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Electronic Personalize Health Records Towards Acceptance from Patients, Physicians and Organizations in Malaysia Perspective: Methodgy Applied

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Research Methodology is defined as a highly intellectual human activity used in the study of nature and matter specifically in relation to the way data is collected, analyzed, and interpreted. The models, procedures, and techniques used to find research results. In this chapter the author explains the method which has been used in this research. The author concluded that it would be appropriate to employ mixed techniques in this study after considering the purpose of the current investigation and conducting a discussion. The study used a case study methodology and was conducted using the method of systematic observation. The two characteristics listed below define this approach and are appropriate for the research being conducted. The ability to refrain from directly influencing variables and manipulating them comes first. Secondly, that framework makes it easier to study a phenomenon "in the wild." In order to examine the e-PHR system in Malaysia in a realistic environment, both of these qualities are appropriate for the research to identify the appropriate user acceptance models to apply to it. This essay introduces

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Acceptance.

1. Introduction

As stated by [1] Individuals' electronic personal health records, or e-PHRs, are a publicly accessible repository of health data. One such software application or technology that offers patients a range of choices for managing and tracking their health in their daily life is e-PHR. Additionally, e-PHR has been described and regarded as a self-management tool, particularly for patients with chronic conditions as diabetes, cancer, COPD, and others [2]. In addition, because it affects thousands of individuals annually, it has been regarded as a self-management tool for diseases like cancer, heart attacks, and strokes that can be prevented. Since many kinds of e-health records are offered, the e-PHR is also a novel trend [3], [4] are provided as all activities such as recording, management, monitoring, and maintenance are performed by the patient himself [5]–[7]. As stated in [8]–[10] the e-PHR used or in today's development supports different functions and therefore offers different value propositions. the e-PHR that is now in use supports a variety of functionalities and, as a result, provides a range of value propositions.While the role and focus of the electronic health record (EHR) [13], [14] system is to provide the necessary information for healthcare professionals, the PHR system [11], [12] stated that it lacks the same level of observation. In contrast, the PHR system [15] records the specific health data that individuals have entered, provides care-related information specific to individuals, and offers tools to help individual patients take a more active role in their own health. Accordingly, this instrument should be regarded as crucial to provide patients easier and better care in accordance with the current technological paradigm [2]. In order to deliver this tool, the acceptance of the user as a patient and the physician is an important part of the use of e-PHR. This paper provided a detailed explanation related to the research methodology that has been implemented in the study toward e-PHR acceptance in Malaysia

2. RELATED WORK

Since medical records are kept and handled independently, electronic health records (e-PHRs) are a new trend in the medical information exchange system that offer a variety of e-health records [16], [17]. Despite e-PHR's many advantages, research on it is still lacking, particularly in Malaysia [[18]. Many nations around the world have begun implementing e-PHR, but obstacles to its successful adoption include problems with workflow, communication, workload, technology, and many other areas. The mode of data collecting, which may involve qualitative, quantitative, or a combination of both, is determined by the research approach (Mohammad and Jalil, 2013). Theoretically, at least, no research design need a research technique; yet, in reality, more experimental designs typically employ quantitative methods (Creswell, 2013).

[19], [20] using a triangulation technique is needed to examine the acceptance from the perspectives of patients, physicians, and organizations, as the goal of this study is to determine the factors that affect users to accept or reject e-PHR. For a wide-ranging goal and a deeper level of comprehension and validation, researchers use mixed techniques, which integrate aspects of qualitative and quantitative research approaches [21]–[23].

