



TELEHEALTH

OBJECTIVE

To study the acceptance of telemedicine by the patients and investigate their intention to use telecare. The study shall deal with the factors thereof and its influence on the suitability of telehealth as a mode of healthcare delivery.

METHODOLOGY

- Analyzing a survey done in a medical institute as a sample unit. Patients were sampled by convenience sampling and surveyed with a structural questionnaire. Around 500 questionnaires were collected.
- Model Construction is based on **Health Belief Model**.
- **Confirmatory Factor Analysis (CFA)** is used to test the reliability and validity of the measurement model.
- **Structural Equation Modelling (SEM)** is used to explain the casual model.

HEALTH BELIEF MODEL

It will focus on four components :

- Perceived Benefits (PBs)
- Perceived Disease Threats (PDTs)
- Perceived Barriers of Taking Action (PBTA)
- Individual's Cues to Action (CUES)
 - Internal Cues to Action
 - External Cues to Action

These four components further define the attitude towards telecare (ATT) and the Behavioral intention to use telecare (BI)

HYPOTHESIS

- **H1** : There is a positive correlation between individuals' attitudes toward using ATT and the behavioral intention to use telecare.
- **H2** : Individuals with higher perceived benefits of telecare will have a higher positive attitude to use telecare.
- **H3** : Individuals with higher perceived disease threats will have a higher positive attitude to use telecare.
- **H4** : Individuals with higher perceived barriers of taking action will have a lower positive attitude to use telecare.
- **H5a** : Individuals with higher internal cues to action will have a higher positive attitude to use telecare.
- **H5b** : Individuals with higher external cues to action will have a higher positive attitude to use telecare.

