Poster

Visual Food Diary for Social Support, Dietary Changes and Weight Loss

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Abstract

Background: To find out to what degree health-improving dietary behavior (eg, increasing consumption of vegetables and fruits) can be furthered in virtual peer support groups moderated by a nutrition professional using a mobile app.

Objective: To find out, to what degree health improving dietary behaviour, for example increasing the use of vegetables and fruits can be furthered in virtual peer support groups moderated by a nutrition professional using a mobile application.

Methods: In this feasibility study, volunteering adult men and women (body mass index [BMI]>25 kg/m²) were recruited both from a diabetes outpatient clinic and from an occupational health care unit. Participants were divided into 3 groups. All participants used a smartphone app that allowed them to keep a visual food journal, share their meals and activity with group members, and receive virtual coaching from a nutrition professional. Outcomes were assessed via surveys at baseline, after the intervention, and 4 weeks later using a food frequency questionnaire (FFQ). Frequency of app use, weight, and waist circumference were estimated at baseline and after the intervention.

Results: Mean weight loss (n=25) after intervention was 1.5 kg (95% CI 0.79 to 2.29), or 1.7% (95% CI 0.89 to 2.5) in all subjects together, and 1.5% in group 1 (95% CI –0.02 to 2.9), 1.9% in group 2 (95% CI 0.56 to 3.25), and 1.7% in group 3 (95% CI –0.20 to 3.61), respectively. Mean waist circumference (n=22) reduced 2.4% (95 % CI 1.3 to 3.4). At the end of the 4-week intervention, the consumption of vegetables and fruits (n=26) had increased by 55%, while the consumption of sweets and chocolate had decreased by 39% as compared to baseline. Almost all participants (84%) strongly agreed (40%) or agreed (44%) that they got support and encouragement from other group members. Similarly, altogether 92% of participants strongly agreed (67%) or agreed (25%) that they felt like they belonged to the group. The engagement level was high, with the average user uploading 5.2 meals a day and recording a total of 9.3 sessions a day. There was some variation between the 3 groups. On average, users in groups 1, 2, and 3 uploaded 3.8 (n=8, 862 meals), 5.8 (n=8, 1315 meals) and 5.7 (n=11, 1774 meals) meals a day, respectively, within the 4 week period. In total, the participants uploaded 3951 meals and recorded 7066 sessions.

Conclusions: Smartphone-based virtual peer support can be used as a tool to promote healthy eating both in outpatient clinic and occupational health settings.

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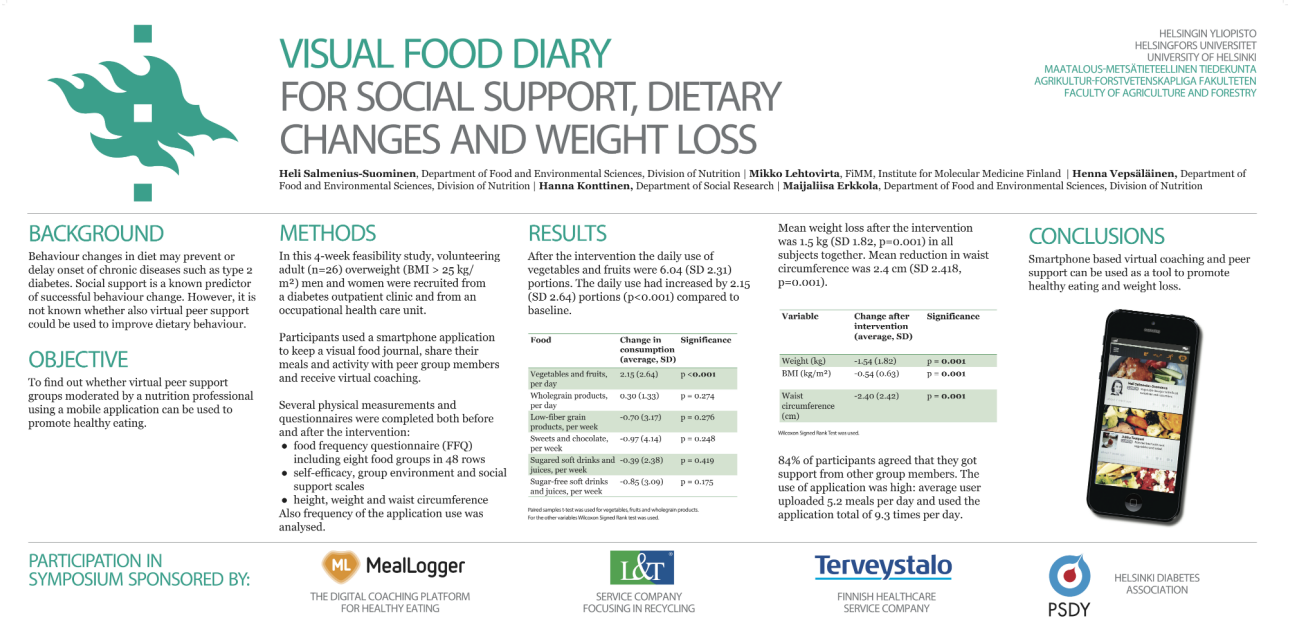
KEYWORDS

mHealth; nutrition; food journal; peer support; obesity

This poster was presented at the Connected Health Symposium 2016, October 20-21, Boston, MA, United States. The poster is displayed as an image in Figure 1 and as a PDF in Multimedia Appendix 1.

Figure 1. Poster.



Multimedia Appendix 1

Poster.

[PDF File (Adobe PDF File), 1MB-Multimedia Appendix 1]

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