How a researcher plans to collect data is directly impacted by the study method they use.In particular, the selection of particular research techniques also exposes disparate research practices, skills, and presumptions. represent various study methodologies, presumptions, and techniques Creswell (2013). A mixed method [19], [20] using a triangulation technique is needed to examine the acceptance from the perspectives of patients, physicians, and organizations, as the goal of this study is to determine the factors that affect users to accept or reject e-PHR. For a wide-ranging goal and a deeper level of comprehension and validation, researchers use mixed techniques, which integrate aspects of qualitative and quantitative research approaches [21]–[23] According to Creswell (2013), this approach integrates a number of strategies to improve study results. Triangulation is a phrase that is frequently used in conjunction with mixed approaches, which include explanatory sequential design, exploratory sequential design, and other sorts, according to Carter et al. (2014). This earlier research examines the comprehension and exploration of pertinent elements that impact e-PHR user adoption in other nations. The mode of data collection, which may involve qualitative, quantitative, or a combination of both, is determined by the study approach, as previously noted [24], Although more experimental designs typically employ quantitative approaches, in theory at least no aspect of any study design necessitates the adoption of a research method (Creswell, 2013). The manner a researcher gathers data is influenced by the study approach they choose. Different research practices, presumptions, and talents are also reflected in certain research methods (Creswell, 2013). A mixed method approach using the triangulation technique is necessary to examine the acceptance from the perspectives of patients, physicians, and organizations, as the goal of this study is to determine the factors that affect users to accept or reject e-PHR. For a wide range of purposes and a deeper level of comprehension and validation, researchers use mixed methods [25] which blend aspects of qualitative and quantitative research approaches. With reference to Creswell (2013), This approach enhances study outcomes by combining multiple methodologies. Triangulation is a phrase that is frequently used in conjunction with mixed approaches, which include explanatory sequential design, exploratory sequential design, and other sorts, according to Carter et al. (2014). This earlier research examines the comprehension and exploration of pertinent elements that impact e-PHR user adoption in other nations. Figure 1 summarizes the research approach procedure. The ensuing subsections provide more information about each process's specifics and contents. In Malaysia, this study used a mixed-method approach that included patients, doctors, clinics, and both public and private hospitals. Access to organizational empirical data is essential to enable analyze real-life contexts, and technological, sociological, and organizational aspects in order to build theory and develop validating models for e-PHRs in Malaysia.

3. METHODOLOGY

Figure 1 summarizes the steps involved in the research methodology process. The ensuing subsections provide more information about each process's specifics and contents. In order to provide a clear image for selecting appropriate research strategies for this study, some of the quantitative and qualitative research methodologies have now been explained. This study used a mixed methods approach in Malaysia, involving patients, doctors, clinics, and both public and private hospitals. To establish theory and create validating models for e-PHRs in Malaysia,

it is imperative to have access to organizational empirical data in order to study real-life scenarios as well as technological, social, and organizational issues.

4. RESEARCH DESIGN

The logical structure of the study is referred to as the research design by [26], [27]. It explains what information is required, who must provide it, and how it will address research questions. The degree to which causal claims about the intervention's effects can be made depends on the fundamentals of research design. Research design addresses logical problems instead of logistical ones. Below are the research questions, hypothesis, independent and dependent variables, data collection methods, and statistical analysis that will be used in this study to improve its design.

TRIANGULATION TECHNIQUE

To put it another way, triangulation [28] has been defined as the use of multiple approaches to investigate research problems in order to increase the certainty of the data and the findings. This is due to the fact that some research will have used, or been based on, a particular research approach, but will run into some limitations with the method or from specific applications (Creswell, 2014). For example, the researchers may choose to employ one of the most appropriate or well-known sources when conducting their research. Triangulation offers greater confidence prospects and can support a significant amount of evidence [29]. Scientific methods divide triangulation into several categories, while the evidence data triangulation or data source triangulation is the collection of data using several strategies of sampling. The various approaches of Inter while s s s triation method means that more than one research is used in the area of cover age and analysis. Triangulation of perspectives to the same dataset or theoretical triangulation refers to the employment of more than conversation theoretical position in data interpreted. The last is methodological triangulation or method of triangulation means identification of more than one technique of data collection. Using; Triangulation technique involves the use of; Different methods, theories, investigators or data source for a single phenomenon. According to Denzin (2012), Denzin (1970) noted that research results would have greater validity and dependability than those from single approach studies if several ways were utilized to explore the phenomenon and the findings and inferences were similar. This study also showed that triangulation, which combines traits that overlap and those that are distinct from the phenomenon, could aid in the concentration of results. Figure 3.1 below details the triangulation technique used in the research design;

