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Research Article

DIFFICULTY IN USABILITY OF ELECTRONIC PERSONAL HEALTH RECORD SYSTEMS FOR AN UNDERSERVED ELDERLY ADULT POPULATION

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ABSTRACT:

Objective: The objective of the current paper is to investigate the use of electronic patient records (E-PHRs) among elder people and those with low income. Elder population due to low awareness, literacy rate, low income level and lack of training and experience felt difficulty while assessing E-PHRs.

Background: Use of PHRs has been increasing in healthcare organizations. Patients' involvement in managing health has been crucial. However, scars and spars literature is available about use of PHRs in elderly people.

Material and Methods: The nature of the current study is quantitative and nature of data is cross-sectional. Survey approach was used. Self-administered questionnaire was distributed among 30 elderly people. Questionnaire consists of two sections. First is about demographic information such as gender, age, literacy and second section are about awareness, lack of experience, training and resistance to new technology. Frequency, percentage, and mean values are calculated in SPSS. The reliability of the questionnaire was checked by Cronbach alpha.

Results: Findings indicated that highest mean value is scores by lack of experience followed by resistance to new technology. Moreover all the constructs met the threshold for reliability.

Conclusion: It is concluded that hospital administration focus on training on elderly population. Motivate them to use new technology, make it user friendly and raise awareness about using E-PHRs and its benefits.

Practical Implications: This study has practical implications for health practitioners, policy makers and ministry of health. Policy makers cannot ignore the importance of E-PHRs while making policy. Budget is required for training, raising awareness and motivating elderly population to use E-PHRs but it has long term benefits in future. Both health care professionals and patients can take benefits from use of E-PHRs.

KEYWORDS

Communication Impairment, Disability, Health, Health literacy, communication skills, PHR, Personal Health Records, e-PHR

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1 | INTRODUCTION

Electronic personal health records (E-PHRs) were established in Saudi Arabia in 2018. It was established by Ministry of National Guard Health affairs to enhance the quality, safety and effectiveness of health care services. E-PHRs fall under e-health or telemedicine[1]. Legislation was passed around the World that patients have the right to access their data and information regarding their health[2]. Due to this legislation health care organization started using e-health so that patients have the access to their data[3]. Use of new tools like e-health or E-PHRs empowers the patients by giving them ownership of their data[4]. Through implementation of PHR not only patients but other stakeholders can also take benefits[5]. Though, PHRs is getting momentum in the World yet percentage of adoption of PHRs is still very[6]. In this regard healthcare professionals (HCPs) plays very important role[7]. Endorsement by the professionals can increase the use of PHR not only in the institutions but individuals as well[8]. In Kingdom of Saudi Arabia health sector passed through various transformations and reforms. These includes privatization, fee for services, insurance moreover, e-health services has been implemented to enhance quality of services which is part of Vision-2030. To the best of authors' knowledge limited is known about PHRs. After pandemic the need to manage digital health has been significantly increased. Therefore some scholars are of the view that patients empowerment is more essential in such crisis. For this purpose patient requires access to tools, techniques, information and informed decision making. Access to online information have empowered patient a lot. Furthermore use of electronic health records (EHRs) and electronic patient health records (E-PHRs) have been implemented. Different mobile applications have been developed to manage health information. The problem occurs when elderly and less literacy population resist adopting new technology and due to lack of awareness and training they are not able to properly access E-PHRs. High income countries give access PHRs to their patient without any charge.

1.1 | Objective of the Study

To identify the most dominant factor this is barrier in using E-PHRs

1.2 | Significance of the Study

The existing study is beneficial for scholars, medical students, academicians, patients, professionals in healthcare organizations and elderly population.

2 | ELECTRONIC PERSONAL RECORD IN SAUDI ARABIA

Health sector in Saudi Arabia is categorized in three levels such as primary healthcare centers (PHCCs) secondary level which includes general hospitals and tertiary level which is specialist hospitals[9]. Saudi Arabia's government is significantly increasing the spending of billions of riyals to enhance the quality of healthcare services. Ministry of Health (MoH) provides these funds to all the healthcare organizations. Along with MoH other Saudi organizations such as Aramco, ministry of Defense, national guards, universities' hospitals also providing healthcare services, due to which these organizations have variation in the health system and due to this variation there is difference in tracking health information[10]. Patients' information is not organized. There is immense need to have uniform system which helps all the healthcare organizations to access patients' records. Unavailability of such system leads to waste of time, efforts, there is need to have digital application so that patients and health professionals can access the information any time. This situation calls for electronic patients health records. Though it incurs huge cost and expenditure but it would be helpful in future for long run[11]. Moreover, it enhances communication between patients and physicians[12]. See Figure 1

3 | MATERIAL AND METHODS

3.1 | Research Design

Survey approach design was used. Self-administered questionnaire was used for collection of the data. Nature of the data was cross-sectional. Primary data from 30 respondents was collected. Non-probability convenience sampling technique was used.