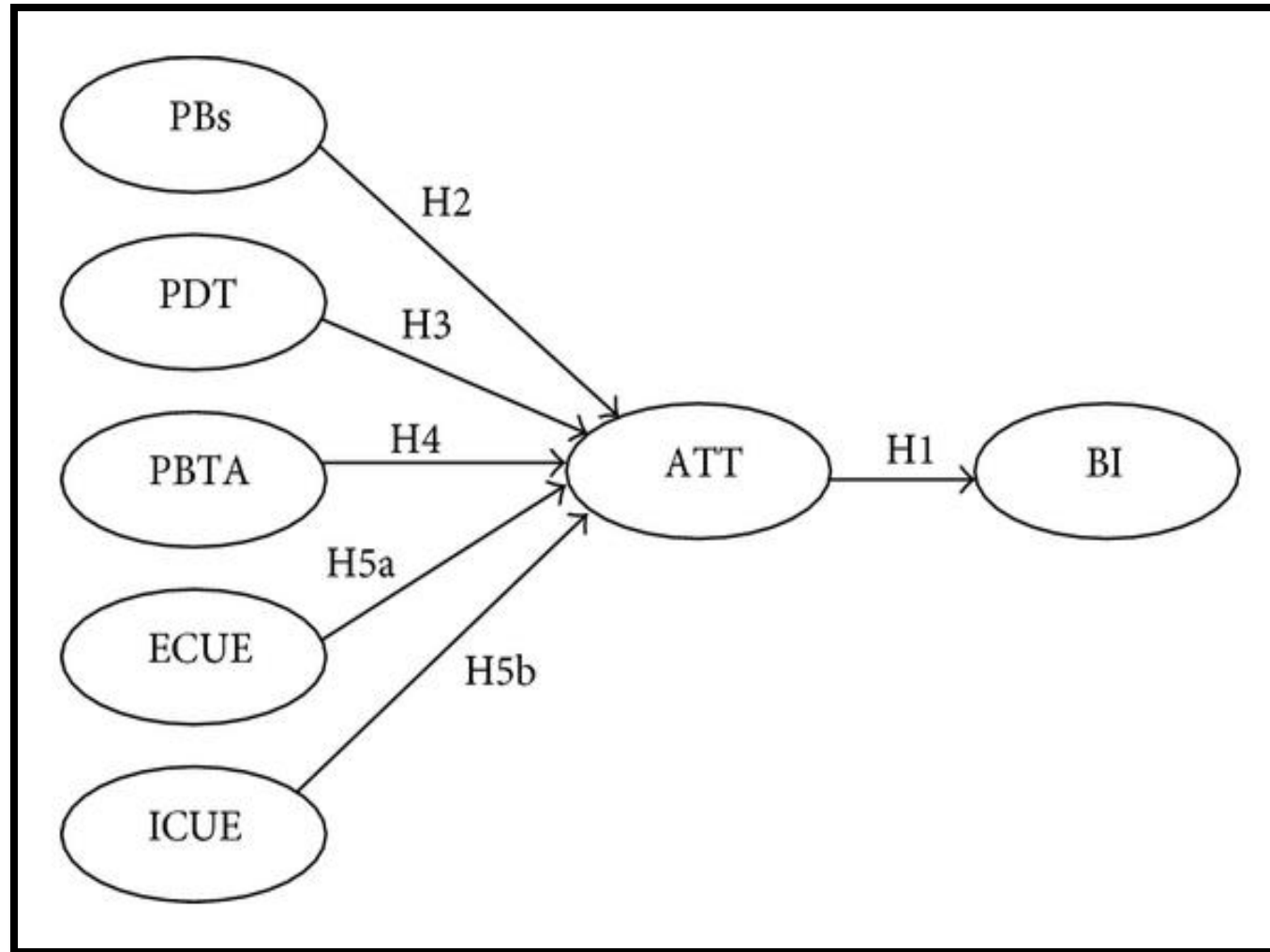


Figure 1 : Research Structure with 7 constructs of Health Benefit Model

DATA COLLECTION

- The study objects are patients with chronic diseases.
- Patients older than 20 years who have chronic disease were surveyed.
- Total of 500 valid questionnaires were collected
- 55.8% of the respondents are females, mostly aged 45 years and above.
- The 44.2% of the males were mostly above 50 years old.
- Most of the respondents are high school educated (29%)

MEASURES OF CONSTRUCT

- **PBs** : PB1 , PB2 , PB3 ,PB4
- **PDT** : PDT1 , PDT2 , PDT3, PDT4
- **PBTA** : PBTA1 , PBTA2 , PBTA3
- **ECUE** : ECUE1 , ECUE2, ECUE3, ECUE4
- **ICUE** : ICUE1
- **ATT** : ATT1 , ATT2 , ATT3
- **BI** : BI1 , BI2 , BI3 , BI4

Validity and Reliability of Measurement Model

- In the measurement model there are 23 indicators describing the seven latent variables. We run this model as a Confirmatory Factor Analysis and we have the following results in nutshell

Fit Indices	Value
GFI	0.81
AGFI	0.75
RMSEA	0.08
CFI	0.94
RFI	0.92
NFI	0.94

INTERPRETATION

- **GFI** : A GFI value of 0.9 or greater is considered to be a good fit for the model. The HBM has a GFI of 0.81 which means the model is a fair fit. It is not up to the standard benchmark.
- **AGFI** : A AGFI value of 0.8 or greater is considered to be a good fit for the model. The HBM has a AGFI of 0.75 which means that the model is a fair fit.
- **RMSEA** : A RMSEA value less than 0.1 is considered acceptable; the lower the better. HBM has a RMSEA of 0.08 which means the model is a fair fit.
- **CFI** : CFI value of 0.9 or greater is considered to be a good fit. HBM has a CFI value of 0.94 which is an excellent fit.
- **RFI** : RFI value of 0.9 or greater is considered to be a good fit. HBM has a RFI value of 0.92 which is a good fit.
- **NFI** : NFI value of 0.9 or greater is considered to be a good fit. HBM has a NFI value of 0.94 which is an excellent fit.

INTERPRETATION

- Fit indices CFI, RFI, NFI and RMSEA all reached the suggested standards of a good fit.
- The indicators GFI and AGFI were slightly lower than the required standards.
- The structural equation analysis (SEM) by Baumgartner and Homburg published in 1994 showed that 24% and 48% of the published papers reported that GFI and AGFI fit indicators lower than the suggested standards could still be considered as acceptable.
- After comparing all the fit indicators with the suggested standards, this study concluded that the fit indicators of the structural model are within the acceptable range.

