



The Influence of Perception of Quality and Attitude on the Intention of Using Home Healthcare Services in Hanoi

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Abstract

The authors' research article is about the perception of quality and attitude towards the intent to use home healthcare services of individuals in Hanoi. The study was implemented with 426 observations, using the partial least square (PLS) analysing method and obtained several results. In particular, perception of quality as well as attitude had a strong and multidimensional impact on behavioural intention, with levels of impacts of 0.57 and 0.469 respectively. In addition, the group study further examined the effect of health consciousness on the corresponding low level of 0.132. From there, the importance of prefixes in promoting opinion is: perception of quality, attitude and health consciousness. Through this result, the research can propose a number of strategic solutions for service providers, for state management agencies on appropriate health insurance policies and curative care management, thereby contributing to promoting development of a service type which has many economic as well as social meanings.

Keywords: Home healthcare service; Medical services; Family doctors

Introduction

Medical overcrowding has been a common problem in almost all hospitals in Hanoi, especially large ones at higher levels. The people's needs for curative care have been constantly increasing while medical facilities cannot keep up, leading to many shortcomings in the healthcare sector. In addition, for many patients, direct visits to medical services face many difficulties due to both subjective and objective reasons. From the above situations, the homecare service appeared and became an effective solution with high economic and social significance because it helps to solve many difficult problems. In 2013, the project "Building and developing the model of family doctor clinic for the period 2013-2020" was also approved and put into practice by the Ministry of Health, which proved the importance as well as the consider this service in the future. Especially in 2020, when the Covid-19 epidemic began to break out and spread, the majority of Vietnamese people would not go to medical

facilities for medical examination and treatment because of concern that hospitals were places with high potential of community infection, therefore, the demand for home medical care has increased significantly. However, the number of people using this service is still limited. In order to help develop better services and become an effective support solution for curative care in hospitals, research on the intention to use the home healthcare services is necessary.

Theoretical Basis and Research Method

Theoretical basis

Health care services: According to L. Tuan, medical examination and treatment services include medical care, medicine, nursing, hospital services, dentistry, ophthalmology, with the aim of preventing and mitigating, healing, or trauma, or physical disability [1]. Combining the above definition with the concept provided by the World Health Organization, the home

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healthcare service is a collection of curative healthcare services, medical and social support services for customers in their own place of residence.

The impact of quality perception on attitude and intention:

Service quality is an important factor determining competitiveness, demonstrating the ability of a service to satisfy the needs of customers. And perception is the direct and immediate awareness of things through many different receptors. Combining these two concepts, perception of quality can be understood as customers' thoughts, beliefs and views on the ability to satisfy customers' needs from medical service. According to, service quality is measured by 5 main groups of factors including: reliability, availability responsiveness, assurance, empathy and tangible factor. In this research, authors will apply the Servqual Scale to assess the level of perception of quality. Many previous scholars have mentioned the positive relationship between perception of quality and attitude towards the use of products or services [2,3]. It can be mentioned as, said that perception of product quality had an impact on attitude towards businesses; also concluded that perception of the quality of organic foods had an important effect on consumers' attitudes towards this product; asserted that the positive impact of perception about the quality of electronic services on both attitudes and intention to use services on the Internet; also according to perception of quality affected attitude towards buying through both direct and online channels. Besides, there are also studies on the direct effects of perception of quality on consumers' intention to use services [4,5]. Specifically, built a model to evaluate the impact of perception about health care service quality on behavioural intention, in which the author measured quality over the years through 5 factors: tangibility, reliability, responsiveness, empathy and assurance; emphasized that: improving quality, increasing service value had a positive effect on the behavioral intention of the patients undergoing physical therapy; showed a positive relationship between the quality of service perceived by the patient, intention to use and reuse when studying at Minsheng Hospital, Taiwan [6-8];

Synthesizing a number of studies, the authors said that perception of quality can affect both attitude and intention to use services, so two hypotheses were proposed to re-test for medical services:

