

Personligt stöd för goda levnadsvanor



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Stöd för goda levnadsvanor bör:

Vara evidensbaserat

Bygga på teorier för
beteendeförändring

Anpassat till
personerna det gäller

Vara effektivt på lång sikt

Pragmatiskt att implementera i större skala

Forskningen kring implementering av interventioner behöver stärkas

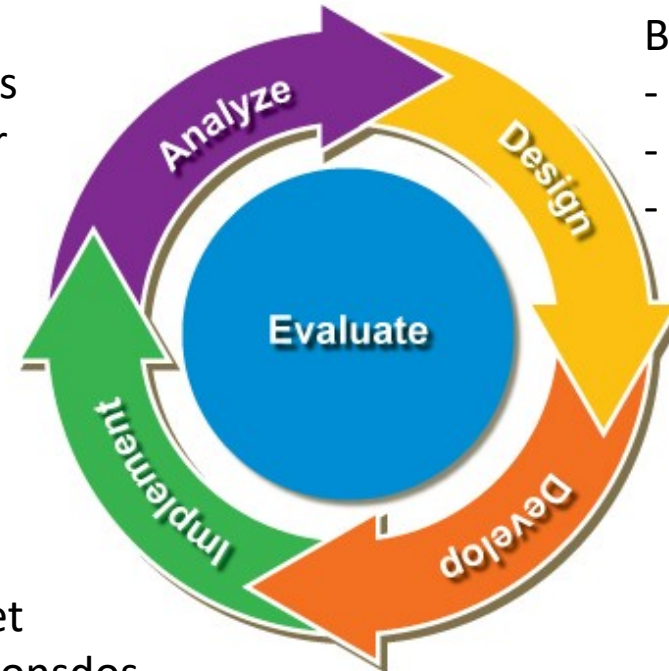


Utvärdera

- Effectiveness
- Mekanismer
- Kostnad

Följ upp

- Följsamhet
- Interventionsdos



Basera på

- Prioriterade behov
- Tillgänglig evidens
- Teoretisk grund

- Samverka
- Utbilda
- Anpassa
- Pilottesta

Innehåll

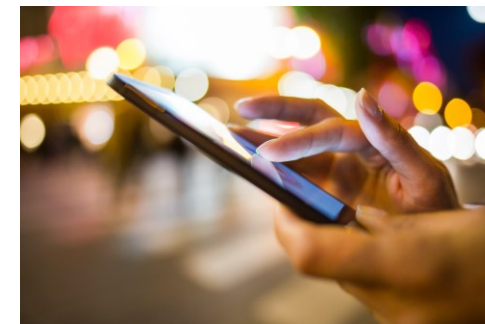
Sophia Step Study- en stegräknarintervention

- Processutvärdering- följsamhet och interventionsdos
- Intervjustudie- hur deltagandet upplevdes
- Effekt på fysisk aktivitet och kardiometabol hälsa
- Förklaringsfaktorer



En individanpassad digital intervention

- Planering: litteraturöversikt, fokusgruppsstudier, workshops
- Anpassning: feasibilitystudier
- Utvärdering: planerad studie



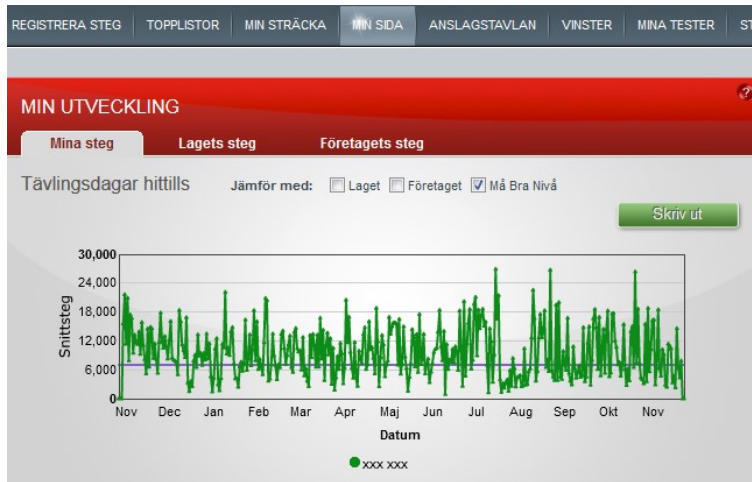
Sophia Step Study



En majoritet av personer med typ 2 diabetes och prediabetes var inaktiva.
Metoder för att stödja hälsosammare rörelsevanor behövdes inom
primärvården.



