

HealthyMoms- a digital platform for promotion of a healthier lifestyle and weight in pregnant women and support for self-management of gestational diabetes

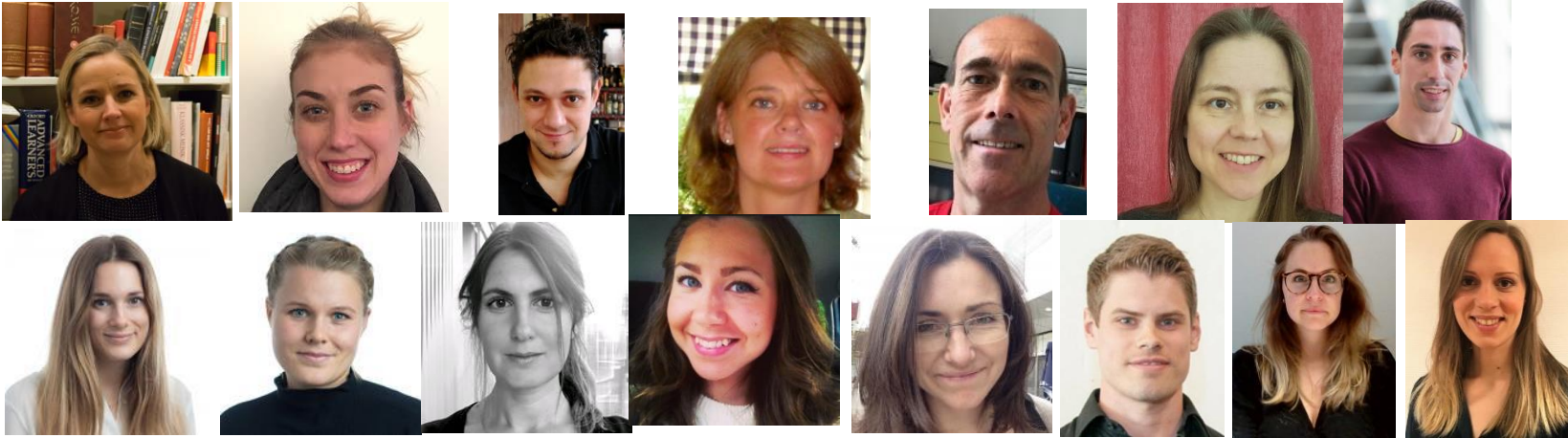
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Declaration

I have no conflict of interest

The IMPACT research group

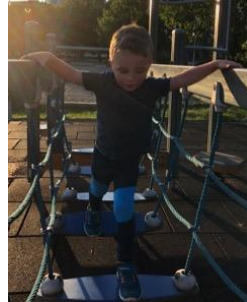


A multidisciplinary team (19 people)

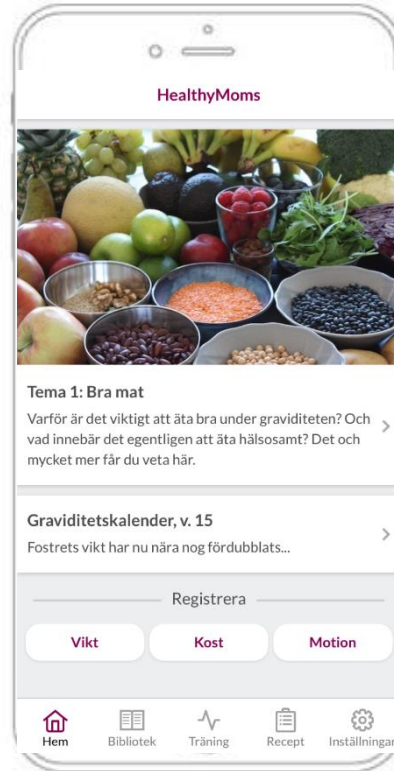
<https://ki.se/en/bionut/the-impact-research-group-marie-lof>

Two research tracks

- Early-life risk factors for overweight and obesity (pregnancy and children up to 6 years)
- eHealth interventions and self-management of disease



HealthyMoms: maternity health care



Randomised controlled trial

306 pregnant women to evaluate effectiveness on gestational weight gain, dietary intake and physical activity