H1: Perception of quality has a positive effect on attitudes towards home healthcare services

H2: Perception of quality has a positive impact on the intention to use home healthcare services

The impact of health consciousness on attitude and intention:

In the study of, health consciousness measures readiness to perform take action related to health, are always mindful of your health and mentally improve or maintain health and quality of life, as well as prevent disease by taking healthy actions [9,10]. In

this study, health consciousness is understood as the level of consumer concerns about health-related issues, as shown by their tendency to act or use products, service that is conducive to their health. Several researchers have demonstrated the relationship between health consciousness to attitudes with certain products or services: applying the Theory of planned behavior demonstrated that a sense of health had a positive effect on intent to use organic food; concluded that the relationship between perception of the importance of health influenced attitudes and intention to use health-related products and services on mobile to improve quality of life [11]. Not only that, but health consciousness also has a direct impact on the intention to use products or services. Some of the studies that can be mentioned here are as follows: confirmed the role of health consciousness in attitudes and intentions of organic food consumption; both showed that the sense of health would have a positive effect on intentions as well as habits to use mobile services and applications related to health care and protection; From the reference models from the above studies, the research group found that there was a correlation between health consciousness to attitude and intention with the field of curative care services, so the research group proposed 2 more hypotheses [12,13]:

H3: Health consciousness has a positive influence on attitude towards home healthcare services

H4: Health consciousness has a positive influence on the intention to use home healthcare services

The theory of planned behaviour: Besides, this research also inherited the Theory of planned behaviour to come up with the model. Suppose individuals have a positive attitude towards behaviour, and their essential people expect them to behave in specific ways, they will have a higher probability of doing that behaviours. It has also been proved in many previous research pieces, stating the relationship between attitudes towards behavioral intention and executing it. Many scholars in the health-related field have also confirmed this relationship, for example, "The theory of planned behaviour: a review of its applications to health-related behaviours". Therefore, in this research, the theory of planned behaviours was applied to build the hypothesis:

H5: Attitude towards home healthcare service positively influences intention to use home healthcare service (Figure 1).

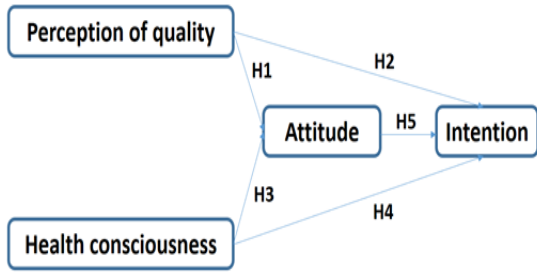


Figure 1: Proposed conceptual framework.

Methods

The target of this research is residence living and working in Hanoi. The group of authors has conducted the official quantitative study by questionnaire surveys. The total number of responses was 450; after filtering, the number reduced to 426 valid surveys, including 32 face-to-face responses and 394 online responses). The data was analyzed with SPSS 26 and SmartPLS-SEM 3.0 by PLS Method.

Results

Table 1: Reliability and factor analysis results.

No	Component	Number of items	Cronbach's Alpha	Total variance explained	Conclusion
1	Reliability (DTC)	5	0,847	62,523%	Accepted
2	Availability responsiveness (DU)	6	0,869	60,706%	
3	Assurance (DB)	5	0,909	73,329%	
4	Empathy (TC)	4	0,926	81,964%	
5	Tangibles (HH)	5	0,896	70,969%	
6	Health Consciousness (SK)	5	0,844	62,983	
7	Attitude (TD)	6	0,850	58,319%	
8	Intention (YD)	4	0,861	70,913%	

Table 1 provided Cronbach's Alpha values and exploratory factor analysis (EFA) results. The Cronbach's Alpha results for all constructs were above the recommended level of 0.6 (Hair & ctg), and total variance explained results were above 50%. Simultaneously, the authors created average values representing quality perception factors, using for analysing exploratory factor EFA and valid SEM model in the following steps. The group of factors needed to create new identity values was as follows: Reliability (DTC), Availability Responsiveness (DU), Assurance (DB), Sympathy (TC), Tangible Factor (HH).