STRUCTURAL MODEL

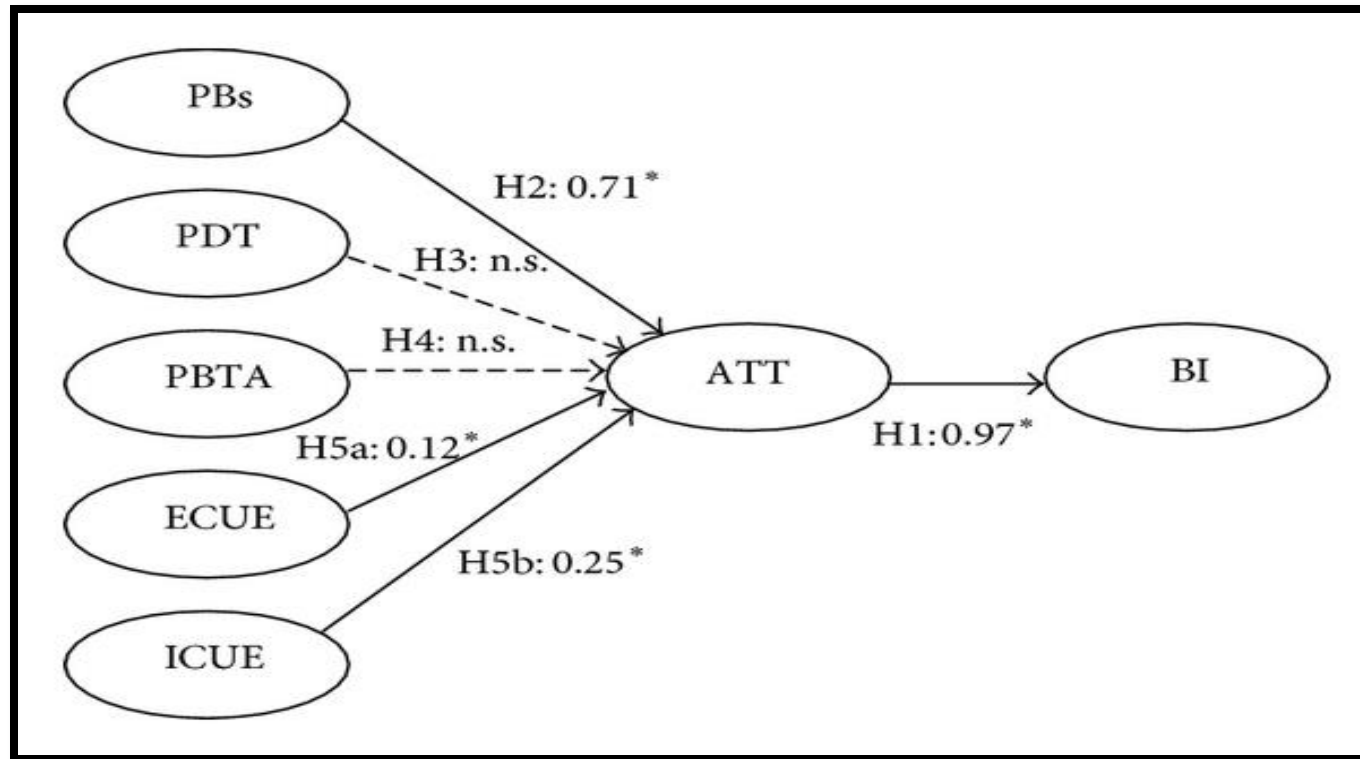


Figure 2: Path Diagram showing results of the Structural Model.

STRUCTURAL MODEL

- The attitude toward using (ATT) was found to positively influence the behavioral intention to use (BI) significantly (the standardized path coefficient of (H1 = 0.97))
- The perceived benefits (PBs) were found to positively influence the attitude toward using (ATT) significantly (the standardized path coefficient of (H2 = 0.71)).
- External cues to action (ECUE) positively and significantly influences attitude toward using (ATT) (the standardized path coefficient of H5a = 0.12))
- Internal cues to action (ICUE) positively and significantly influences attitude toward using (ATT) (the standardized path coefficient of H5b = 0.25)).

INTERPRETATION

- Neither the perceived disease threat (PDT) nor the perceived barriers to taking action (PBTA) had a statistically significant influence on attitude toward using (ATT).
- Therefore, hypotheses 1, 2, 5a, and 5b were supported, while hypotheses 3 and 4 were not supported by the analysis.
- Furthermore, the R^2 value for behavioral intention to use (BI) is 0.972, which is larger than 0.5, indicating that a high degree of variation could be explained by the HBM.

CONCLUSION

- Structural equation modeling showed that the perceived benefits (PBs), external cues to action (ECUS), and internal cues to action (ICUE) all had significant and positive influences on the attitude toward using (ATT) telecare in patients with chronic diseases.
- The highest influence came from PB, followed by ICUE, and ECUE.
- Furthermore, this study did not find any significant influences of the perceived disease threat (PDT) and perceived barriers of taking action (PBTA) on the attitude toward using (ATT).

CONCLUSION

- This study concluded that while promoting the use of telecare, priority may be given to promotion of the users' perceived benefits (PBs).
- It also assessed that the attitude towards using telecare should be strengthened and that the priority should be placed on promoting the patients' perceived benefits, in order to promote the behavioral intention to use telecare in patients with chronic diseases
- Another focus could be on providing external cues to action, such as increasing the influence of important people . In doing so, the multiple advantages of telecare could be reached in regards to the welfare of patients with chronic diseases.

TAKEAWAY

- First, the findings demonstrated that patients with chronic diseases use telecare differently from the general public. The main contribution of this study was to explore the intention of patients with chronic diseases to use telecare.
- Second, different methods should be used to promote the attitude toward using and the actual usage of telecare according to the different demographic characteristics of the subjects.
- Third, when promoting the use and acceptance of telecare in patients with chronic diseases, technology developers should prioritize the promotion of the usefulness of telecare.

THANK YOU !

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