Qualitative/quantitative studies

19/156 women to evaluate satisfaction and usage

JMIR mHealth uHealth. 2021 Mar 5;9(3):e26159

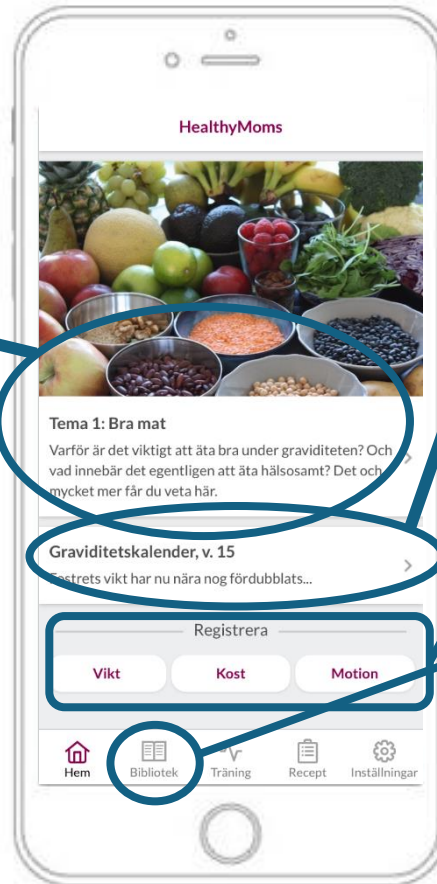
JMIR mHealth uHealth, 2021;9(3):e26091

Pediatr Obes. 2022 Feb 1:e12894.

Sci Rep. 2022 Aug 13;12(1):13793.

12 themes

1. Healthy Food
2. A healthy weight gain during pregnancy
3. Physical activity and exercise
4. How to change a habit
5. Cravings and sweets
6. Vegetables and fruits
7. Nutrition for you and your baby
8. The last trimester
9. Food and reward
10. Exercise in the end of pregnancy
11. How to maintain new habits
12. The future



Pregnancy calendar

- Development of the fetus
- The mother
- The partner

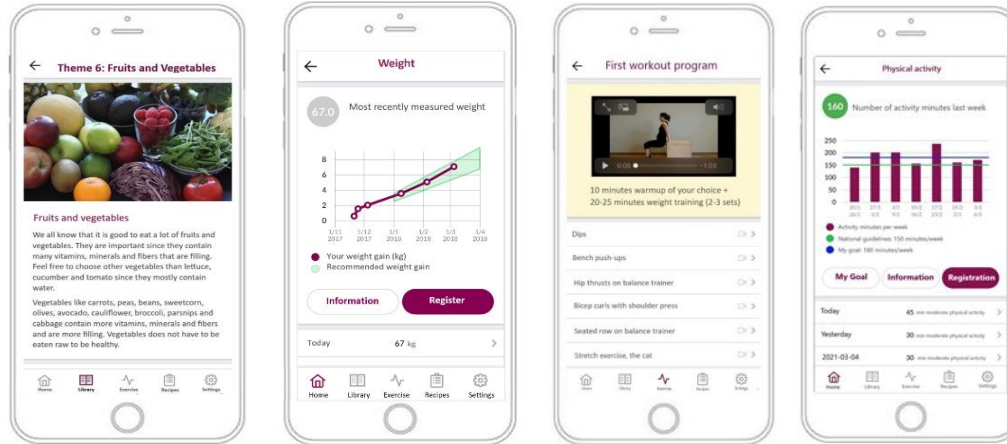
Self-monitoring

- Weight
- Diet
- Physical activity and exercise

Library

- Practical tips
- Useful links
- Frequently asked questions

Some examples of features



A. Diet (NNR) B. Weight (IOM) c) Exercise (FYSS) d)Feedback

6-10 weeks

Routine visit at maternity clinics in Östergötland

Inclusion criteria:

- a single pregnancy
- >18 yrs
- Be able to speak and read Swedish sufficiently well

Exclusion criteria:

- BMI < 18.5 kg/m²
 - Pre-pregnancy diabetes
 - Medical conditions
 - Pharmacological treatments
- That may affect BW*

14 weeks

Baseline measures

Web-based 24h-diet recall*
Accelerometry*
BodPod*
Blood sample*
6-min walking test
Handgrip strength test*

1:1

Control group (n=150)

Standard antenatal care

Oral information (w 6-10 and 25). BW in w 6-10, 32, 37 and at delivery

Intervention group (n=150)

Standard antenatal care
HealthyMoms app

Information
Push notifications
12 topics
Tips & strategies
Record: BW, F&V, sweetened beverages, candy and PA.
Feedback

