Contribution of primary Healthcare in promoting sustainability and scalability of Digital Health Technologies - A Scoping Review

IIHMR-Delhi

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PG/20/105

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Screenshot of Approval

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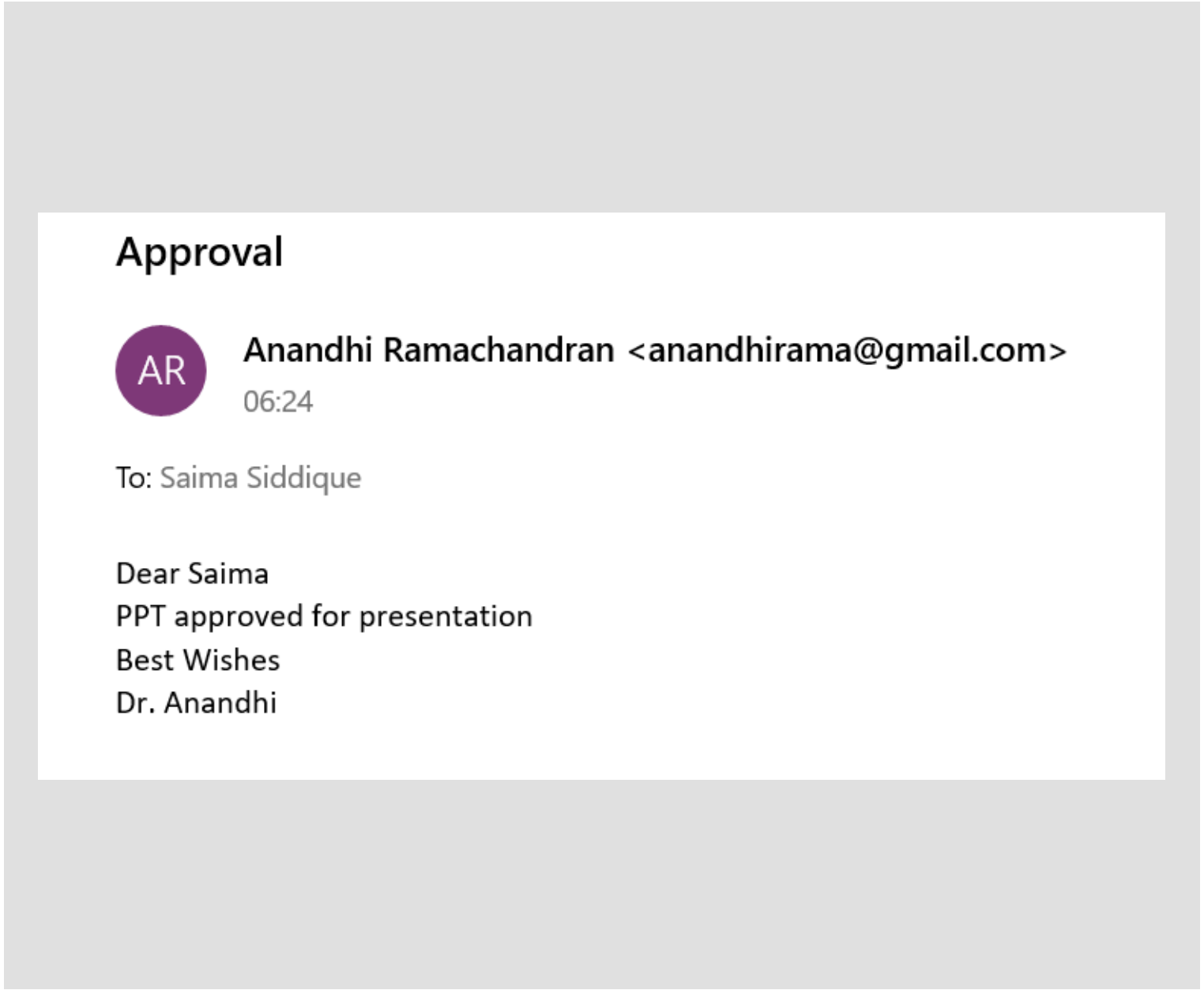


