

Factors related to uptake of cardiovascular mHealth applications from the patient, healthcare provider and healthcare system perspective: A qualitative systematic review

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BACKGROUND

Cardiovascular digital health applications (mHealth apps) have the potential to revolutionise healthcare for people with cardiovascular disease (CVD), resulting in improved systolic blood pressure, low density lipoprotein cholesterol, HbA1c, physical activity, smoking cessation, BMI and medication adherence. However, little is known about the patients, health professionals and systems perspectives in relation to uptake and sustainment of use.

AIMS

To explore patients, healthcare professionals and health system perspectives on engagement, uptake, and sustainability of using mHealth apps.

METHODS

Systematic search of five databases for published studies between 2007 and 2023 on cardiac mHealth using qualitative methods. Thematic analysis was conducted to identify enablers and barriers to the uptake of mHealth. Study quality (dependability and credibility) was assessed using the JBI ConQual.

RESULTS

Twelve studies met the eligibility criteria employed: qualitative methods (n = 7), included focus group, in-depth and semi structured interviews; mixed methods (n = 5), included semi structured interviews. ConQual score varied from high (n = 4), medium (n = 3) to low (n = 5) [1]. Barriers of mHealth included a lack of person centredness, financial costs and increased health professionals' workload. Enablers were access to technology, personalisation, high quality, reliable mHealth content and mHealth interface, features, and functionality.

Included studies	Country	Participants N = 327
n = 12	Canada Ghana Nepal Netherlands Republic of Korea Singapore United Kingdom USA	Patients n = 243 Health care professionals n = 47 Family and care givers n = 23 Key informants = 4 ICT developers n = 5 Managers n = 5

Barriers

"Patients of 70 years or older have more difficulty in handling technology"[2]



Lack of person centredness

"Smartphone itself is expensive; moreover, I will have to pay for data, so its a burden for me"[3]



Financial cost

"It generates a lot of data... which you are required to analyze... That generates a lot of work"[3]



Increased workload

Enablers

"I think it will work and be feasible because majority of people own a mobile phone"[4]



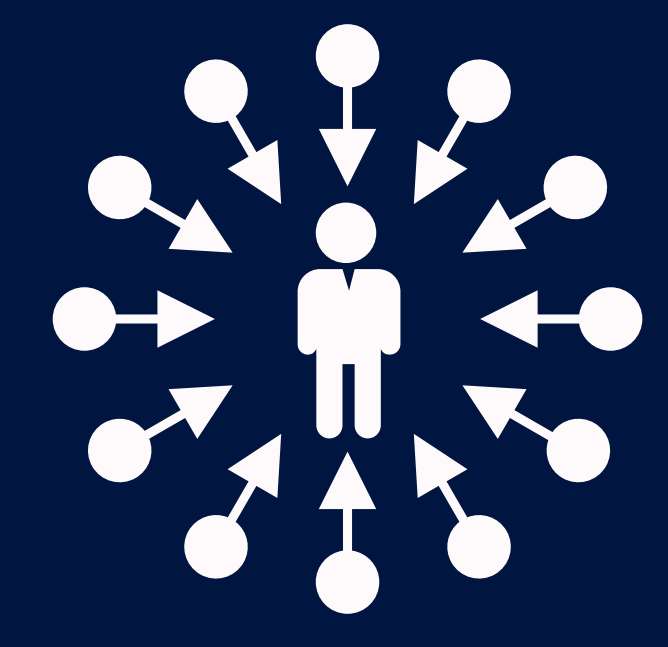
Access to technology

"If reliable information is provided, I might be willing to use it often"[3]



High quality and reliable content

"They wanted personalised information that reflected their current health status"[3]



Personalised content

"Features to assist daily selfcare behaviours. Interactive communication with medical staff"[3]



mHealth features & functionality

CONCLUSION

Access to technology, personalised, reliable mHealth content, design and interface are important factors to the uptake of cardiovascular mHealth apps. Future mHealth design requires co-design approach with its end users to promote its sustainment and potentially leading to therapeutic effect and improved patient outcomes.

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