Exploratory Factor Analysis (EFA) results

EFA results stopped at the third time with KMO statistics at 0.878 and Bartlett test value with Sig. = 0.000 (<0.005). This demonstrated that observed variables generally correlate. Specifically, in the first attempt, Factor Loading of TD1, TD2, SK5 did not appear, therefore, the authors eliminated these variables from the model. In the next attempt, Factor Loading of TD3 did not appear so they were eliminated from the model either. After eliminating those unqualified variables, there were four groups of factors left, including 16 observed variables. The Eigenvalue was 1.129, and the Total Cumulative Variance explained was 67.677% (Above 50%), which meant at the value of Eigenvalue of 1,129, these 4 components could explain 67,677% of variance of data collected (Table 2).

Table 2: EFA results.

Component	Items
Perception of quality (NTCL)	DTC, DU, DB, TC, HH
Health consciousness (SK)	SK1, SK2, SK3, SK4
Attitude (TD)	TD4, TD5, TD6
Intention (YD)	YD1, YD2, YD3, YD4

Table 3: Measurement Model analyzing results.

Component	Cronbach's Alpha	Composite Reliability	Average variance extracted (AVE)
NTCL	0.906	0.930	0.727
SK	0.848	0.898	0.687
TD	0.866	0.918	0.788

YD	0.863	0.906	0.708
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Structural Equation Modelling (SEM) analysis

Measurement model testing (Table 3): In order to test the scale’s reliability, the research use Composite Reliability (CR), Average variance extracted (AVE), Outer loading. The Composite Reliability and outer loading must be above 0.7 and 0.4 respectively [15]. Besides, according to, the average variance extracted must be above 0.5 to prove the reliability and Convergent validity [16]. The minimum value is 0.687 from the Health Consciousness. The results indicated satisfactory of all the values in measurement model.

Structural model testing: SEM results in image 4 illustrated that model had Chi-Square Test at 1072,1493 with p-value = 0.000 < 0.005. However, according to, if the model has the SRMR value <0.1, then it will be considered appropriate for the real data. Hence, SRMR = 0.079 < 0.1, the model was considered appropriate with the data collected in Hanoi [17] (Figure 2).

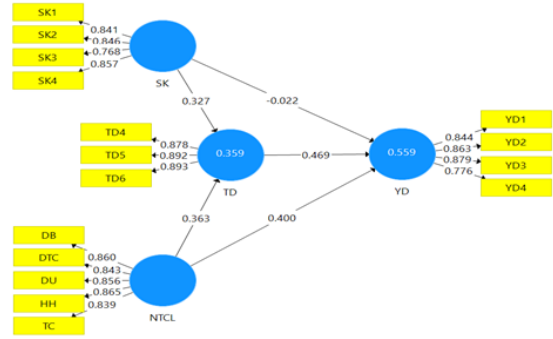


Figure 2: PLS-SEM Results analysis.

According to the result, perception of quality and health consciousness only explained 35,9% of attitude variation, at the same time, perception of quality, health consciousness, and attitude explain 55.9% of intention variation, at the meaning level of 5%. However, according to Chin and associates (1996), when analysing the effect of independent variables towards dependent variable, the researcher not only consider the relationships of meaning level but also analyse the effect level. Therefore, this study continued to test bootstrapping [18].

Bootstrapping testing

From 5000 observations, all the original weights are in the range of 95%. Therefore, the estimates in the model were considered to be reliable (Table 4).

Table 4: Bootstrapping structural model testing.

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	5%	95%
NTCL -> TD	0.363	0.363	0.000	0.277	0.448
NTCL -> YD	0.570	0.568	-0.002	0.503	0.636
SK -> TD	0.327	0.329	0.002	0.232	0.406
SK -> YD	0.132	0.133	0.001	0.050	0.209
TD -> YD	0.469	0.470	0.000	0.384	0.553

Table 5: Hypothesis testing results.

