer look found that after the COVID-19 outbreak, the Taiwanese think about medical procedures in an egocentric way. During the epidemic, the government has been actively controlling external environmental risks. However, the Taiwanese care about how to solve their problems and can quickly reduce their troubles. In this case, the internal motivation broke through the government's risk control, resulting in a loophole in the government's risk control of COVID-19, allowing the epidemic to spread further.

Keywords

COVID-19, Medical treatment behavior, Promotion strategy, Consumer behavior

Introduction

According to statistics, from December 31, 2021, to July 13, 2022, the number of people infected with COVID-19 in Taiwan increased by more than four million (Johns Hopkins University System Science and Engineering Big Data Center). It shows that in these six months, the number of infections in Taiwan has risen sharply. Moreover, hospital medical staff also increased risk during this period. COVID-19 affects the medical behavior of Taiwanese and Taiwanese risk awareness will increase due to infection.

At present, various types of medical institutions in Taiwan include national medical centers, regional hospitals, and clinics. How should changes in people's medical behaviors respond to the management strategies of various medical institutions? This paper mainly studies the effect of Taiwanese on medical behavior due to risk conversion. Different choices will affect the long-term operation of the hospital.

Due to the risks posed by the COVID-19 outbreak, Taiwan's Ministry of Health and Welfare Taoyuan Hospital transfers patients to other hospitals to eliminate the risks. Still, it needs to pay all personnel and equipment depreciation costs, which are important issues for hospital operation management. Therefore, risk prevention is a critical element in business management, and understanding the Taiwanese's medical choices after the outbreak of the COVID-19 can reduce unnecessary variable costs and business losses for hospitals.

According to statistics, during the epidemic, the registration points of otolaryngology and pediatrics dropped by more than a quarter on average (National Medical Insurance Administration, 2021). In addition, due to Taiwanese's good self-health management and changes in living habits, the number of patients with respiratory diseases has dropped significantly (Kaohsiung City Clinic Association, 2021). As a result, otolaryngology and pediatric clinics saw a 60% reduction in revenue during the pandemic. The questionnaire also showed that during the epidemic, 50.7% of clinics in Taiwan wanted to lay off staff, and 24% even wanted to close their business (Society of Pediatrics, 2021).

In addition, they worried that the epidemic would gradually spread. Therefore, in addition to considering the risks that Taiwanese may face when seeking medical treatment, there may also be other factors to consider.

Consider whether to go to a medical center with a large number of patients, a regional hospital, or choose to go to a grass-roots clinic for medical treatment.

This study is an in-depth study of risk transfer in Taiwanese seeking medical care due to COVID-19. In this painful period, is it still an effective strategy to increase the risk management of medical institutions? This study uses a questionnaire survey to analyze the intrinsic motivation of Taiwanese to seek medical treatment and whether the risk control strategies proposed by medical hospitals affect Taiwanese's confidence in seeking medical treatment.

Do Taiwanese medical habits have changed since then?

Literature review

This study explores changes regarding behavior in seeking medical treatment in Taiwan in the post-COVID-19 era. The primary purpose is to sort out the literature on the causality of Taiwanese intrinsic motivation and then discuss external hospital risk control.

2.1 Medical treatment-seeking behaviour
The behavior of seeking medical treatment refers to a patient choosing a medical institution or a doctor (Chen, C.L., 2011). This study defines medical behavior : People are willing to seek medical treatment and the type of hospital they choose.

Andersen (1968) proposed that behavioral patterns predict or explain people's medical service utilization. The behavioral patterns of personal medical use are affected by three factors : "predisposing characteristics," "enabling factors," and the "need for resources." The need for resources refers to the behavior of seeking medical treatment after the individual feels a medical need. When the patients need resources, how do they judge what kind of resources will be helpful? Therefore, McKinley, Moser & Dracup (2000) found that patients' cognitive,emotional, and social responses to symptoms are associated with decisions to seek treatment. Besides mixing cognitive, emotional, and social responses and resources, the patients will add an opinion from Manski et al. (2013) about choosing to seek medical care. Individuals weigh the financial cost of treatment against its perceived benefit to their health.

Patients have also paid increasing attention to the preference for medical treatment and satisfaction with medical services. In addition, it is necessary to improve the medical publicity model and the efficiency of medical services according to the needs of patients (Li et al., 2022). When patients can't get more choices way, patients will fall into Steinwachs (1978) view that timeliness is the interaction between patient care-seeking behavior and system accessibility, both of which do expect to influence the effectiveness of medical care. Therefore, covid-19 has caused patients to have a significant impact on medical choices. It is not a general perception but an immediate need for medical resources.