Stegräknare



Beteendeförändringstekniker

Egenmätning

Medvetandegörande

Målsättning

Direktåterkoppling

Utvärdering av beteende

Uppmuntran

Återkoppling på måluppfyllelse

Utmaningar och jämförelser

Rådgivning och gruppstöd

Beteendeförändringstekniker

Medvetandegörande

Individuell målsättning

Återkoppling

Uppmuntran

Stärkt self-efficacy

Identifiering av hinder

Beslutsbalans

Förstärkning av beteende

Förebygga återfall

Socialt stöd

Förebilder

Färdighetsträning



Sophia Step Study

- Utvärderade om stegräknare kan användas som stöd för fysisk aktivitet inom primärvården, samt om stärkt stöd är bättre på lång sikt
- Implementerades i tre primärvårdskontexter
- Inriktat mot personer med prediabetes och typ 2 diabetes
- Två års intervention

Rossen et al. *BMC Public Health* (2015) 15:647
DOI 10.1186/s12889-015-1941-9



STUDY PROTOCOL

Open Access



Physical activity promotion in the primary care setting in pre- and type 2 diabetes - the Sophia step study, an RCT

Jenny Rossen^{1,2}, Agneta Yngve^{1,3}, Maria Hagströmer⁴, Kerstin Brismar⁵, Barbara E. Ainsworth⁶, Christina Iskull⁷, Peter Möller⁷ and Unn-Britt Johansson^{1,2*}

Abstract

Background: Physical activity prevents or delays progression of impaired glucose tolerance in high-risk individuals. Physical activity promotion should serve as a basis in diabetes care. It is necessary to develop and evaluate health-promoting methods that are feasible as well as cost-effective within diabetes care. The aim of Sophia Step Study is to evaluate the impact of a multi-component and a single component physical activity intervention aiming at improving HbA_{1c} (primary outcome) and other metabolic and cardiovascular risk factors, physical activity levels and overall health in patients with pre- and type 2 diabetes.

Methods/design: Sophia Step Study is a randomized controlled trial and participants are randomly assigned to either a multi-component intervention group (A), a pedometer group (B) or a control group (C). In total, 310 patients will be included and followed for 24 months. Group A participants are offered pedometers and a website to register steps, physical activity on prescription with yearly follow-ups, motivational interviewing (10 occasions) and group consultations (including walks, 12 occasions). Group B participants are offered pedometers and a website to register steps. Group C are offered usual care. The theoretical framework underpinning the interventions is the Health Belief Model, the Stages of Change Model, and the Social Cognitive Theory. Both the multi-component intervention (group A) and the pedometer intervention (group B) are using several techniques for behavior change such as self-monitoring, goal setting, feedback and relapse prevention.

Measurements are made at week 0, 8, 12, 16, month 6, 9, 12, 18 and 24, including metabolic and cardiovascular biomarkers (HbA_{1c} as primary health outcome), accelerometry and daily steps. Furthermore, questionnaires were used to evaluate dietary intake, physical activity, perceived ability to perform physical activity, perceived support for being active, quality of life, anxiety, depression, well-being, perceived treatment, perceived stress and diabetes self-efficacy.

Discussion: This study will show if a multi-component intervention using pedometers with group- and individual consultations is more effective than a single-component intervention using pedometers alone, in increasing physical activity and improving HbA_{1c}, other metabolic and cardiovascular risk factors, physical activity levels and overall health in patients with pre- and type 2 diabetes.

Trial registration: ClinicalTrials.gov Identifier: NCT02374788. Registered 28 January 2015.

Keywords: Metabolic health, Pedometer, Adults, HbA_{1c}, Behavior change, Intervention

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Tre parallella grupper

Multikomponent

Stegräknare +
Hemsida
Individuell
rådgivning
Gruppträffar
n= 64

Singel komponent

Stegräknare +
hemsida
n= 59

Control

Sedvanlig vård
n=65

Två års intervention

Vi tog kroppsmått, blodprover, mätte handgreppsstyrka och blodtryck, samt skickade ut enkäter och aktivitetsmätare

Primärt utfallsmått- HbA1c



SOPHIA HEMMET

32. Markera vilket påstående som bäst beskriver din hälsostatus idag.

Rörlighet

- ★ Jag går utan svårigheter
- Jag kan gå men med viss svårighet
- Jag är sängliggande