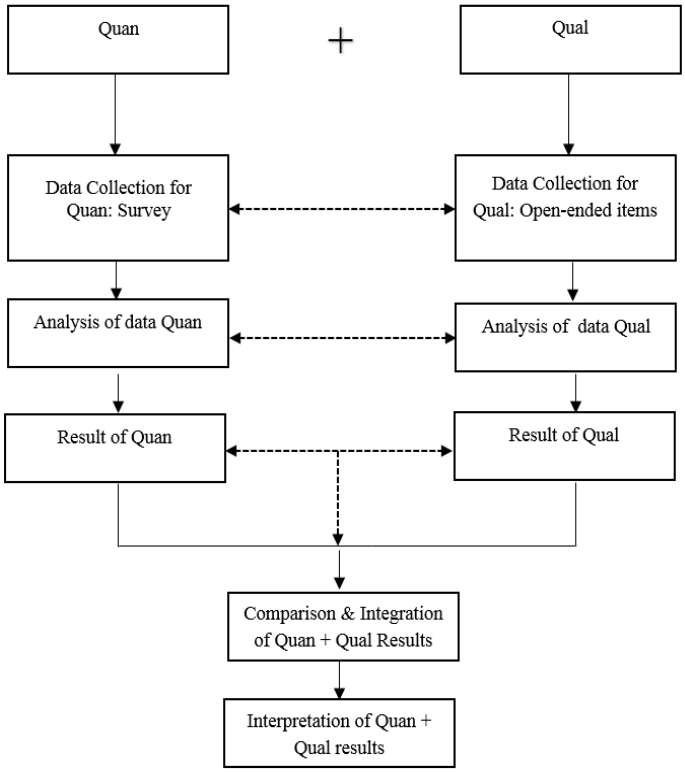

Figure 1: Research Design [28]

5. RESEARCH PROCESS

Figure 3.1 above shows the research design for this study which involved two methods quantitative and qualitative. The data collection from quantitative is derived from a survey and while data collection from qualitative derived from open-ended items. The findings have been from both methods been analyzed using the analysis tool. The result has been compared, integrated, and interpreted.

i. Conduct Literature Review Phase

The literature review process in this research has been done by reviewing the existing including current studies in a variety of databases such as IEEE Xplore, ScienceDirect, Web of Science, and other scholars to find the research gaps. The literature has also been performed in order to identify the current factors that influence the user to accept e-PHR.