For the Taiwanese, their choice of medical institutions may seem like medical treatment behavior, but in essence, it is similar to consumer behavior. Potential factors of patient satisfaction include the "Medical service quality factor," "Medical expenditure factor," and "Medical convenience factor" (Liu & Fang 2019). Therefore, this study intends to regard patients as consumers. From the consumers' intrinsic consumption motivation, to explore the influence of patients' intrinsic motivation on their medical treatment behavior. Therefore, this study has sorted out the relevant literature on intrinsic motivation in the next section.

2.2 Intrinsic motivation
Motivation causes certain behaviors and explains why people behave in specific ways (Weinberg 2003 ; Wohlfeil & Whelan 2006). According to self-determination theory. Divided people's behavior into three types of motivation according to the degree of autonomy. The three types are no motivation, extrinsic motivation, and intrinsic motivation (Deci & Ryan, 1985). Self-determination theory focuses on types of motivation, autonomous, controlled, and unmotivated, as predictors of performance, relationship, and well-being outcomes (Deci & Ryan, 2008).

The material consequences of actions are not the primary motivating factor but the inner enjoyment and meaning that those actions can bring us. Scholars call them "intrinsic motivations." (Deci & Ryan, 1985) Intrinsic motivation refers to the satisfaction and happiness that people obtain during activities and the intrinsic motivation that motivates people to continue or strengthen these activities. Also, extrinsic motivation usually refers to people doing something because of external pressure, to get a reward (material and immaterial), or to avoid punishment.

Both intrinsic and extrinsic motivation affect the frequency and duration of behavior. However, behaviors elicited by intrinsic motivation are higher in frequency and behavioral duration than extrinsic motivation (Deci & Ryan, 1985). Individual control over performance is an essential determinant of intrinsic motivation, but the type of reward system does not affect intrinsic motivation (Fisher, 1978). Motivation is a better predictor of performance when it is indirectly related to performance (Cerasoli et al., 2014). Intrinsic motivation increases when verbal reinforcement and positive feedback are given (Deci, 1971). In addition, an increase in salary increases intrinsic

motivation. Increased reward reduces intrinsic motivation. (Earn, 1982).

The strength of people's intrinsic motivation can effectively explain persistence and performance in various aspects such as work, academic field, healthy behavior, and sports. (Chambel et al. 2015 ; Deci & Ryan 1985 ; Grant & Berry 2011 ; Ng et al. 2012 ; Vallerand 2007 ; Van Egmond et al. 2017).

People's motivations will learn to improvise, adapt and change consumer behavior. The long-term impact of COVID-19 has yet to be determined (Piccarozzi et al., 2021). Therefore, sued SARS describes from relevant literature on the epidemic's impact on the performance of medical institutions. Zhang et al. (2004) assessed the impact of the severe acute respiratory syndrome (SARS) epidemic on healthcare utilization in Taiwan. At the peak of the SARS epidemic, outpatient (23.9%), inpatient (35.2%), and dental (16.7%) dropped significantly. Restrictions on the use of hospital services led to a 10%-12% decrease in overall hospitalization and medical admissions in Toronto during the early and late SARS restrictions (Schull et al., 2007), and Chu et al. (2008) noted that the SARS crisis reduced the Outpatient, emergency and inpatient services in Taiwan. Many factors have contributed to changes in hospital performance ; from the above; we can see that the outbreak has changed people's medical behavior. The impact of COVID-19 has a long-term impact on consumer habits and behavior. The impact of COVID-19 has a long-term impact on consumer habits and behavior. After COVID-19, Taiwanese tend to go to regional hospitals and medical centers rather than clinics (Huang, 2022).

To sum up, the epidemic has indeed changed people's medical behavior, affecting the operating performance of medical institutions. However, in the past literature, there is no in-depth discussion of the intrinsic motivation behind changes in people's medical treatment-seeking behavior. Therefore, based on the discussion mentioned above, the following hypothesis is proposed :

H1 : The intrinsic motivation of the Taiwanese has a significant positive impact on the Taiwanese seeking behavior of medical treatment.

1.3 Risk Control in Medical Situation

From the perspective of studying, the primary purpose of research on crisis management mechanisms for epidemic prevention and control is to reduce and avoid severe damage caused by immune disease crises (Huang, 2005). COVID-19 has become an emerging global health crisis. Different countries have adopted different countermeasures to prevent the spread of this disease. In Taiwan, the government adopted many strategies, including, 1. border control ; 2. official media channels and press conferences ; 3. a medical mask quota system ; 4. TOCC-based rapid triage, outdoor clinics, and protective sampling devices ; 5. maintain social distancing, postpone the start of the new semester, and limit religious gatherings (Chen et al. 2020).

