Some findings on Digital Health & NCDs

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Outline

1. mHealth & NCDs
2. Digital Health & Physical Activity
3. Next steps
1. mHealth & NCDs

Reference


- **Type of study**: A systematic review of systematic reviews.
- **Objective**: To assess the impact or effectiveness of mobile health (mHealth) interventions in different health conditions and in the processes of health care service delivery.
- **Methods**: 5 major scientific databases; AMSTAR.
- **Results**: 10,689 articles; 23 systematic reviews analyzed (371 studies; more than 79,665 patients).
- **Quality**: Ten reviews were rated as low quality (AMSTAR score 0-4), seven were rated as moderate quality (AMSTAR score 5-8), and six were categorized as high quality (AMSTAR score 9-11).
1. mHealth & NCDs

Congestive Heart failure

- Mobile technology counseling led to fewer symptom complaints in congestive heart failure subjects.

Chronic Lung Diseases

- SMS can improve cough symptoms and sleep quality.

Diabetes

- Educational group sessions for diabetic women via SMS showed positive effects on sleep, positive actions, and coping.
- Use of mHealth (SMS and interactive voice response calls) can improve HbA1c.
- mHealth strategies are beneficial to increase adherence to: (1) treatment in diabetes patients; (2) prescriptions in type 2 diabetes; and (3) insulin among type 1 diabetes
1. mHealth & NCDs

Hypertension

- Improvement in BP has been demonstrated with SMS or voice mail and immediate physician feedback.

Smoking Cessation

- Positive results have been demonstrated with moderate-quality evidence that mobile phone-based cessation interventions increased abstinence rates at 26 weeks.
2. Digital Health & Physical Activity

Reference

Dumit E, Novillo-Ortiz D. The impact of eHealth on physical activity: An overview of systematic reviews (in progress).

- **Type of study**: An overview of systematic reviews.
- **Objective**: To see where and how eHealth technologies have had a positive impact on physical health—using eHealth strategies to guide, promote, strengthen, and maintain physical activity.
- **Methods**: 4 major scientific databases; AMSTAR.
- **Results**: 420 articles; 44 systematic reviews analyzed.
- **Quality**: AMSTAR 2
2. Digital Health & Physical Activity

Main findings (Positive results / Moderate-High quality)

Web based interventions:

- Individuals (+50) / 7 months. Mostly positive, hold great potential – especially for stimulating activity, facilitating weight loss, and improving social support.

- Middle-aged and older people with elevated cardiovascular risk / +3 months. *Positive, but mixed* – significant reduction in systolic BP of 2.66 mmHg. Thus, the effects on Internet interventions on BP reduction and, to a lesser extent, LDL cholesterol reduction, can be clinically relevant at the population level if reductions are maintained.
2. Digital Health & Physical Activity

Main findings (Positive results / Moderate-High quality)

**eHealth/mHealth:**

- Adults / Duration not specified. Text-messaging interventions were effective at addressing weight loss and physical activity.
- Developing countries / 3 months. The majority of studies demonstrated that e- & m-Health interventions were effective in promoting physical activity and healthy diets in developing countries.
- All participants were required to be somewhat familiar with the technology used to deliver the intervention /1-12 months. Positive effects on medication adherence and physical activity

**Social Media:**

- Target and duration not specified. Trials assessing the effectiveness of social media interventions in modifying risk factors for noncommunicable disease show that social media use does improve the primary outcomes.
3. Next steps

1. WHO Report EB142/20 - mHealth. Use of appropriate digital technologies for public health

2. Development of **new technical guidelines** on digital health (electronic health records, mHealth and Social Media)

3. Be Healthy, Be Mobile (WHO mHealth Program)