



Effect of motivational interviewing combined with digital shoe-fitting on adherence to wearing orthopedic shoes: study protocol

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Background

Diabetic foot ulcers are a leading cause of hospitalization, amputation and high treatment costs. Personalized orthopedic shoes are considered essential to prevent (re)ulcerations, and therefore adherence to this footwear is crucial. However, adherence to orthopedic footwear is low, only 46–49% of patients wear their orthopedic shoes for at least 80% of total steps, and there is also a lack of insight into the (long-term) benefits of intervention methods that might improve this adherence.

Aim: to assess the (cost-)effectiveness of a novel care procedure (motivational interviewing (MI) combined with digital shoe-fitting) compared to usual care (no MI and traditional fitting).

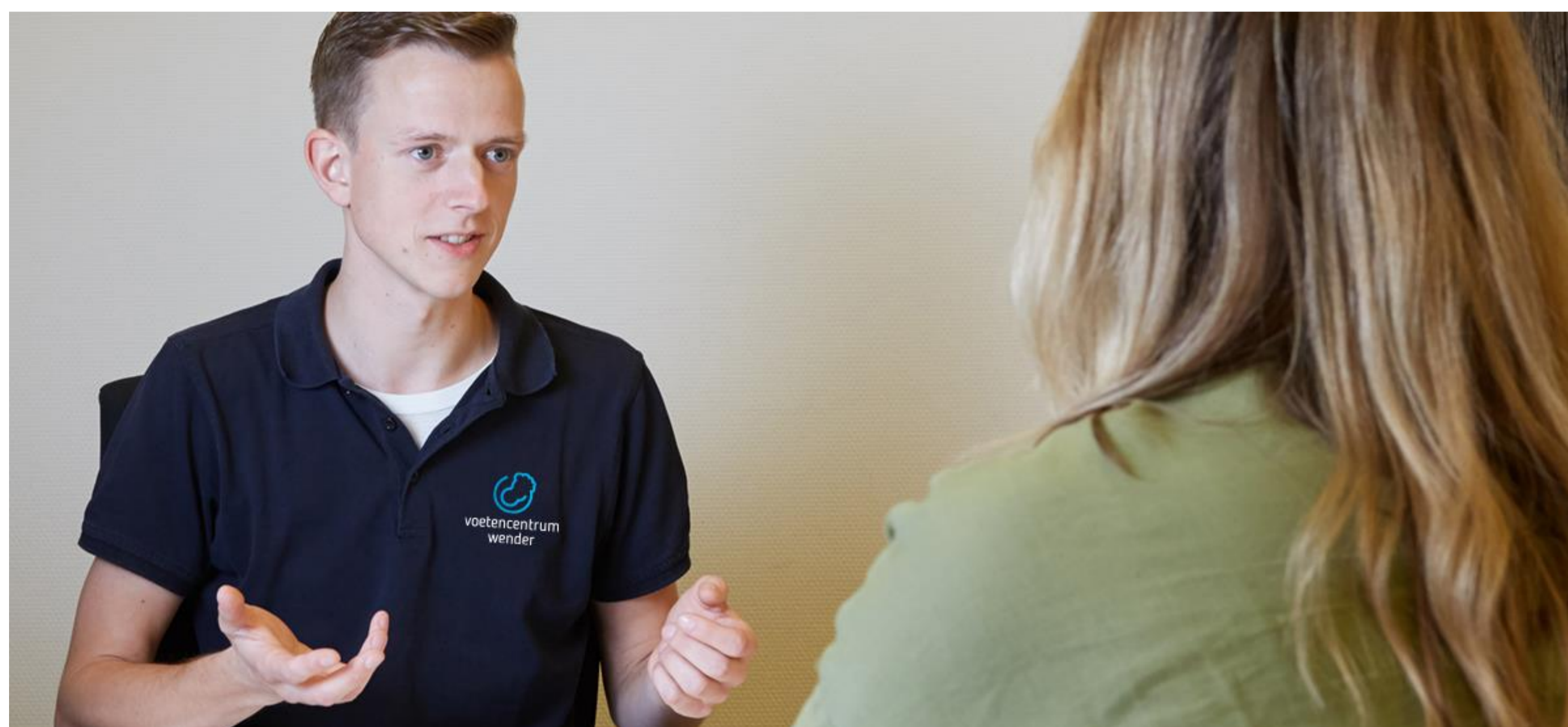


Fig 1. Podiatrist applying motivational interviewing.

Method

In this ongoing randomized controlled trial, 140 participants with diabetes mellitus, with or without previous ulcer, who are prescribed custom-made orthopedic shoes were included and randomized over the intervention (novel care) or control condition (usual care).

A temperature sensor was built in participants' custom-made shoes to continuously measure wearing time throughout 12 months. Daily activity is being measured using logdata with a step watch and combined with the wearing time to calculate adherence. The primary outcome is the proportion of participants who adhere, that is, take at least 80% of their total steps with custom footwear.



Fig 2. Podiatrist applying digital shoe-fitting.

Results

Results will consist of sensor-based and objective assessment of differences in adherence to orthopedic shoes, quality of life, productivity, costs and quality-adjusted life years, over one year. In a mixed methods approach the patient perspective on the experience with orthopedic footwear, use and usability, will be triangulated with adherence data. This trial will generate insights into the socio-economic, wellbeing and motivational impact of the novel care procedure resulting from improved adherence to orthopedic shoes.

More information

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