Hygien

- ★ Jag behöver ingen hjälp med min dagliga hygien, mat eller plådring
- Jag har vissa problem att tvätta eller klä mig själv
- Jag kan inte tvätta eller klä mig själv

Huvudsakliga aktiviteter (tex arbete, studier, hushållssysslor, familje- och fritidsaktiviteter)

- ★ Jag klarar av mina huvudsakliga aktiviteter
- Jag har vissa problem med att klara av mina huvudsakliga aktiviteter
- Jag klarar inte av mina huvudsakliga aktiviteter

Smärter/besvär

- Jag har varken smärter eller besvär
- ★ Jag har måttliga smärter eller besvär
- Jag har svåra smärter eller besvär

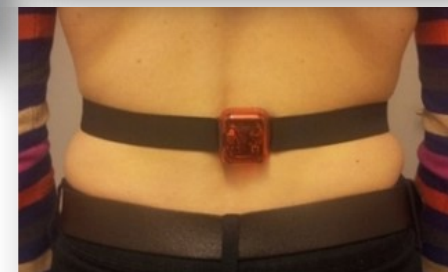
Oro/nedstämdhet

- ★ Jag är inte orolig eller nedstämd
- Jag är orolig eller nedstämd i viss utsträckning
- Jag är i högsta grad orolig eller nedstämd

Tillbaka Nästa

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RESEARCH ARTICLE

Open Access

Process evaluation of the Sophia Step Study- a primary care based three-armed randomized controlled trial using self-monitoring of steps with and without counseling in prediabetes and type 2 diabetes



Jenny Rossen^{1*} , Maria Hagströmer^{1,2,3}, Agneta Yngve⁴, Kerstin Brismar^{5,6}, Barbara Ainsworth^{7,8} and Unn-Britt Johansson^{1,9}

Abstract

Background: Describing implementation features of an intervention is required to compare interventions and to inform policy and best practice. The aim of this study was to conduct a process evaluation of the first 12 months of the Sophia Step Study: a primary care based RCT evaluating a multicomponent (self-monitoring of daily steps plus counseling) and a single component (self-monitoring of steps only) physical activity intervention to standard care on cardiometabolic health.

Methods: The evaluation was guided by the Medical Research Council Guidance for complex interventions. To describe the implementation communication with the health professionals implementing the interventions, attendance records and tracking of days with self-monitored pedometer-determined steps were used. Change in physical activity behaviour was measured at baseline, 6 and 12 months as daily steps by accelerometry.

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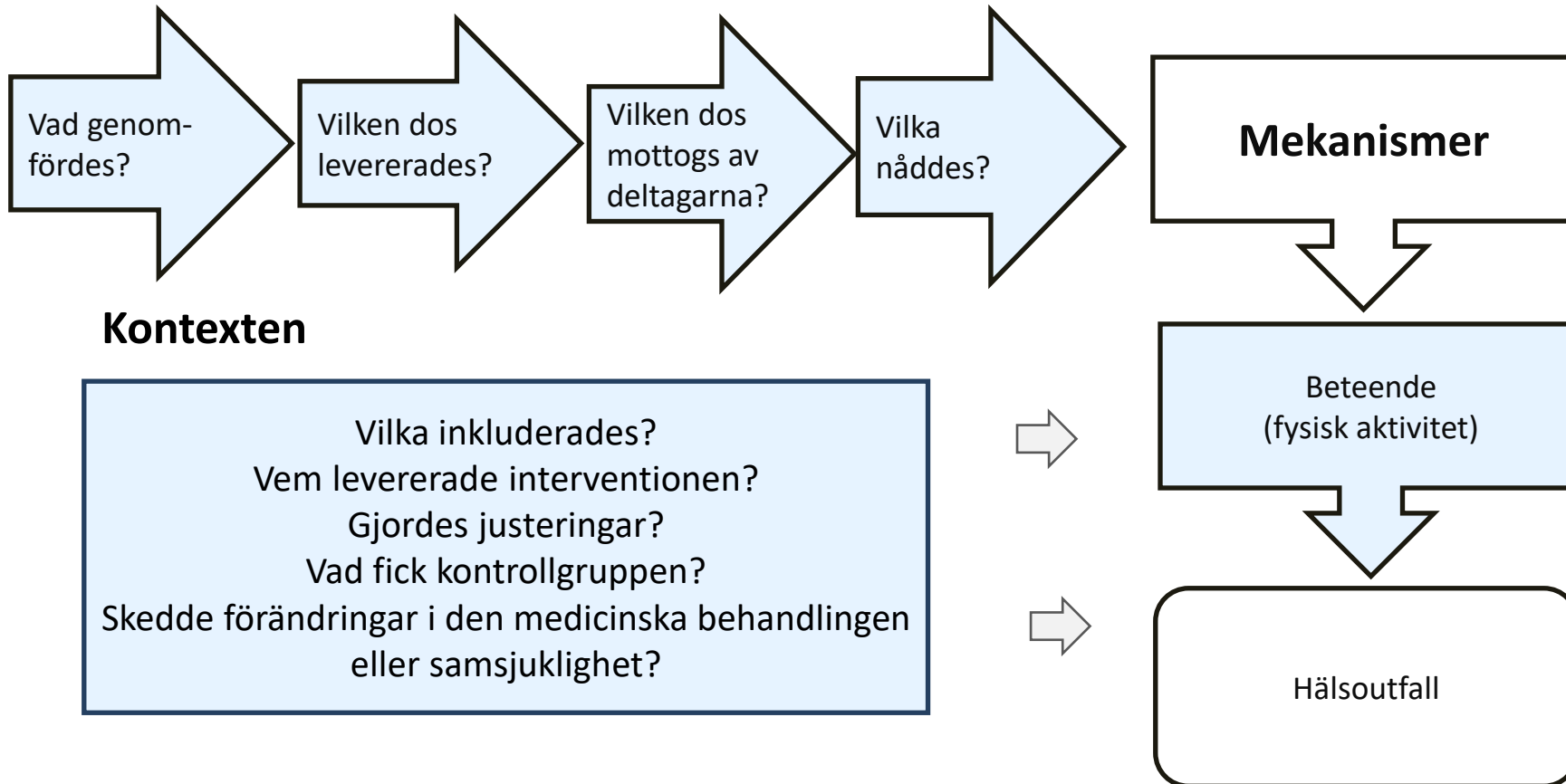
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Gick det som planerat?

