

**Decision process on Health care provider – A Patient outlook:  
Structural equation modeling approach****Ms. Sharanya Paranthaman,**

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**Abstract:** Patients' needs and expectations have to be clearly understood by the hospitals in order to deliver better health care service. Consumer Behaviour is the study about how individuals, groups, and organizations choose, buy, utilise and dispose of goods, services, ideas and experiences to satisfy their needs and wants. It helps us to know when, why, how, and where people do or do not buy a product, or a service and also attempts to apprehend the consumer decision making process, both individually and in groups. Cognitive processes, involving thought, experiences and senses of the buyer also play a crucial role in determining the buyer's choices. A consumer plays three diverse roles such as user, payer and buyer. The current study was done in order to analyse, as to why a patient chooses a particular health care provider. Data were collected from 120 patients of the corporate hospitals located in Chennai. In order to evaluate the association between variables used in the model, Structural Equation Modeling (SEM) was used for analysis of data. The result of the study showed that, there is an absolute fit and reveals that the proposed model is acceptable among the variables, satisfying the recommended values.

**Key words:** Individual determinants of Behaviour, Decision process, Structural equation modeling (SEM).

**INTRODUCTION**

The health care sector is steadily growing and moving into the view of a service sector coupled with the intent to do business. Healthcare organizations today face the daunting task of delivering the service while at the same time ensuring that the organization survives while contending with competitors. The organization can only survive as long as it has a steady inflow of patients. Assessments of the various factors that influence what makes an individual, as a consumer of healthcare services, prefer or decide to choose one healthcare organisation over the other, may help organizations finding it difficult to survive in the market to identify areas for improvement.

**Role of Cognitive Processes in Consumer Behaviour**

Human beings, being species possessing the sixth sense, do not perform actions based on 'need' alone. A variety of factors influence the decision making behaviour of a consumer. The role of cognitive processes, which are higher level functions of the brain which involves the assimilation of experiences and senses to influences one's line of thought (memory for instance), plays a crucial role decision making.

**OBJECTIVES OF THE STUDY**

- 1) To assess the individual determinants of behaviour that influences the patient in choosing a health care provider.
- 2) To assess the decision process of the patient.
- 3) To develop a suitable model for decision process.

## METHODOLOGY

The development of the study is in an aim to define a suitable model for patient decision process which is based on following steps

- 1) Analogous works available in the field of decision process were reviewed in direction to identify the key aspects of the study.
- 2) In direction to improvement of aspects involved in the study, scheduling method were conducted involving experts. The questionnaire was disseminated among the experts like statistician, senior level doctors and experienced person. About 10 – 20 experts were asked to provide their suggestions and comments for improvising the study aspects.
- 3) The model is measured by issuing the questionnaire to the patients. The patients were requested to give their view on a five point scale concerning the aspects of decision process.

**Table 1: Aspects of projected to assess the Decision process**

ASPECTS	MEASURES
<b>Individual Determinants of Behaviour</b>	
Learning and Memory	Patient's introduction to the Hospital, Word of mouth, Advertisement through Brochures, Pamphlets, Websites, Advertisement on TV/Radio/ Newspaper, Mode of treatment, Availability of modern equipment, Multi-specialty facilities, Prompt diagnosis, Insurance facilities, Brand image
Motivation and Involvement	Affordability, Ambience , Transportation, Trusted doctor, Forced due to financial constrains such as approved institution by employer or insurance
Attitudinal Aspects	Best suited for my status, Friends and relatives come here for treatment, Doctor knows all about me, Frightened of unknown hospitals
Perception and Information Processing	Transparency in treatment & payment procedures, Economical for non-insurance patients, Promptness of service, Counselling given by medical professionals
<b>Decision Process</b>	
Taking medical decisions	On your own, In consultation with spouse, parents, relatives , friends, professionals
Decision to choose the hospital	With full awareness , Because of facilities / Doctor/ Preferred hospital by many people/ location/ accessibility/affordable/ on basis of reference

- 4) Structural Equation Modeling (SEM) has been used for evaluating the decision process. It is a statistical technique for measuring the causal relationships amongst variables, as well as validating the compatibility of the model. It evaluates whether the data fits a theoretic model.