For individuals, COVID-19 protective equipment, testing modules, surgical masks, gloves, and touching management of staff can help reduce the threat of pandemic transmission (Ilyas et al., 2020). Outside risk is accessible, but the psychological risk is not easy to describe. Therefore, Zhong, Oh, & Moon (2021) point out that perceived psychological risk, subjective norm, and enjoyment impact people's consumption behavior. Another study shows that general guidance significantly affects individuals' risk perception, while risk perception positively impacts social distancing obedience behavior (Yuan et al.,2020).

To summarize the above literature, we can find that the critical success factors for preventing the spread of the epidemic are effective government policies, people's awareness of the risks that the epidemic may cause, and people's high compliance with government policies. In Taiwan's epidemic prevention policy, medical institutions must strictly control personnel entry and exit. This study refers to it as "risk control in medical institutions."

Based on the above, the risk control of the hospital is to reduce the risk sources of Taiwanese seeking medical treatment. Whether the medical staff has taken disinfection and contact prevention measures and the publicity and preparation of the hospital's standard operating procedures for epidemic prevention are all critical tasks. Under the influence of COVID-19, have Taiwanese medical treatment behavior been affected? Under the circumstance that the risk of COVID-19 transmission is unknown, the thinking behind Taiwanese's medical treatment behavior in choosing a hospital is worth studying. Therefore, this study will assess and measure this opinion. Thus, setting H2 is as follows :

H2 : The influence of medical risk control on the behavior of Taiwanese seeking medical treatment was significantly and positively correlated.

3. Methodology

According to the discussion of relevant literature, this study established a framework to clarify the research structure, hypothesis, and methods.

3.1 Research structure

This study uses Taiwanese intrinsic motivation and hospital risk control as the source of decision-making affecting people's medical treatment choices. (Figure 1)
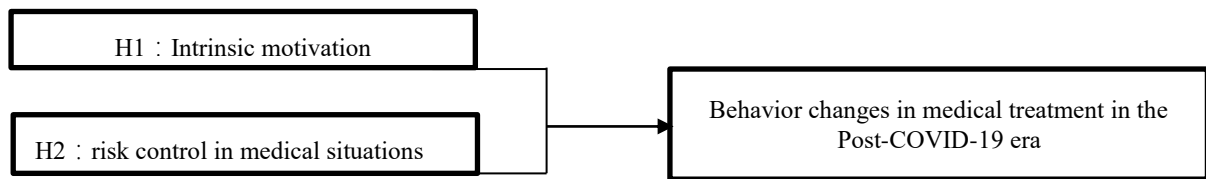

Figure 1 Research structure

3.2 Research hypothesis

According to the research purpose stated in the previous chapter and the research framework established hypotheses for this study are as follows：

H1：The intrinsic motivation of the Taiwanese has a significant positive impact on the Taiwanese seeking behavior of medical treatment.
H2：The influence of medical risk control on the behavior of Taiwanese seeking medical treatment was significantly and positively correlated.

3.3 Methods

This study collected data by questionnaire and used SPSS 23.0 software for statistical data analysis. Including descriptive statistical analysis, reliability analysis, factor analysis, variance analysis, and multiple regression analysis.

This study uses descriptive statistics to collect Taiwan's data. The respondents' views on the subject are consistent when the standard deviation number is small. The standard deviation number is high, and the respondents' opinions on the subject are discrete. This questionnaire is based on the attitude of Taiwanese and calculates the mean and standard deviation to evaluate the difference in Taiwanese attitudes to the subject.

According to reliability analysis to the measurement standard of Cronbach's α value proposed by Guilford (1965), to further understand the reliability. A Cronbach's α value higher than 0.7 as high reliability in the interval of 0.5-0.6 is acceptable, and less than 0.5 indicates low reliability. This study used "Corrected item-total Correlation" and "Cronbach Alpha if Item Deleted" as deleted observations. The items deleted who filled the questionnaire whose Cronbach's α was lower than 0.5, and the test continued until the Cronbach's α was not lower than 0.5.