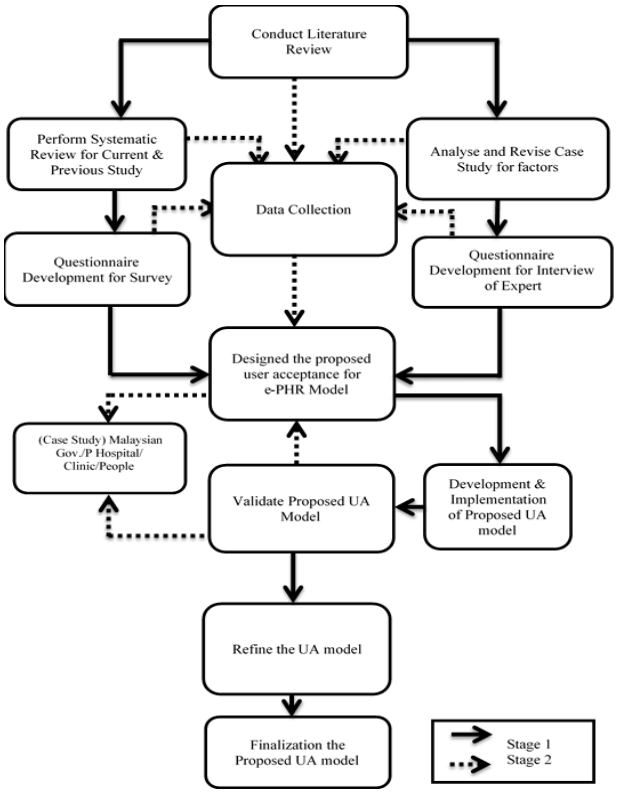

Figure 2: Research Process

ii. Data Collection Phase

The primary data was collected through structured and open-ended interviewing techniques [30], [31]. In order to make sure they understood the questions and were comfortable answering them about the topics of interest in this research, the interviews were performed in an informal and unstructured manner. The case study employed in this study dispersed empirical data from a variety of sources, including documents, archival records, observations, and interviews, as recommended by (Bash et al., 2006; Hart, 2007; Ghani, 2010). The purpose of this study was to gather empirical data, all of which were qualitative, and a variety of techniques were employed to do so. For example, the first theoretical and recommended model, as well as the literature and organizational papers used in the literature review, were examples of primary data. For example, the first theoretical and recommended model, as well as the literature and organizational papers used in the literature review, were examples of primary data. Semi-structured, yes/no interview questions, as well as the process of observing and reviewing organizational records, were the primary methods used to collect the interview data (of the main case). The participating respondent provided these details. Primary data serves two purposes: it confirms that an actual event is understood and establishes necessary prerequisites for building the suggested model.

iii. Perform Systematic Review for Current & Previous Study Phase

This section contains a number of studies that attempted to provide conceptual or model

models in an attempt to improve the use of significant SRs for creating specific future research, along with other relevant materials that make reference to the goals of this investigation. Additionally, explain how the researcher arrived at the systematic reviews by conducting a literature review of every publication, journal, and article.The exclusion criteria for each discovery were then presented in order to concentrate on particular subjects associated with this study. The systematic literature review taxonomy has made reference to the findings.

iv. Analyse and Revise Case Study on Current Model Phase

This phase has been performed to determine the current characteristic, weaknesses, problems and strengths of the e-PHR constructs in order to fit Malaysian users.

v. Questionnaire Development for Survey Phase

The question has been selected and chosen from the existing model and studies which has implemented and used the related model in their research. The development questionnaire related to factors has been developed through the combination of three models which are UTAUT2, DOI, TOE, and Cultural Hofstede, and existing studies as shown in the table below. The hypothesis that was identified from the literature using the current research model served as the foundation for its establishment. There are three sets of questionnaires have been developed first related to patients, secondly related to physicians, and the last related to organizations.

Questionnaire Development for Interview of Expert Phase

A selected group of experts consisting of 10 experts from the ICT fields has been approached and interviewed as targeted participants to verify and validate every question in order to check whether the question is suitable or not suitable before distributing it to users which are patients, physicians, and organizations. The development of a verification and validation questionnaire with the expert has been developed which involved several expert backgrounds such as fields, education level, experiences, and others. The modification for the questionnaires has been performed after the verification and validation of the questionnaires based on the comment and suggestions from the expert. Following the phase of adjustment, the questionnaire was finalized and approved by being validated and verified once again with the chosen expert. A pilot research has since been carried out.

Design the Proposed Model Phase

The proposed model has been designed through several process literature reviews, gaps, case studies, data collection phase, and others. The design started with the construct of the hypothesis based on the variables which have been identified from the existing research model. The conceptual model of e-PHR has been designed based on the user acceptance model from existing studies. The last design has been finalized after the data analysis from the survey.

6. CONCLUSION

Mix method approached using the triangulation technique has been applied in this research. The quantitative and qualitative approacheshave been interpreted and the process of research presented every process involved in data collection, analysis, and design of the proposed

model in this study.

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