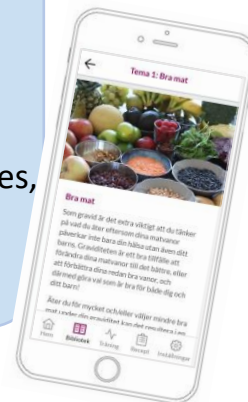
37 weeks

Outcome measures*

1-2 weeks postpartum

Outcome measures

BodPod
PeaPod

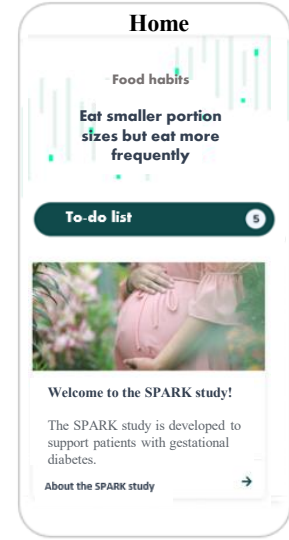


Main published results from the HealthyMoms trial

- An improvement in healthy dietary index in the intervention versus the control group (0,27 [95% CI; 0.05 to 0.50], $P=0.017$)
 - Women with overweight or obesity : -1.67 kg [95% CI -3.26; -0.09, P -value = 0.031] in the intervention versus the control group
 - Overall high usage and satisfaction of the app and relatively little decrease in use over time
 - The total number of registrations (weight-, diet- and physical activity) was associated with lower gestational weight gain ($P = 0.043$) and improved diet quality ($P = 0.019$)
 - **The next step: implementation at scale (Region Östergötland, Framskjuten Vård, autumn 2022)**
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SPARK

SmartPhone App for gestational
diabetes patients supporting Key lifestyle
behaviors and glucose control

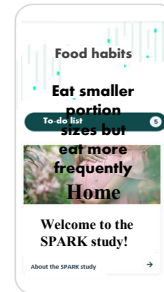


Aims

- The overall aim is to evaluate whether the SPARK digital platform can improve self-management of GDM and prevent adverse maternal and offspring outcomes. Specifically, we aim to:
 - a) evaluate the effectiveness of the SPARK platform on glycaemic control in the 3rd trimester (*primary outcome*), gestational weight gain, moderate-to-vigorous physical activity, eating behaviours, in the 3rd trimester, adverse obstetric and neonatal outcomes and cardiometabolic risk profile one year post partum (*secondary outcomes*)
 - b) evaluate the cost-effectiveness of developing and disseminating the SPARK platform
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Design

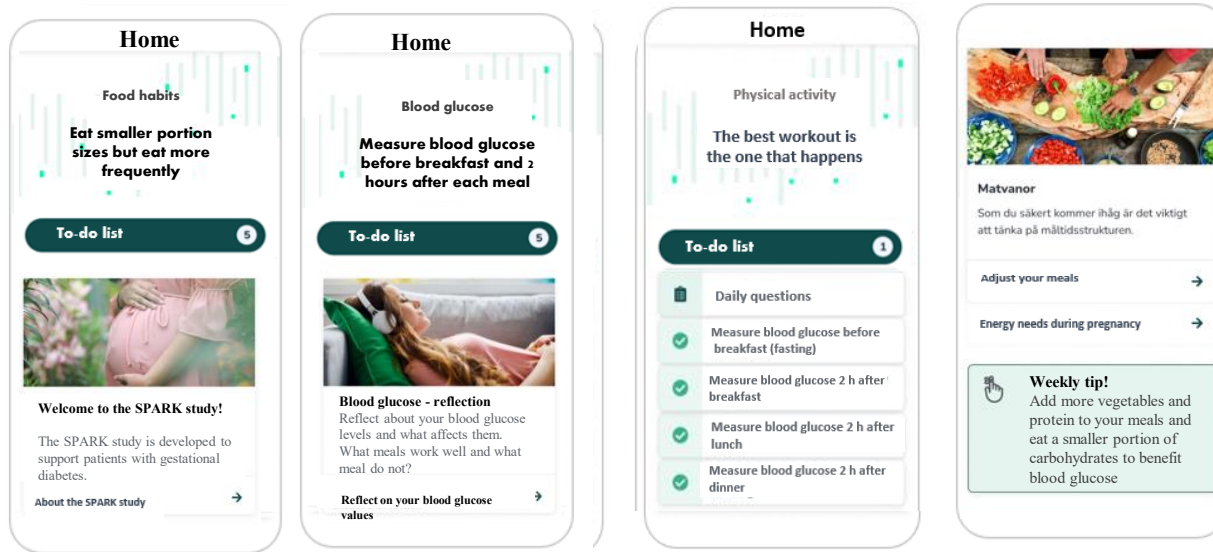
- A randomised controlled trial (1:1)
- 360 women (180 intervention-SPARK and 180 control-standard care)
- GDM diagnosis according to 2013 WHO guidelines
- Recruitment setting: South Eastern Sweden
- Primary outcome in gestational week 36-37 (time in range, continuous glucose monitoring)



Health care professional user-interface
(monitoring)

Patient user-interface (self-managment)

Screenshots from the GDM app



Available in different languages



Swedish



English



Arabic



Somali

Time plan

- Pilot study during the spring 2022, modifications and revisions are ongoing
 - Recruitment in Linköping will start in Oct 2022 and data collection is estimated to be finalised in two years
 - The first results will be available in the end of 2024
 - Other projects: HealthyMoms4MentalHealth
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Acknowledgements

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