Approval

AR

Anandhi Ramachandran <anandhirama@gmail.com>

06:24

To: Saima Siddique

Dear Saima
PPT approved for presentation
Best Wishes
Dr. Anandhi

Introduction

Primary Health care

- Cornerstone of healthcare
- Provides: health promotion; disease prevention, treatment and rehabilitation; & palliative care
- Increasing demand due to demographic & epidemiological changes

Digital Health Technology (DIT)

- An essential resource in primary care
- Essential resources in primary care
- Improved quality of care, Enhanced patient safety, Better outcomes
- Better monitoring the spread of infectious diseases

Introduction

Challenges for Digital health

- Physical infrastructure
- Health workforce
- Legal and regulatory environment
- Governance policy
- Interoperability & standardization

Research Gap

- Digital health technology impacts primary healthcare
- How primary care impacts Digital Health ???
- No studies emphasizing other way around

Objective & Research Question

Objective:

To identify the role of primary care centres in the sustaining and scaling digital health Technologies

Research question

1. What is role of primary care in sustaining digital health innovation?
2. What factors in primary care influences scalability and spread of Digital health Technology?

Methodology
Booth's 5 stage process

Step1: Search databases

- PubMed, Google scholar, WOS (Clarivate), Wiley

Step 2: Peer-reviewed articles

- Included peer reviewed articles from the search

Step 3: Bibliographic search

- Search for additional relevant articles by screening the bibliographies of all papers

Step 4: Revision and modification

- Text mining using relevant keywords
- PubMed.mineR package

Step 5: Extraction, analysis and recording of data

- Citation
- Study design
- Objective
- Human, organizational, technological factors
- outcomes

Keywords

Sustainability
Scalability
Digital health
Primary healthcare
Innovation
Impact
Adoption

