

The Role of Artificial Intelligence and Digital Technology in Enhancing the Nutritional Health in Sri Lanka

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Introduction

This **systematic review** reveals;

- The current landscape of using AI & digital technology
- Future potential of these technologies in enhancing nutrition related outcomes in the Sri Lanka

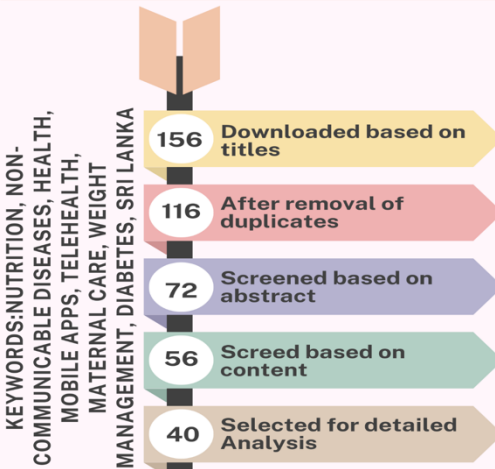
Methodology

Peer reviewed articles from **Google Scholar and IEEE Xplore**

Published between **2011 - 2024**

Inclusion criteria: Relevance to Sri Lanka, published within specific time frame, peer-reviewed validation

Exclusion criteria: Published before 2011 and not conducted in Sri Lanka



Results & Discussion

SMART PHONE APPLICATIONS

Sri Lanka claims a high mobile penetration of 47%

Smart Glucose Manager: Self management of diabetics through reminders

My Smart Diet: Menu planning & nutrition advice

mHENAL: Fostering behavioural changes on heart health by reminders

Collaborated with another device

Dia shoe: Mobile base plug and play device can be attached to diabetic shoes

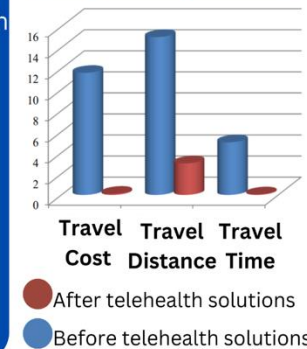
Hemo Smart: Early detection of anemia by the images of fingertip and responses of the user

TELEHEALTH INTERVENTIONS

Practical Applications

- Distance education for healthcare professionals through eLearning platforms
- Continuing maternal services and sending medicine for NCD patients during public health emergencies
- Monitoring the Out Of Home (OOH) food environment
- eConsultation facilities for remote areas

Post Implementation Analysis of patients



USE OF ARTIFICIAL INTELLIGENCE

Practical Implications

- Personalized diet recommendations
- Accurate anthropometric measurements
- Health risk predictions
- Enhanced public health campaigns

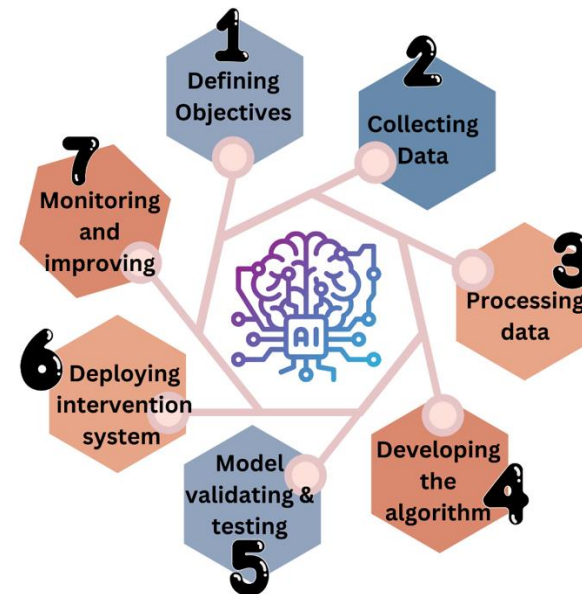
Advantages

- High accuracy
- Data driven insights
- Cost effective monitoring

Disadvantages

- Data privacy
- High cost of implementation
- Requirement of big data

Process Steps of Developing AI nutritional platform



Conclusion

AI and digital technologies are transforming nutritional health in Sri Lanka by enabling **improving healthcare access, personalized diet recommendations, and enhancing risk prediction.** However, for the full potential of these technologies to be realized, it is **essential to address challenges related to data privacy, accessibility, and infrastructure.** Continued investment in digital health and a **supportive regulatory framework** will be key to build a healthier future.

Recommendations

- Establishing necessary **regulations** for digital technology and AI platforms.
- Investing in **digital infrastructure** to utilize the technological advancements.
- Develop a **national data set of patients information system.**