In order to judge whether a factor can analyze the scale variables, Kaiser (1974) proposed the "sampling adequacy measure" (Kaiser-Meyer-Olkin measure of sampling adequacy, KMO). The KMO value is between 0 and 1. The closer the value is to 1, the higher the correlation of the variables and the more suitable for factor analysis. The closer the value is to 0, the lower the correlation of the variables and the less suitable for principal component analysis. The KMO value above 0.90 is excellent, 0.80-0.89 is good, 0.70-0.79 is moderate, 0.60-0.69 is average, 0.50-0.59 is poor, and below 0.49 is unacceptable. The next step is the study for factor analysis to select that the questionnaires extracted with a factor loading (Eigenvalue) greater than 1 for standard.

The primary purpose of using the analysis of variance is to determine whether there is a significant difference in the mean of F values in different groups. The formula for total variation (TSS) in the analysis of variance is $\sum_{i=1}^{n}\sum_{j=1}^{n}\left(Y_{ij}-\bar{Y}_{total}\right)^2$, where i is the questionnaire sample in this study group category (*i=1,2...,n*)．The j is the number of questionnaire samples in this study (*j=1,2,3,...,n*). The *Yij* is the *j* questionnaire sample of group *i* number, $\bar{Y}_{total}$ is the average of all questionnaire samples. The formula of between-group variation (BSS) is $\sum_{i=1}^{n}n_i(\bar{Y}_i-\bar{Y}_{total})^2$, where n_i is the total number of questionnaire samples in group i, and $\bar{Y}_i$ is the total number of questionnaire samples in group *i*. Questionnaire sample size average. The within-group variation (WSS) is $\sum_{i=1}^{n}\sum_{j=1}^{n}\left(Y_{ij}-\bar{Y}_i\right)^2$. In this study, the respondents have been divided into groups. However, the differences between groups can be proved by analysis of variance, indicating a significant difference between groups.

Multiple regression analysis is mainly to understand the influence of independent variables on dependent variables. This study uses regression analysis tools to predict the influence of independent variables on dependent variables and to test the explanatory power of the entire framework to observe whether the results reached the display level. Therefore, this study sets questionnaire item "1. Because of the occurrence of COVID-19, Taiwanese have reduced the number of visits to medical institutions." for the dependent variable.

4. Results

The samples out of 343 returned questionnaires from the internet during February to May 2022. There were 339 valid ones, with a validity recovery rate of 98.83%. The samples were randomly and from the northern, central, and southern parts of Taiwan. The results of this study depend on the research mentioned above methods. It utilizes descriptive statistical analysis, reliability analysis, factor analysis, variance analysis, and multiple regression analysis. Moreover, the paper used SPSS 23.0 analysis of the data.

4.1 Descriptive statistics

The sample size was 339 from the descriptive statistics. The minimum average is 2.53, and its questionnaire item is "16. Because of the new crown pneumonia epidemic (COVID-19), many large hospitals have reduced outpatient hours, and you will go directly to the emergency room of a large hospital for medical treatment." Indicating that Taiwanese are less likely to choose to go to the emergency room for medical treatment. The highest average value is 3.82, and the questionnaire item is "7. Even if COVID-19 occurs, when you choose the hospital, you want to see according to the level of hospital equipment." It shows that the Taiwanese will follow the level of hospital equipment to choose the hospital.

In terms of standard deviation, the minimum value is 0.806, and the questionnaire item is "7. Even if COVID-19 occurs, when you choose the hospital, you want to see according to the level of hospital equipment." It shows that the Taiwanese agrees to seek medical treatment. The choice is based on the hospital equipment to make decisions, and the Taiwanese has the slightest difference in this time. The maximum standard deviation value is 1.154, and the questionnaire item is "2. Whether or not there is COVID-19, you choose a large hospital above the regional type." It shows that Taiwanese do not necessarily choose medical treatment in large hospitals. There is a significant gap in this recognition. (Note : * in Table 1 represents the minimum value, ** represents the maximum value) (Table 1)