## RESULTS:

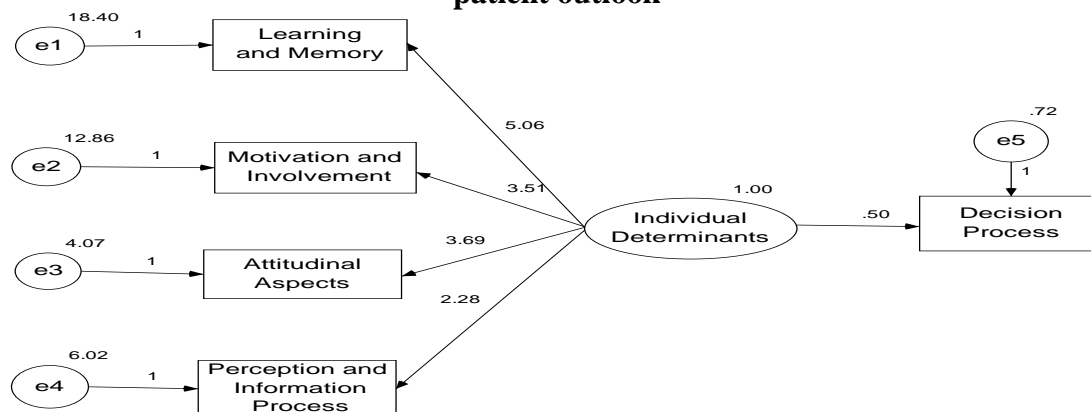
**Variables used in the Structural Equation Model are as follows:**

- I. Observed, endogenous variables
  1. Learning and Memory
  2. Motivation and Involvement
  3. Attitudinal Aspects
  4. Perception and Information Processing
  5. Decision Process
- II. Unobserved, exogenous variables
  1. Individual Determinants
  2. e1: Error term for Learning and Memory
  3. e2: Error term for Motivation and Involvement
  4. e3: Error term for Attitudinal Aspects
  5. e4: Perception and Information Processing
  6. e5: Decision Process

Hence number of variables in the Structural Equation Model is

- Number of variables in this model : 11
- Number of observed variables : 5
- Number of unobserved variables : 6
- Number of exogenous variables : 6
- Number of endogenous variables : 5

**Figure 1: Structural equation model for the aspects of decision process on health care provider a patient outlook**



**Table 2: Variables used in Structural Equation Model (SEM) Analysis**

Variables		Unstandardized co-efficient	S.E	Standardized co-efficient	t value	P value
Learning and memory	<--- Individual determinants	5.063	0.547	0.763	9.257	<0.001**
Motivation and Involvement	<--- Individual determinants	3.505	0.426	0.699	8.237	<0.001**
Attitudinal aspects	<--- Individual determinants	3.689	0.328	0.877	11.252	<0.001**
Perception and Information Processing	<--- Individual determinants	2.282	0.287	0.681	7.963	<0.001**
Decision process	<--- Individual determinants	0.503	0.090	0.509	5.579	<0.001**

Note: \*\* denotes significant at 1% level

Here the coefficient of **learning and memory** is 5.063 represents the partial effect of Learning and memory on Individual determinants, holding the other variables as constant. The projected positive sign indicates that such effect is positive that Individual determinants would increase by 5.063 for every unit increase in Learning and Memory and this coefficient value is significant at 1% level.

The coefficient of **motivation and involvement** is 3.505 represents the partial effect of Motivation and Involvement towards, Individual determinants holding the other variables as constant. The projected positive sign indicates that such effect is positive that Individual determinants would increase by 3.505 for every unit increase of Motivation and involvement and this coefficient value is significant at 1% level.

The coefficient of **attitudinal aspects** is 3.689 represents the partial effect of attitudinal aspects towards Individual determinants, holding the other variables as constant. The projected positive sign indicates that such effect is positive that Individual determinants would increase by 3.689 for every unit increase in attitudinal aspects and this coefficient value is significant at 1% level.