	Original Sample	T-value	P-value	Hypothesis
NTCL -> TD	0.363	6.941	0.000	Accepted H1
NTCL -> YD	0.568	14.122	0.000	Accepted H2
SK -> TD	0.329	6.264	0.000	Accepted H3
SK -> YD	0.133	2.715	0.003	Accepted H4
TD -> YD	0.470	9.043	0.000	Accepted H5

Hypothesis testing (Table 5)

Regression analysis for hypothesis

In this research, the authors used the standardized regression equation to test the effect of independent factors on dependent

ones because the standardized regression equation has the economic meaning more rather than mathematical meaning (Table 6).

According to the results, the three factors all had influences on behavioral intention, specifically, perception of quality was the most important factor. Besides, p-value was 0.000, indicating that

the estimated data was suitable to real data. R-Square coefficient was 0.513, showing that these 3 factors explained 51.3% of the variance of use intentions. The dustbin-Watson = 1,763 and VIF coefficient of the three factors are all below 5. Therefore, we have the regression equation: $YD = 0,532NTCL + 0,192TD + 0,102SK$. Hence, the importance of each factor on behavioral intention respectively were: perception of quality, attitude and health consciousness.

Conclusion and Implications

Conclusion

Based on the review of the data and analyses summarized in the previous section, the research team drawn the following conclusion: the majority (95%) of survey respondents indicated that they had heard of home care services and the Internet is by far the most popular source of information. Over four out of ten (45%) respondents have been using it, as the data indicated that convenience and time saving were the main reasons that made the respondents think positively of using home health care, while the remainder still preferred hospitals to provide health care services. At the same time, based on a review of domestic and foreign research, the team has constructed a theoretical model for evaluating the study hypotheses about direct and indirect effects of perceived quality and health consciousness on attitude and intention to use home medical services. Results indicated that there was a positive and significant impact of perceived quality on consumers' attitude and using intention (0.363 and 0.568 respectively), which means that increasing awareness among consumers can enhance their purchase intention and attitude towards the home care service. Furthermore, attitude also positively influenced behavioral intention towards usage (at 0.470). The above results were consistent with a number of previous studies of the relationship between perception, attitude and behaviours. It can be inferred that perception is directly derived from the customer's interaction with the service or from external sources of information, thus improving quality of service and media strategy may significantly increase customers' behavioral intentions. In addition to affecting purchase intentions, health consciousness should also be considered despite having small beta weight for both attitude and intention, precisely 0.329 for the former and 0.133 for the latter. This indicated that individuals with high health consciousness tended to get far more proactive about searching for health products and services in order to protect their personal and their family's health. Therefore, home health aide services are an alternative to reside at home instead of hospitals and potentially experiencing discomfort through unfamiliar surroundings [19-21].

Implications

Based on the findings of this study, the researchers would like to make some recommendations to the following parties.

For State management agencies: This finding suggests that the government should focus on developing and strengthening the management mechanisms, policies and organizational systems in order to improve and ensure the quality of nursing home care services. Additionally, the government should take action to control price policies along with subsidizing health insurance, as home-based medical services provide solutions to current healthcare problems.

For hospital managers and healthcare service providers: The research team recommends that the hospital managers build a marketing-mix strategy including products, prices, and promotional techniques to enhance their public image and distribution methods that must be in sync with one another. However, above all, health's moral importance is what makes home healthcare service distribution special. The application of marketing in the field of healthcare has to ensure authenticity, making patient health and safety a top priority. Healthcare managers have to avoid marketing abuse and exaggeration advertising to increase profit because not only it can violate medical ethics but also risk directly harming patients. Finally, improving customer's perception, thereby improving both attitudes and intentions to use services are the top objectives of strategic marketing.

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