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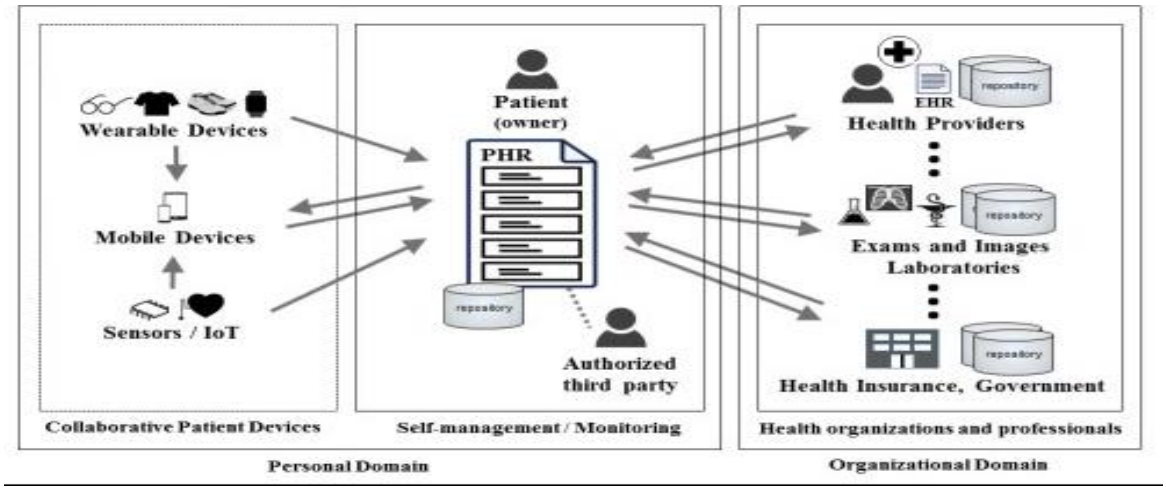

Figure 1: Patient Health Records

3.2 | Measures

Scale of PHRs consisted of two sections one is demographic and other about PHRs. Questionnaires of PHRs was adopted form past studies [13, 14]. It has four variables awareness, training, resistance to new technology and lack of training. Demographic variables include gender, age, and literacy.

3.3 | Data Analysis

Data was analyzed in SPSS. Descriptive statistics such as mean standard deviation, percentage and frequency were calculated. In order to check the reliability of the questionnaire Cronbach alpha was also reported.

4 | RESULTS

Respondents were investigated about the gender, age and literacy. It is evident from the table 1 that majority of the respondents are male 20 (66.66%) and 10 female participants taken part in the study which is 33.33% of the sample size. In addition respondents are also asked about their age. Most of the informants belong to 51-60 years of age i.e. 12 (40%) followed by those having age group of 40-50 years i.e. 10 (33.335) and only 7 (23.33%) were above sixty years of age. Furthermore, regarding literacy most of the respondents held higher secondary education i.e. 21 (70%) followed by those holding secondary education 6 (20%) only 3 (10%) respondents had primary education.

Table 1 Demographic Information

Variables	Characteristics	n	%
Gender	Male	20	66.66
	Female	10	33.33
Age	40-50	11	36.66
	51-60	12	40
	60 above	7	23.33
Literacy	Primary	3	10
	Secondary	6	20
	Higher secondary	21	70

Descriptive statistics was used to record mean scores of the variables. From the table 2 it is evident that highest mean value is scored by lack of experience M = 3.71, followed by resistance to new technology M= 3.64, and training M = 3.59 and lowest value is scored by awareness M = 3.15. It is concluded form the table 2 that lack of experience and resistance to use and adopt new technology are the dominant barriers in usability of PHRs for elderly

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population. Moreover lack of training and awareness is also essential to enhance the usability of e-PHRs.

Table 2 Mean and Standard Deviation of Software utility

Variables	No of items	Cronbach Alpha
Awareness	5	0.791
Training	5	0.846
Resistance to new Technology	5	0.701
Lack of Experience	5	0.744

Threshold for reliability of the constructs is >0.70 suggested by Field[15] and Hair et al[16] From the table 3 it is evident that all the constructs met the threshold thus it is assumed that questionnaires used in this analysis are reliable.

Table 3 Reliability Analysis

Variables	Items	Mean
Awareness	5	3.15
Training	5	3.59
Resistance to new Technology	5	3.64
Lack of Experience	5	3.71

5 | DISCUSSION

In the modern era people have to update knowledge of using new technologies which is recommended by Ministry of Health (MoH). Since there is a lack of awareness and technology cannot able to handle properly[17]. Hence government has to take initiative to give proper training when they come to the OPD[18]. The apps which are used have to be user friendly user to the both patients and healthcare staff[19]. This would not only enhance quality of the services as well as time, cost, efforts would also be saved. Given this outcome, it is interesting that use of E-PHRs is still very low and inconsistent among elderly population as compared to other age groups. The reason for such inconsistency is lack of awareness, training, experience and resistance to adopt new technology.

6 | CONCLUSION

It is concluded that use of new and advance technologies and equipment are beneficial for health care organizations and patients as well. New and advance technologies are cost and time effective. Increase efficiency and effectiveness of services. It also increases the satisfaction level of physicians and patients. In addition elderly patients who are aware of the uses and benefits of the E-PHRs are willing to overcome the technological barriers.

7 | PRACTICAL IMPLICAITONS

Ministry of Health, policy makers and hospital administration cannot ignore E-PHRs while making policy. All stakeholders including patients and elderly population could take benefits from the use of E-PHRs. It saves time and cost.

8 | LIMITATIONS AND FUTURE DIRECTIONS

This study has few limitations which are essential to address. First this study is conducted on small sample size. Therefore, it is recommended that future studies may use big sample size. Second this study has only used single method of data collection in future studies mix methods, qualitative inquiry and longitudinal data could be sued to have better understanding of the subject matter.

Conflict of Interests
Authors declare no competing interest **Funding**

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