The coefficient of **perception and information processing** is 2.282 represents the partial effect of perception and information processing towards Individual determinants, holding the other variables as constant. The projected positive sign indicates that such effect is positive that Individual determinants would increase by 2.282 for every unit increase in perception and information processing and this coefficient value is significant at 1% level.

The coefficient of **individual determinants** is 0.503 represents the partial effect of individual determinants towards decision process, holding the other variables as constant. The projected positive sign indicates that such effect is positive that decision process would increase by 0.503 for every unit increase in individual determinants and this coefficient value is significant at 1% level.

### MODEL FIT SUMMARY

In order to evaluate the model, emphasis was given to common model-fit measures like Chi-square value, P Value, Goodness of fit index (GFI), Adjusted goodness of fit index (AGFI), Comparative fit index (CFI), Root Mean Square Residuals (RMR), and Root mean square error of approximation (RMSEA). According to Gerbing and Anderson (1992), the criteria for an acceptable model are as follows: RMSEA of 0.08 or lower; CFI of 0.90 or higher. The fit between the data and the proposed measurement model can be tested with a chi-square goodness-to-fit (GFI) test where the probability is greater than or equal to 0.9 indicates a good fit (Hu and Bentler, 1999).

**Table 3: The estimates of the model fit indices**

Variable	Value
Chi-square value	4.350
P value	0.500
Goodness of Fit Index (GFI)	0.986
Adjusted goodness of fit index (AGFI)	0.959
Comparative fit index (CFI),	1.000
Root Mean Square Residuals (RMR)	0.056
Root mean square error of approximation (RMSEA)	0.000

From the above, it is found that the calculated P value is 0.500 which is greater than 0.05 which indicates perfectly fit. Here GFI (Goodness of Fit Index) value and AGFI (Adjusted Goodness of Fit Index) value is greater than 0.9 which represents that it is a good fit. The calculated CFI (Comparative Fit Index) value is 1 which means that it is a perfectly fit and also it is found that RMR (Root Mean Square Residuals) and RMSEA (Root Mean Square Error of Approximation) value is 0.056 and 0.000 which is less than 0.08 which indicated it is perfectly fit.

### CONCLUSION:

The outcomes of the study can be used to identify the impact of individual determinants on the decision process of the patient with regard to choosing a health care provider. Healthcare provider must focus on the key aspects of the individual determinants. Satisfaction is a function of closeness between expectations and the perceived performance. From the study we can know, the trivial aspects which are also influencing the health care delivery and to what extent it can impact on the health delivery. Thus the study findings will help the health care providers to improve on the health care delivery, to bring about patient delight.



**REFERENCES**

1. Armstrong, D. 1991 “What do patients want?”, *British Medical Journal*, vol. 303, no.6797, pp.261 - 262.
2. Baker, TL. and Taylor, SA. 1997. “Patient satisfaction and service quality in the formation of customers' future purchase intentions in competitive health service settings”, *Health Marketing Quarterly*, vol. 15, no. 1, pp. 1- 15.
3. Lence, RL. and Smith, MC. 1987. “Patient satisfaction an intention to revisit the hospital - A further test of disconfirmation and equity theory”, *Journal of Hospital Marketing*, vol. 2, no.1, pp. 19 – 34.
4. Renganathan, R. Balachandran, S. and Govindarajan, K. 2012, “Customer perception toward banking sector: Structural equation modeling approach”, *African Journal of Business Management*, vol.6, no. 46, pp. 11426 – 11436.
5. Saltman, RB. 1994. “Patient choice and patient empowerment in Northern European health systems: A conceptual framework”, *International Journal of Health Services*, vol. 24, no. 2, pp. 201- 29.
6. Schumaker, RE., Lomax, RG. 1996. “A Beginner’s Guide to Structural Equation Modeling”, *Lawrence Erlbaum Associates*, Mahwah, NJ.
7. Strull, M., Lo, B. and Charles, G. 1984. “Do patients want to participate in medical decision making”, *Journal of the American Medical Association*; vol. 252, no. 21.