Items	Mean	Std.deviation
1. Because of the occurrence of COVID-19, Taiwanese have reduced the number of visits to medical institutions. (hereinafter referred to as item 1)	3.72	0.98
2. Whether or not there is COVID-19, you choose a large hospital above the regional type. (hereinafter referred to as item 2)	2.71	**1.154
3. Regardless of COVID-19, people will be under the referral system. First, go to the clinic for medical treatment and will only be referred if the hospital is required. (hereinafter referred to as item 3)	3.78	1.014
4. Because of the risk of COVID-19, the Taiwanese have changed the choice of going to a medical institution. (For example, who used to go to a clinic, now goes to a hospital. Alternatively, before all went to the hospital, now go to the clinic. (hereinafter referred to as item 4)	2.79	1.096
5. Because of COVID-19, the risk control process in large hospitals has become more rigorous so that you will go to the clinic for medical treatment. (hereinafter referred to as item 5)	3.27	1.055
6. Even if COVID-19 occurs, people choose the hospital to seek medical treatment based on the doctor's medical skills. (hereinafter referred to as item 6)	3.79	0.911
7. Even if COVID-19 occurs, when you choose the hospital, you want to see according to the level of hospital equipment. (hereinafter referred to as item 7)	**3.82	*.806
8. Because of COVID-19, Taiwanese worry about the risk of cross-infection when going to a large hospital, so Taiwanese go to a clinic for medical treatment. (hereinafter referred to as item 8)	3.28	1.069
9. Because of COVID-19, people will go to a large hospital even though the cost of medical care in a large hospital is several times higher than in a clinic. (hereinafter referred to as item 9)	2.83	1.094
10. Because of the outbreak of COVID-19, people learned that large hospitals have COVID-19 patients that people will go to the clinic for medical treatment. (hereinafter referred to as item 10)	3.29	1.046
11. Because COVID-19 has entered tertiary control, people will not choose a large hospital. People will only go to a clinic for medical treatment. (hereinafter referred to as item 11)	3.31	1.01
12. Because COVID-19 has entered the third-level control, someone needs to go to a large hospital for medical treatment. If someone is hospitalized, someone can only accompany someone to the hospital after a PCR test. If someone feels troublesome, someone will go to the clinic for medical treatment and judge the condition first. (hereinafter referred to as item 12)	3.51	1.024
13. Because people have regular doctor's visits and the doctor knows someone's medical history, even if COVID-19 occurs, you will not choose other hospitals with lower risk. (hereinafter referred to as item 13)	3.59	1.015
14. Because there is only this hospital or clinic in this area of life, even if COVID-19 occurs, people can only seek medical treatment in this medical institution. (hereinafter referred to as item 14)	3.26	1.042
15. Because the clinic's service is better than hospitals, whether or not there is an occurrence of COVID-19, people choose to go to the clinic for medical treatment. (hereinafter referred to as item 15)	3.29	1.001
16. Because of COVID-19, many large hospitals have reduced outpatient hours, and you will go directly to the emergency room of a large hospital for medical treatment. (hereinafter referred to as item 16)	*2.53	1.107
17. Even if COVID-19 occurs, a friend recommends people to see a specific doctor. Someone will go to that particular doctor regardless of the risk. (hereinafter referred to as item 17)	2.85	1.058

Table 1 Descriptive Statistical Analysis

4.2 Reliability analysis

This study aims to confirm whether it is credible in terms of reliability. Through the analysis of Cronbach Alpha, its value is 0.784, indicating a relative degree of confidence. Then analyze whether there are inappropriate items in the question. When deleted 13 questions and 17 questions, the value of Cronbach Alpha could be improved. (Table 2 with mark **)

Items	Cronbach's α	Scale mean	Scale variance	Alpha If Items Deleted
Item 1		51.90	62.195	.773
Item 2		52.91	62.084	.779
Item 3		51.84	64.401	.784
Item 4		52.83	59.099	.762
Item 5		52.36	59.094	.760
Item 6		51.83	64.126	.780
Item 7		51.80	64.321	.778
Item 8		52.35	58.878	.760
Item 9	0.784	52.79	62.002	.776
Item 10		52.33	60.525	.767
Item 11		52.31	60.836	.768
Item 12		52.12	61.428	.771
Item 13		52.03	64.523	**.785
Item 14		52.37	61.280	.771
Item 15		52.33	61.446	.770
Item 16		53.09	60.782	.771
Item 17		52.77	64.539	**.786

Table 2 The First-round of Reliability Analysis

The study tested second time Cronbach's alpha. The result shows that the value of questionnaire items 2, 3, and 6 is more significant than 0.791. Therefore, the reliability value can be improved again when deleted these three questionnaire items. (Table3 with mark **)

Items	Cronbach's α	Scale mean	Scale variance	Alpha If Items Deleted
Item 1		45.46	54.237	.780
Item 2		46.47	55.191	**.792
Item 3		45.40	56.246	**.792
Item 4		46.39	51.434	.769
Item 5		45.91	50.990	.764
Item 6		45.39	57.109	**.792
Item 7		45.36	57.017	.788
Item 8	0.791	45.90	50.715	.763
Item 9		46.35	54.818	.788
Item 10		45.89	52.038	.770
Item 11		45.87	52.364	.770
Item 12		45.67	53.245	.776
Item 14		45.92	54.024	.781
Item 15		45.88	53.913	.779
Item 16		46.65	53.513	.781

Table 3 The Second-round of Reliability Analysis

It passed the third time Cronbach's alpha test. It turns out that there is no number less than 0.796, so it is no longer necessary to delete the questionnaire items. The paper got the reliability questionnaire items.