För att beskriva implementeringen och följsamheten till interventionen gjorde vi en processutvärdering av de första 12 månaderna

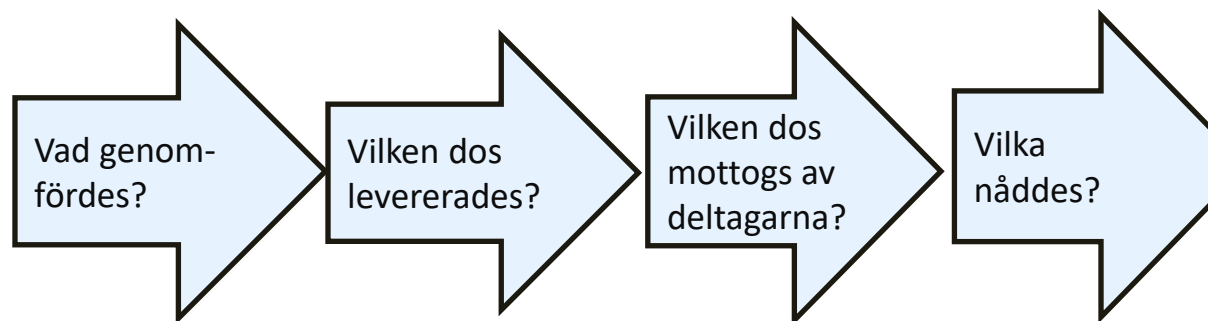


Implementering (fidelity, delivery and reach)



