Evaluation of mobile applications that promote health behaviour change. Can these applications be adapted for use in dietetic practice in Newfoundland and Labrador?

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Purpose

To identify current mobile health (mHealth) promoting technologies and cultivate a summary of recommendations for the development of a mobile application intended to support individuals with healthy eating behavior change within Newfoundland and Labrador (NL).

Process or summary of content

A selection of mHealth apps that emphasize weight and calorie counting are presently available. Research is limited on their accuracy, success, and long-term usefulness. Furthermore, these apps have minimal focus on healthy eating and behaviour change. Individuals are more likely to be successful making positive dietary changes when they can identify their goals via a client-centered approach. mHealth can motivate and support clients, resulting in improved self-efficacy with achieving personalized goals.

Systematic approach

An environmental scan and analysis of existing technologies (i.e. mobile apps, websites, etc.) that focus on health promoting behaviors was searched using CADTH, PubMed and Google Scholar. A literature review was conducted on motivation and other factors influencing behaviour change. Consultation with national, provincial, and local stakeholders provided qualitative data pertaining to the feasibility and level of interest in the development and implementation of this type of technology.

Conclusions

At present, there are limited applications available that meet the needs of clients and dietitians. Introducing a mHealth application into dietetic practice in NL is a cost-effective method to enhance dietetic services province-wide.

Recommendation

It is recommended that the government of NL invest in the development of mHealth application tailored to support the practice of dietitians, their clientele, and individuals who are working to improve their eating behaviour.

Significance to the field of dietetics

The findings have been translated into recommendations for the development and implementation of a mHealth application targeted at improving healthy eating within NL. This technology will foster a client-centered approach to behaviour change related to healthy eating
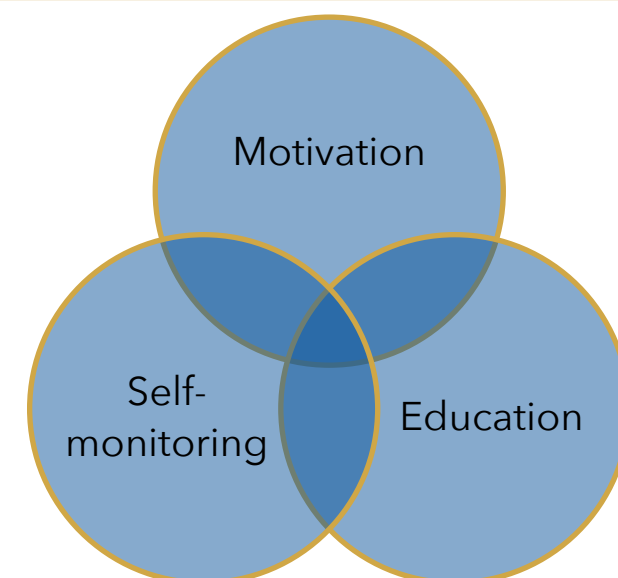

Figure 1.0 Elements supportive of behaviour change

Table 1.0 Strengths and Weakness of select nutrition-related mHealth apps

Categories	Apps	Strengths	Weaknesses
Diet Tracking	MyFitnessPal	• Self-monitoring via large food database • Activity tracking	• Focus on calorie counting/ weight loss
	LoseIt!	• Self-monitoring via food searching, scanning and photos • Activity tracking	• Focus on calorie counting/weight loss
	Weight Watchers	• Self-monitoring via an easy to use points system	• Focus on food tracking using points • Membership required
	eaTracker	• Ability to set personalized goals • Self-monitoring of food intake	• Focus on calories counting/weight loss • Limited selection of foods
	Fooducate	• Educate • Provides nutrition education	• Not available in Canada • Focus on calories counting/weight loss
Dietitian-Specific	NutriGuides	• Evidenced-based information	• Not for the use of clients
	Nutricare Tools	• Evidenced-based information	• Not for the use of clients
Nutrition Counselling	Liva Health	• Online support community with peers • Motivation through video and text messaging support from a dietitian	• Not available in Canada
	Oviva	• Self-monitoring via photo food diaries • Ability to set your own goals	• Not available in Canada
	Our Path	• Does not focus on calorie counting/weight loss	• Not available in Canada
	Healthie	• Does not focus on calorie counting/weight loss • Motivation through videos and text messages	• Requires a dietitian subscription
Healthy Cooking	Cookspiration	• Ability to choose pre-set cooking goals	• Cannot set goals related to overall healthy eating