FACTORS INFLUENCING THE IMPLEMENTATION OF E-HEALTH: A SYSTEMATIC REVIEW

Submitted by: Sunita Gureliya

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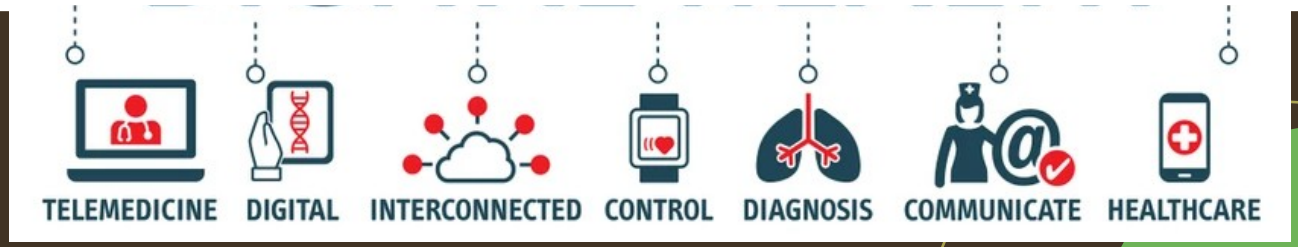
INTRODUCTION

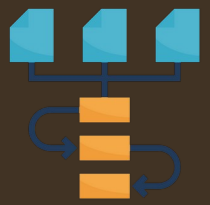
e-health, use of digital technologies and telecommunications, such as computers, the Internet, and mobile devices, to facilitate health improvement and health care services. E-health is often used alongside traditional “off-line” (non-digital) approaches for the delivery of information directed to the patient and the health care consumer.

E-health grew out of a need for improved documentation and tracking of patients’ health and procedures performed on patients, particularly for reimbursement purposes, such as by insurance companies. Traditionally, health care providers kept paper records on the history and status of their patients. However, rising health care costs and technological advances encouraged the development of electronic tracking systems. As e-health technologies continued to be developed, the field of telemedicine, in which telecommunication technologies are used to provide health care remotely, emerged.



RESEARCH QUESTION: What are the factors influencing implementation of e-health by studying qualitative literature that discovers the barriers and facilitators the public experience when engaging with and enrolling in DHIs.

OBJECTIVE: To identify the factors and challenges occurring during implementation of e-health by conducting a systematic review of the qualitative literature that discovers the barriers and facilitators the public experience when engaging with and enrolling in DHIs.



METHODOLOGY: Articles available on MEDLINE, PUBMED, RESEARCHGATE, and GOOGLE and published between 2010 and 2022 were screen and selected based on the selection criteria. Eligible 15 reviews/articles were founded on the operation of DHIs. Data from qualified reviews/articles was extracted after complying he studies in excel. A complete breakdown of barriers and facilitators to e-health implementation was produced at end as a result.

INCLUSION CRITERIA

1. English language
2. Published between 2010-2022
3. Systematic reviews: where appropriate works had been found via a structured exploration of bibliographic and additional databases, where open methodological standards had been applied to weed out publications that did not adhere to a specific standard, and where the results had been presented with precision.
4. Narrative reviews: with the intention of summarising, debating, and criticising results, appropriate literature had been purposefully selected among field of study, and theoretical or topical criteria had been applied to include works on the grounds of kind, relevance, and perceived significance.

EXCLUSION CRITERIA

1. Non-English language.
2. Published before 2010
3. Secondary analyses of existing datasets for the purposes of presenting cumulative results from personal research programs.
4. Discussions of literature that are part of critiques or contributions to theory development.
5. Summaries of books for informational or analytical purposes.
6. Editorial debates that make the case for a certain area of study or strategy

DISCUSSION: After complete analysis of reviews, following were the factors obtained that were impacting the implementation of e-health:

Global themes	Local themes	Theme derivation/source of information
Internal factors	ICT infrastructure and e-health technologies	A description of information relating to technology
	ICT skills and knowledge	A description of information relating to ICT and skills
	Technical support	A description of information relating to IT department
	Security concerns	A description of information relating to privacy of patient information
	Doctor–patient relationship	A description of information relating to interaction between doctor and patients
	Lack of basic medical facilities	A description of information relating to medical equipment
	Demographic factors such as age	A description of information relating to old and young medical doctors
	Resistance to change	A description of information relating to change in work process and procedures
External factors	Health policy	A description of information pointing to policy issues
	Funding	A description of information pointing to money, funds and budget
	Bureaucracy	A description of information relating to systems authority

RESULT: Issues affecting enrolment and participation in digital health Four main categories and several subcategories relating to barriers and facilitators to involvement with and registration in DHIs were identified from the analysis of papers/articles that were included in the review.

1) Personal Agency and Motivation:

Personal agency and motivation	Barrier	Facilitator
Motivation	Lack of motivation to understand or improve health	Motivation to understand and improve health
Awareness and understanding	Unaware of or lacks understanding of how a DHI could be helpful	Ability to understand a DHI and personal health data
Personal agency (choice and control)	Alternative ways of documenting health information and managing illness	Ability to choose time and location of DHI, Ability to control electronic personal health data

2) Personal Life and Values:

Personal life and values	Barrier	Facilitator
Personal lifestyle	Busy lifestyles with competing priorities	DHI fits with personal lifestyle
Skills and equipment	Poor digital literacy, Lack of access to equipment and the Internet, Cost of DHI	Good digital literacy, Has or can afford computer equipment or mobile devices and network connectivity
Security and privacy	Concern over the security and privacy of DHI information or interaction	Values the privacy and anonymity of DHI information or interaction

3) Engagement and Enrolment Approach:

Engagement and enrolment approach	Barrier	Facilitator
Recruitment strategy	Difficulty understanding the recruitment message	Active promotion and engagement strategies, Health professional acts as a gatekeeper
Direct support	Lack of support from family members, friends or peers	Support from family members, friends or peers offline
Personal advice	Lack of advice and recommendations from trusted	Recommended by family members, friends or peers
Clinical endorsement	Lack of clinical endorsement and support for a DHI	Clinical accreditation and support for a DHI

4) Quality of digital health interventions:

Quality of digital health intervention	Barrier	Facilitator
Quality of digital health information	Poor quality information, Lack of trust in DHI information	Previous negative experience of health services without DHI
Quality of digital health interaction	Impersonal DHI (poor quality interaction), Lack of trust in DHI interaction, Digital health interaction can be abusive	Open, honest digital interaction with healthcare provider, Social support from peers online
Usability	Usability of the DHI, Complex registration process via technology	DHI is easy to enrol in and use (automated and integrated)

CONCLUSION:

E-health solutions are gradually taking the place of conventional healthcare delivery methods. E-health has to be implemented, and governments, medical professionals, and research organisations in developed and developing nations have noticed this. Many governments have started to create strategies that support the use of e-health at different levels of healthcare institutions. Yet, several underdeveloped nations' healthcare facilities are just beginning to explore the concept of e-health. Its application has not received enough attention. Healthcare professionals only use e-health partially or not at all, despite the joint efforts of funders, foreign partners, and the government to roll out e-health systems. E-health is in very poor and unacceptable condition in public healthcare facilities. In certain nations, central hospitals are the major focus of the e-health systems, leaving out other hospitals. As a result, its development in public hospitals can be considered infantile. This makes it essential to develop policies that encourage the adoption of e-health by public healthcare organisations. The study indicates that a range of influences affects how far an e-health system works.

These include, among other things, government regulations, ICT expertise and infrastructure, money, healthcare facilities, and IT technical assistance. The results also show that implementing e-health systems presents similar difficulties for physicians working in public institutions. If these aspects are taken into account, poor nations have a significant chance of implementing e-health. In the absence of this, they would keep falling overdue in the acceptance of e-health systems in community hospitals.

THANK YOU