



Title | Empowering pregnant women to improve diet quality: Results from a randomized controlled trial among pregnant women in the Netherlands

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Background and Objectives

- A healthy diet during pregnancy is crucial for the health of mother and child.
- Empowerment, defined as **strengthening the capabilities and the self-reliance of individuals**, could play a significant role in improving maternal nutrition and health – has been rarely used in nutritional interventions.
- The newly developed intervention Power 4 a Healthy Pregnancy (P4HP) provides four additional consults by the midwife and dietician to discuss nutrition with the pregnant women from an empowerment perspective.
- We hypothesize that P4HP leads to improvements in diet quality and empowerment among the intervention group compared to the control group.**

Methods

- Cluster randomized controlled trial (start January 2022)
- Clusters: 17 Dutch midwifery practices
- N=342 pregnant women (156 control/187 intervention)
- Primary** outcome measures:
 - Diet Quality (Dutch Healthy Diet (DHD) index 2015, adapted for pregnancy)
 - Empowerment (Pregnancy-Related Empowerment Scale; PRES) (range 16-64)
- Secondary** outcome measures: Sense of Coherence (SOC) (3=strong, 4-5=medium, 6-9=weak), Self-Rated Health (range 1-5) and Quality of Life (range 0-10).
- Measurements at beginning (T0) and end (T1) of pregnancy.
- Results will be analysed using Linear Mixed Models to analyse the treatment effect of clustered data.

Results

The baseline mean score for diet quality (M=104.4, SD=16.1) of 311 pregnant women was approximately 10 points lower than that of a high-educated healthy reference population (M=114.4, SD=16.0)¹. This indicates a slightly healthier food intake, but also room for improvement. In terms of micronutrient intake, only iodine intake seemed of concern (M=2.9/10), SD=1.5).

Table 1 presents baseline results of the health indicators. Pregnant women, on average, are categorized in the 'strongly empowered'-category (49-64) and have a medium SOC.

Figure 1 shows diet quality scores at T0 (~11 weeks pregnant) and T1 (~34 weeks pregnant) for intervention and control group. **Preliminary results of the data show a significant difference in the change of diet quality from T0 to T1 among the intervention group (n=59) (M=4.44; SD=13.2) compared to the control group (N=66) (M=-1.48; SD=14.6) (t(123)=-2.36, p=0.020).**

Table 1: Baseline results of intervention and control participants

Health indicator	Mean	SD
Empowerment (N=301)	59.09	6.06
Sense of Coherence (N=301)	4.13	1.10
Quality of Life (N=300)	4.09	0.69
Self-Rated Health (N=300)	7.92	1.40



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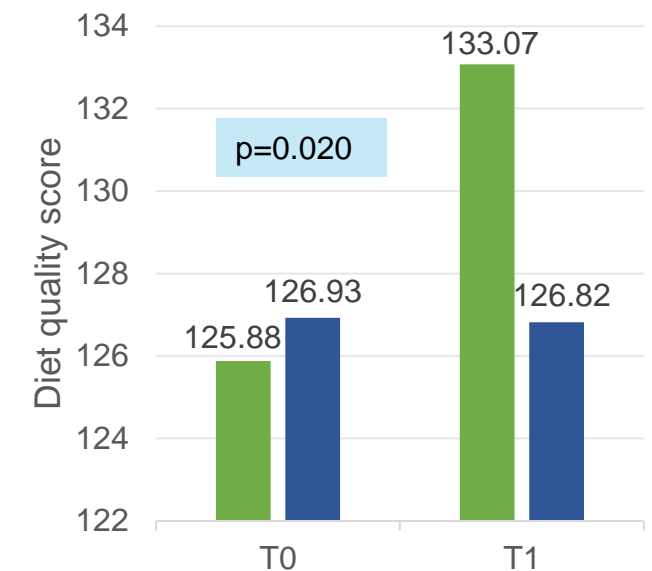


Fig 1: Diet quality scores at T0 and T1 for intervention (green) and control group (blue)

Keywords

Diet quality, empowerment, pregnancy, maternal nutrition

Conflict of Interest

Not applicable

Further Collaborators

RegioDeal Foodvalley & ZonMw

Scan to read the study protocol →



**POWER 4
A HEALTHY
PREGNANCY**