Methodology

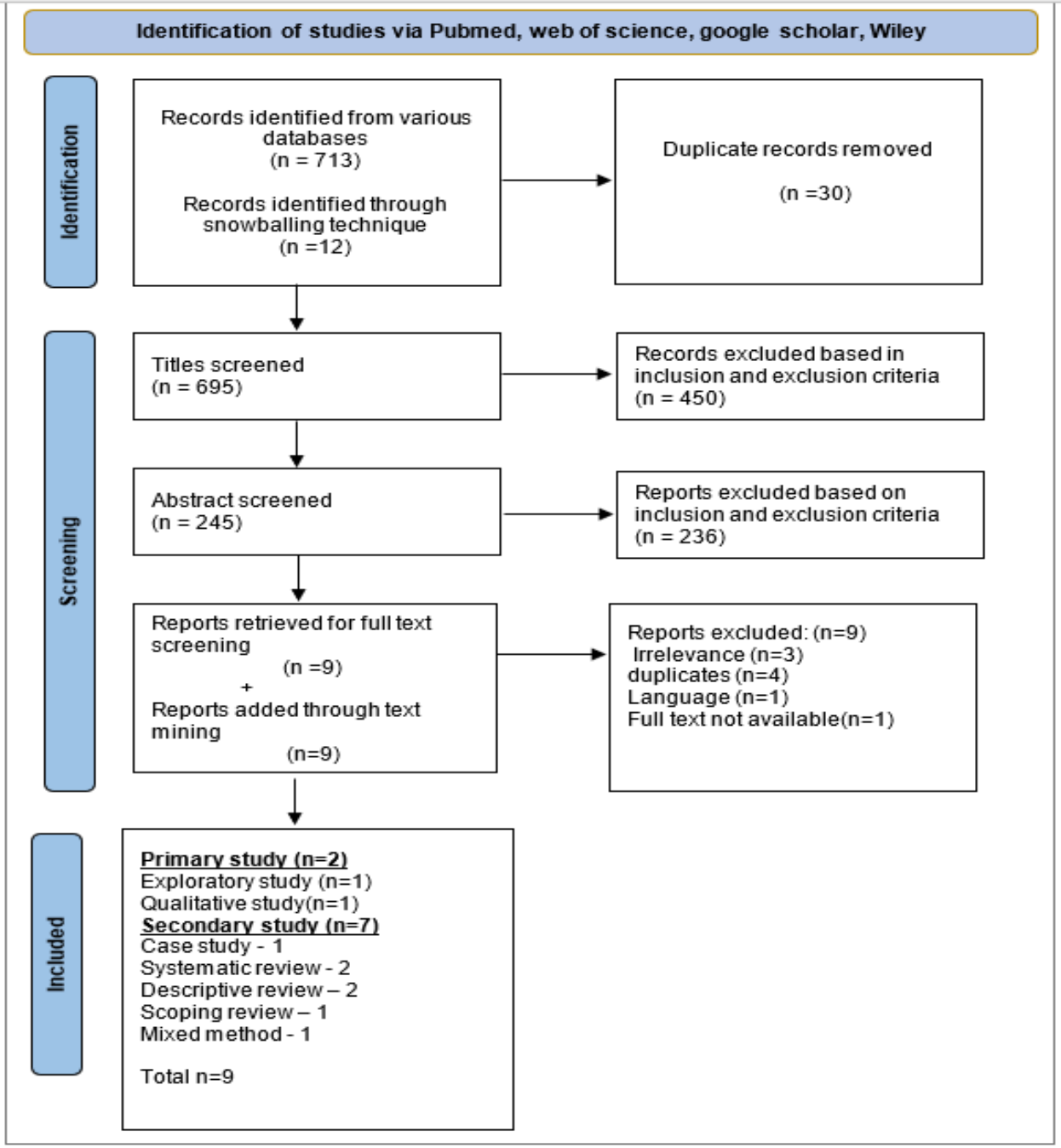
Inclusion criteria

- April 2017-April 2022
- All study designs, full text available
- All geographies, only English language
- Discussing policies, factors affecting sustainability of technology in healthcare

Exclusion Criteria

- Prior to April 2017
- Not discussing sustainability of technology
- Discussing technology itself
- Language other than English, full text not available