Items	Cronbach's α	Scale mean	Scale variance	Alpha If Items Deleted
Item 1		35.18	41.440	.787
Item 4		36.11	38.863	.773
Item 5		35.64	38.084	.764
Item 7		35.08	44.955	.796
Item 8		35.63	37.773	.762
Item 9	0.796	36.07	42.827	.793
Item 10		35.61	38.759	.770
Item 11		35.59	38.876	.768
Item 12		35.40	40.015	.779
Item 14		35.65	40.987	.787
Item 15		35.61	40.594	.782
Item 16		36.37	40.980	.791

Table 4 The Third-round of Reliability Analysis

4.3 Factor analysis

After the reliability analysis results, this study continued with factor analysis. The results showed that the KMO value was 0.814, and Bartlett's P-value was less than 0.05 (Table 5). It indicated that this questionnaire is suitable for factor analysis. Through the Taiwanese choices decision-making, medical institutions can better know what decisions the Taiwanese will make after thinking about intrinsic motivation.

Kaiser-Meyer-Olkin measures the adequacy of sampling		.814
Bartlett's Test of Sphericity	Chi-Square Test	1173.784
	df	66
	Significance	.000

Table 5 KMO and Bartlett Test

Next, to use factor analysis for this study, found four significant factors exist. It was using the content of the questionnaire named to these four factors. Dimension 1 is the reducing trouble factors, and the content focused on the questionnaire questions points out that the Taiwanese make decisions to reduce unnecessary troubles. Dimension 2 is the problem-solving factor, and the topic points out questionnaire's content is how to solve the medical treatment problem. Dimension 3 is the service-oriented factor, the topic-oriented out, the Taiwanese want good service for medical treatment. Dimension 4 is the medical equipment factor. It indicates that the Taiwanese need good medical equipment to treat COVID-19. Therefore, there are four influencing factors in Taiwanese decision-making. (Table 6)

Factors	Items	Factor			
		1	2	3	4
Factor 1-reducing trouble factors	11	.804			
	10	.779			
	8	.772			
	12	.700			
	5	.565			
	1	.498			
Factor 2-problem-solving factor	16		.726		
	9		.722		
	4		.690		
Factor 3-service-oriented factor	14			.801	
	15			.744	
Factor 4-medical equipment factor	7			.	.920

Table 6 Factor Analysis of Rotation Component Matrix

This study discusses this subsection on factor analysis and Taiwanese choice decision-making behavior. This categorization dimension will construct from the title into four dimensions. One dimension of reducing the trouble factor. The second dimension of the problem-solving factor. The third dimension of the service orientation factor. In addition, the fourth dimension of the medical equipment factor. For these four factors, the Taiwanese have two mindsets. One is to directly consider the quality of medical equipment and services without considering the risks. Another is the first consideration in the case of risk control. Then deal with how to reduce the hassle and fix the problem. It clearly shows that the dimensions of the Taiwanese's consideration factors exist in different facets.

4.4 ANOVA

Next, this study analyzes all the questionnaire items in the factor analysis. It learned that the analysis of variance pointed out that the Taiwanese's choice decisions are differentiated, and the P-value is significant, with a value of 0.000. It also shows that the Taiwanese's intrinsic motivations are different. Even in a period when the risk of COVID-19 infection is so high, there are still Taiwanese who do not think there is a very high risk. (Table 7, Note 1 : (Response) Because of the occurrence of COVID-19, Taiwanese have reduced the number of visits to medical institutions. Note 2 : The mark ** in the table is the 95% confidence interval, and the P-value is 0, which is significant.)

Model		Sum of squares	df	Mean squared	F	Significance
1	regression	69.079	11	6.280	8.044	.000
	residual	255.298	327	.781		
	total	324.378	338			

Table 7 Analysis of Variance

4.5 Regression analysis

According to the above variance analysis, there are differences among the groups and factors. Now used multivariate regression analysis to predict the decision-making of Taiwanese regarding behavior in Seeking Medical Treatment.