Implementering

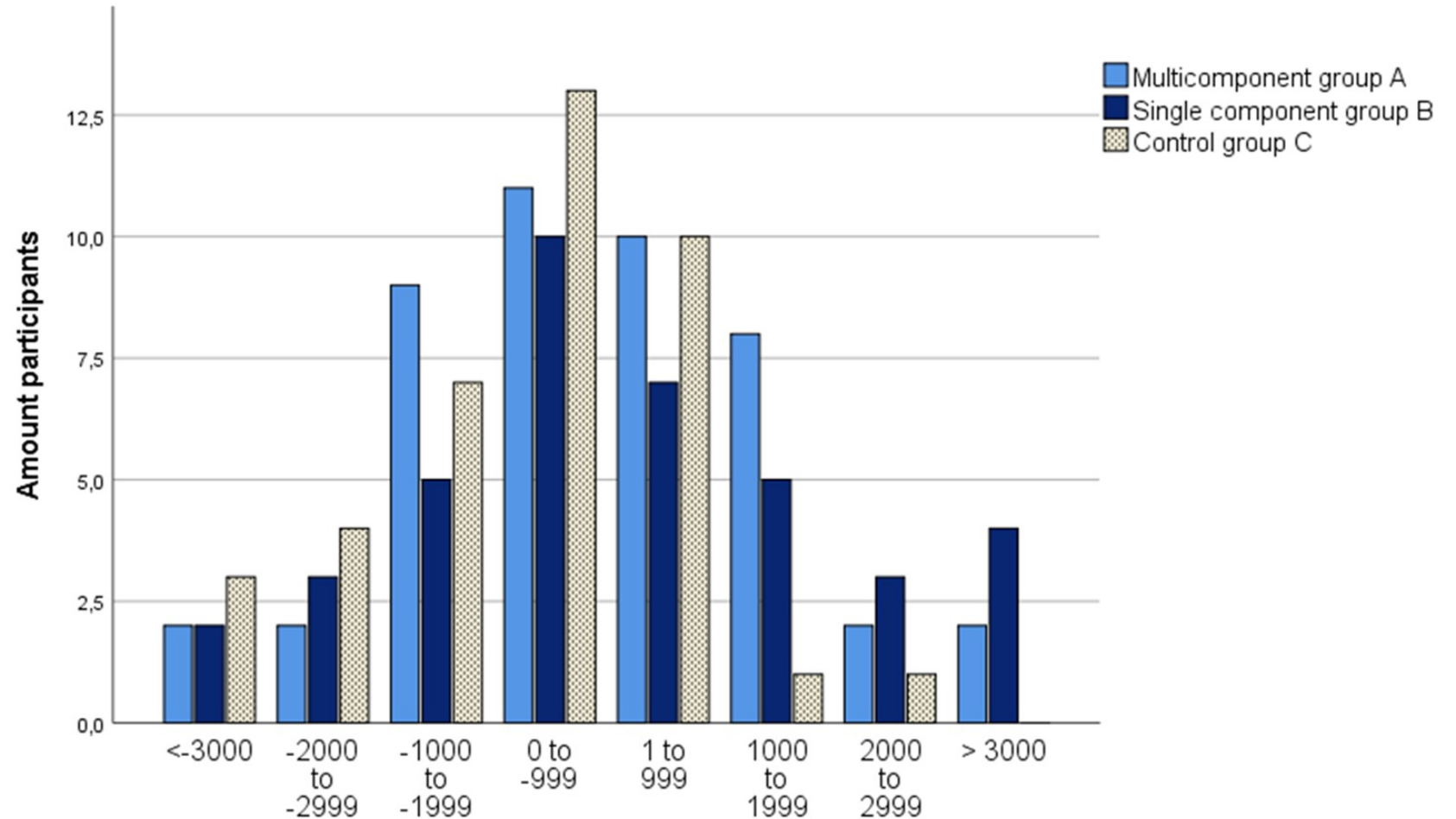
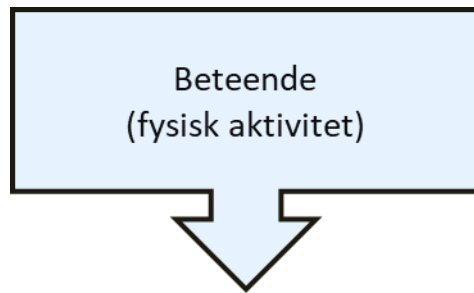
Fidelity, delivery, and reach