Prisma chart



Methodology

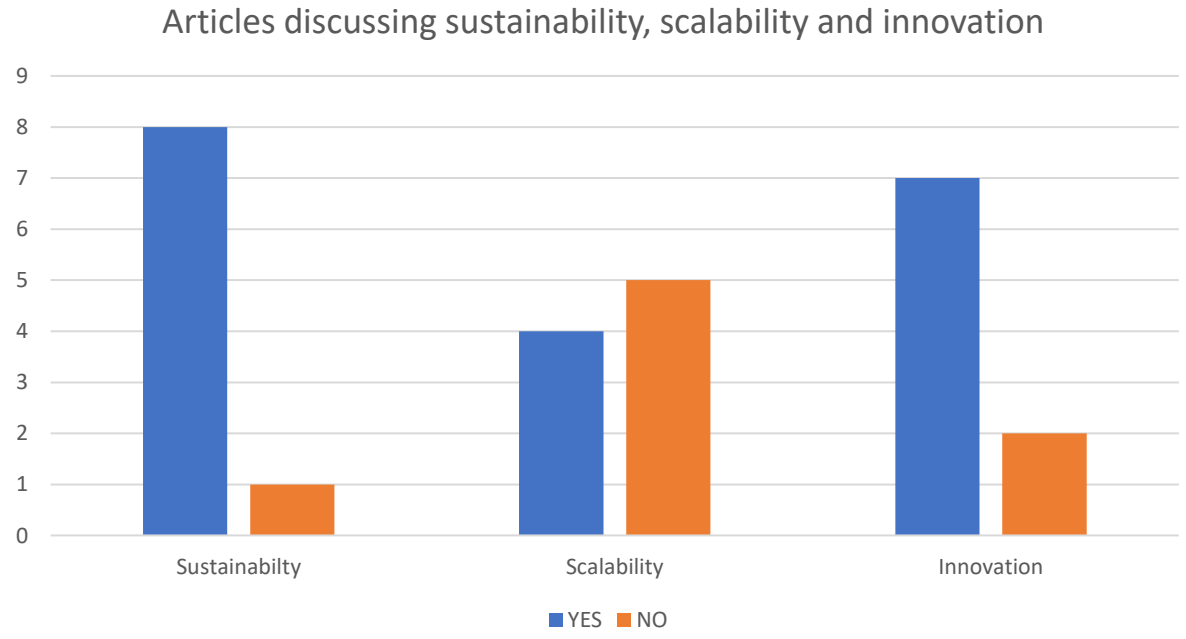
Data extraction

- Citation
- Objective
- Study design
- Year of publication
- Main factors discussed (Human, technological and organizational)
- outcomes

Data analysis:

- Descriptive analysis
- Thematic analyis

Results
Descriptive analysis



Primary articles (n=2)

- Exploratory, qualitative

Secondary articles (n=7)

- case study (n=1),
- systematic review (n=2),
- descriptive review (n=2),
- scoping review (n=1)
- mixed method review (n=1).

Results
Thematic analysis

Human Resources

Upskilling workforce

Stakeholder partnership

Job security

Leadership support

Organizational factors

Policies and procedures

Adaptability

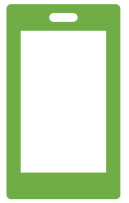
Work culture

Ownership

User engagement

Service delivery

Awareness



Technological factors

Infrastructure

Implementation

Design compatibility

User friendliness

Benefits

Workflow integration

Technical support

Discussion

Our findings can be corroborated from the literature

- Emilsson et al : sustainable product and service development
- Blakey et al: user-friendly designs, compatibility with existing systems
- Sibthorpe et al: teamwork, good internal fit, team meetings, good business model to support the activity
- Sibthorpe et al: the adaptability of complex systems and the sustainability of primary health care programs, social relationships, networks and champions emerged as critical for sustainability.
- Fagini et al. user friendliness of systems, boosting collaboration among stakeholders, change health management promoting smarter and wider use of tools.
- Brewster et al &Radhakrishnan et al: Training, promotion, and redefinition of roles

Discussion

- Capacity building and capability building
- Training focused on technical side, but not with workflow
- Staff and resources availability and allocation, Access to the internet, equipment, and suitable space and power play a key role
- Integration and interoperability among new and old system
- Data management issues
- Findings can be used in context of primarycare

Strengths:

- First of its kind study
- Comprehensive search strategy reflecting primary as well as secondary literature
- Filling a huge research gap

Limitations of the Study

Language

Number of articles

Time period

Quality assessment of articles

Conclusion

- Discourse about the role of primary care in sustaining DIH and innovation is needed
- Identified three main themes i.e., human, organizational & technological
- Provides an opportunity for policymakers, leaders, and stakeholders to create an enabling environment for Digital health technologies
- Clinical decision makers in primary care need to support a cultural shift.
- Way forward & Recommendations
  - ✓ All policymakers, developers, end-users, funders, and researchers must focus on making the PHCs ready for digital health especially in the wake of Ayushman Bharat Digital Mission implementations being planned at state level.
  - ✓ Assessment of sustainability must be done
  - ✓ Extending the study: Time period, language and grey literature
  - ✓ Empirical Validation of our findings in a real-world setting

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Thank You

Any Questions

Dissertation Experiences

Skill

Using digital tools to conduct research

New perspective

Problem-solving skills

Overall self comments on Dissertation

- Comprehensive search strategy
- Important problem discussed
- Could have done better with more time and resources