The Enter model was used in this study to calculate the multiple regression analysis. To affect dependent variable item is "1. Because of the occurrence of COVID-19, Taiwanese have reduced the number of visits to medical institutions. "The questionnaire items of factor dimension one are going to "5. Because of COVID-19, the risk control process in large hospitals has become more rigorous so that you will go to the clinic for medical treatment." and "8. Because of COVID-19, Taiwanese worry about the risk of cross-infection when going to a large hospital, so Taiwanese go to a clinic for medical treatment." are significant (P-value 0.030 and 0.000, respectively) (Table 8 and indicated by **). The name of factor analysis 1 is to reduce the trouble because the Taiwanese will get the news with the questionnaire items 5 and 8's content before going to the doctor. So they will go to the clinic to see a doctor to reduce the trouble.

Factor 2 is named problem-solving. The significance of the P-value is 0.000. It includes the questionnaire item "4. Because of the risk of COVID-19, the Taiwanese have changed their choice of going to a medical institution. (For example, who used to go to a clinic, now goes to a large hospital. Alternatively, before all went to the big hospital, now goes to the clinic, (Table 8 and indicated by **)." The results indicated that Taiwanese are affected by COIVD-19, and their intrinsic motivation has changed their medical behavior patterns. It is mainly the subjective opinion of the Taiwanese regarding what kind of medical institutions can solve the illness problem.

Factor 3 is the service orientation, the item with a significant value of 0.015. The questionnaire is "15. Because the clinic's service is good, no matter whether there is an occurrence of COVID-19 or not, Taiwanese choose to go to the clinic for medical treatment (Table 8, with ** express)." There is a group of public in Taiwan whose intrinsic motivation is that they are not affected by any environmental conditions, and they insist on having good medical services, which trumps everything else.

Factor 4 is the medical devices. The questionnaire item is "7. Even if COVID-19 occurs, when you choose the hospital, you want to see according to the level of hospital equipment (Table 8)." The study pointed out that this Taiwanese group goes to hospitals according to medical equipment. Its intrinsic motivation has a relative principle. It will self-judge the level of the disease and then choose a hospital suitable for equipment based on this level, less affected by the risk of COVID-19.(Dependent variable : Item 1, Note 1 : (Response) Because of the occurrence of COVID-19, Taiwanese have reduced the number of visits to medical institutions. Note 2 : The mark ** in the table is the 95% confidence interval, and the P-value is 0, which is significant. S. C. : Standardized coefficient, N. S. C. : Non-Standardized coefficient, Tol. : Tolerance, Sig. : Significance, C. S. : Collinearity statistics)

Model		N. S. C.		S. C.	T	Sig.
		B	S. E.	Beta		
REGR factor 1	(constant)	2.362	.212		11.117	**.000
	Item 5	.123	.056	.132	2.176	**.030
	Item 8	.298	.063	.325	4.708	**.000
	Item 10	.035	.064	.037	.543	.588
	Item 11	-.057	.070	-.059	-.814	.416
	Item 12	.016	.059	.017	.273	.785
REGR factor 2	(constant)	2.830	.175		16.175	**.000
	Item 4	.266	.050	.297	5.296	**.000
	Item 9	.062	.052	.069	1.196	.232
	Item 16	-.011	.052	-.012	-.208	.835
REGR factor 3	(constant)	3.138	.208		15.053	**.000
	Item 14	.035	.055	.038	.636	.525
	Item 15	.142	.058	.145	2.452	**.015
REGR factor 4	(constant)	3.107	.257		12.111	**.000
	Item 7	.160	.066	.132	2.443	**.015

Table 8 Regression Analysis of Questionnaire Items for Factor 1-Factor 4

It shows the results of multiple regression analysis of the total items of the questionnaire. Questionnaire items 4 (0.014), 7 (0.037) and 8 (0.000) were significant (Table 9, marked with **). These three items show that the Taiwanese are still considering the risks of COVID-19. However, the Taiwanese are very autonomous in choosing a hospital or clinic. Taiwanese did not consider money or insurance. Only think about how to solve the problem, reduce the hassle, and get treatment with the appropriate medical equipment. As for whether it is because everyone in Taiwan has government medical insurance (30% of the monthly insurance cost, the company pays 60%, the government pays 10%, and when the sick burden is 5%-30%). The results of this study show that the Taiwanese do

not consider the cost of choosing a hospital or clinic. The choice of the medical institution is based on socioeconomic background, intrinsic motivation, and the degree of hospital risk control.

Model		N. S. C.		S. C.	T	Sig.
		B	S. E.	Beta		
1	（constant）	1.671	.318		5.262	**.000
	Item 4	.137	.056	.154	2.458	**.014
	Item 5	.063	.062	.068	1.025	.306
	Item 7	.135	.064	.111	2.092	**.037
	Item 8	.303	.064	.330	4.748	**.000
	Item 9	.090	.053	.100	1.691	.092
	Item 10	.014	.063	.015	.221	.825
	Item 11	-.071	.069	-.073	-1.017	.310
	Item 12	.032	.061	.034	.528	.598
	Item 14	-.056	.053	-.059	-1.063	.289
	Item 15	.027	.059	.027	.457	.648
	Item 16	-.053	.051	-.060	-1.050	.294

Table 9 All Questionnaires Multiple Regression Analysis

The people's inners will be affected by many circumstances because of risk considerations. People have changed their medical behavior. In the overall return, there are "4. Because of the risk of COVID-19, public have changed people's choice of going to a medical institution. (For example, you used to go to a clinic, now you go to a big hospital. Alternatively, people all went to a big hospital before, now to the clinic)." and "8. Because of the outbreak of COVID-19, people are worried about the risk of cross-infection when people go to a large hospital, so people go to a clinic for medical treatment." However, some still choose hospitals or clinics according to the old thinking mode, "7. Even if COVID-19 occurs, when you choose the hospital, you want to see according to the level of hospital equipment." Taiwanese consideration in the case of risk control. Therefore, we will deal with how to reduce the hassle and fix the problem of medical treatment behavior.

5. Conclusion

5.1 Conclusion and discussion

The framework of this study uses internal motivation and hospital risk control as choices that influence people's healthcare. The study found that in the research hypothesis H1 intrinsic motivation, Taiwanese choice of medical treatment behavior mainly focused on the quality of service in medical institutions and medical equipment.

In addition, among the risk measures taken by medical institutions in the research hypothesis H2. Taiwanese choice of medical treatment behavior will change their choice to go to medical institutions due to strict regulations on entering medical institutions during the epidemic or fear of cross-infection. (For example, went to the clinic before and now goes to the hospital. Alternatively, go to the hospital before and now to the clinic.)

Summarize the above research results. Taiwanese have two mindsets. One is to directly consider the quality of medical equipment and services without considering the risks. Another the first consideration is risk control. Then deal with how to reduce the hassle and fix the problem. Thus, survival strategies for a hospital or clinic are constrained by the external environment and the increasingly stringent healthcare system. Therefore, in the future, as the epidemic continues to spread, large-scale medical centers should continue to purchase high-quality and advanced medical equipment in terms of business strategy. The local small and medium-sized clinics will provide a friendly and convenient medical environment for the people seeking medical treatment based on service quality. To reduce the trouble of seeking medical treatment and solve the problem of medical treatment.

Taiwan adopts the concept of a graded medical system and provides better medical services for patients through the division of labor and cooperation between medical institutions at all levels and two-way referrals. Has the medical behavior of the Taiwanese changed under COVID-19? The practice of government to control risk in the external environment does change the course of medical treatment. However, according to the results of this study, patients' consideration of medical behavior. As factor identified four axes of main "Service Orientation," "Medical Equipment," "Reduce Trouble," and "Problem Solving." In-depth analysis of the content of these four factors, the main essence is the same. Whether intrinsic motivation or hospital risk control, the public starts with "self-centeredness." The so-called self-centeredness refers to an attitude in which consumers believe they are self-centered and ignore others. In short, in the wake of the COVID-19 outbreak, the Taiwanese are looking for self-centered medical procedures. Regardless of how governments manage risks in the external environment, people are looking for convenience for themselves. Therefore, the loophole created by the government's risk control of COVID-19 is that people's intrinsic motivation has exceeded the government's risk control, thus allowing the epidemic to rage.

5.2 Practical Implications

This study shows that people's choice for hospitals lies in equipment, so hospitals are capital-intensive industries. At the same time, the public will solve disease problems with the doctor's technology. Therefore, the hospital is a highly knowledge-based industry. Nevertheless, when the hospital faces people's choices, which must have high-quality service processes for the public. Therefore, hospitals also are part of the service orientation industry. Above all are integrating capital, knowledge, and service in the medical industry into the marketing strategy model for tomorrow's survival to increase the public's choice rate. During the outbreak of COVID-19, hospitals or clinics provided patients with video technology services for disease consultation. This pandemic has brought about the application of technology management, applying video technology to high-infection medical services, and improving the quality of medical service. However, practical implications are consistent with the resource dependence theory. Doctors are dependent learn new technology, clinics depend on good services, and hospitals depend on purchasing medical equipment. All of them want to survive for tomorrow.

Works Citation

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