Urban primary care center	Rural primary care center	Insurance clinic
Intervention adherence at 12 months Group A Percentage days registered steps: >67% (n=30) 34-66% (n=3) ≤33% (n=3) Have a step goal: 89% (n=34) Attendance at combined individual consultations/study assessments: 5-6 times (n=36), 3-4 times (n=1), ≤2 times (n=1) Attendance at group sessions: 7-9 sessions (n=10) 4-6 sessions (n=14) 1-3 sessions (n=11), 0 sessions, (n=1)	Intervention adherence at 12 months Group A Percentage days registered steps: >67% (n=14) 34-66% (n=1) ≤33% (n=0) Have a step goal: 31% (n=5) Attendance at combined individual consultations/study assessments: 5-6 times (n=16), 3-4 times (n=0) ≤2 times (n=0) Attendance at group sessions: 7-9 sessions (n=6) 4-6 sessions (n=6) 1-3 sessions (n=2), 0 sessions, (n=1)	Intervention adherence at 12 months Group A Percentage days registered steps: >67% (n=10) 34-66% (n=0) ≤33% (n=0) Have a step goal: 50% (n=5) Attendance at combined individual consultations/study assessments: 5-6 times (n=10), 3-4 times (n=0), ≤2 times (n=0) Attendance at group sessions: 7-9 sessions (n=3) 4-6 sessions (n=3) 1-3 sessions (n=3), 0 sessions, (n=1)
Intervention and study protocol adherence at 12 months Group B Percentage days registered steps: >67% (n=22) 34-66% (n=2) ≤33% (n=1) Have a step goal: 82% (n=23) Attendance at study assessments: 5-6 times (n=26) 3-4 times (n=0), ≤2 times (n=0)	Intervention and study protocol adherence at 12 months Group B Percentage days registered steps: >67% (n=14) 34-66% (n=1) ≤33% (n=3) Have a step goal: 27% (n=6) Attendance at study assessments: 5-6 times (n=18) 3-4 times (n=1) ≤2 times (n=1)	Intervention and study protocol adherence at 12 months Group B Percentage days registered steps: >67% (n=7) 34-66% (n=1) ≤33% (n=0) Have a step goal: 44% (n=4) Attendance at study assessments: 5-6 times (n=6) 3-4 times (n=2) ≤2 times (n=0)
Study protocol adherence at 12 months Group C Attendance at study assessments: 5-6 times (n=32) 3-4 times (n=3) ≤2 times (n=0)	Study protocol adherence at 12 months Group C Attendance at study assessments: 5-6 times (n=19) 3-4 times (n=0) ≤2 times (n=1)	Study protocol adherence at 12 months Group C Attendance at study assessments: 5-6 times (n=6) 3-4 times (n=1) ≤4 times (n=0)

Sammantaget en hög grad av genomförande

Beteendeförändring: förändring i antal steg efter 12 månader



'This is why I'm doing a lot of exercise' — a qualitative study of participant's experiences of the Sophia Step Study

Jenny Rossen ^{1,2}, Helena Lööf ^{1,2,3}, Agneta Yngve ⁴, Maria Hagströmer ^{5,6}, Kerstin Brismar ^{7,8,9} and Unn-Britt Johansson ^{1,2}

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Introduction: Support for physical activity (PA) is central in diabetes care. The Sophia Step Study is a three-armed randomised controlled trial aiming to evaluate different levels of support for increased PA in prediabetes and Type 2 diabetes. With the purpose to reveal the programme components and the mediating factors from the participants' perspective this paper aims to report a qualitative exploration of adhering participants' experiences after two years' study participation.

Methods: Semi structured interviews were conducted with 18 participants (men, $n = 11$, women, $n = 7$, prediabetes, $n = 5$, Type 2 diabetes, $n = 13$, median age 68.5 years) who completed a two-year multi-component ($n = 7$), single-component ($n = 6$) intervention or served as controls ($n = 5$) at a primary care center in Stockholm, Sweden. The interviews were analysed using content analysis with an inductive approach. Sophia Step Study is registered at ClinicalTrials.gov with Identifier: NCT02374788.

Results: The participants recalled the frequent study assessments as providing feedback of health outcomes; positive reinforcement; a sense of sentinel and a personalised approach. Group meetings, pedometers and health check-ups were valued as resources for increased awareness and motivation of PA; establishment of new routines and control over the own health. The long program duration allowed for maintenance of awareness and routines for PA.

Conclusion: Adhering participants in theory-based interventions, but also in the control group, identified key mediators to support for PA. Feedback of results, personalised encouragement, emotional support and self-monitoring should be regarded in self-management of PA to optimise patient motivation and outcomes.

Keywords: Experience, Physical activity, Prediabetes, Sophia Step Study, Type 2 diabetes, Qualitative method, Self-management

Introduction

Physical activity (PA) has beneficial effects on diabetes and cardiovascular disease and should serve as a cornerstone in diabetes care.^{1–3} Health-enhancing PA is recommended to be performed on a regular basis, preferably daily.² This requirement places effort on the individual; integrating PA in the daily routines has been expressed as burdensome and stressful.⁴ Indeed, a large number of Swedes with Type 2 diabetes are inactive.⁵ To support self-management of PA in Type 2 diabetes pedometers, group counselling, motivational interviewing and prescribed exercise are evidence-based methods, recommended to be used.^{6–9} The effects of these

The Sophia Step Study is a theoretically based three-armed randomised controlled trial aimed to evaluate a single- and a multi-component intervention designed to support patients with prediabetes and Type 2 diabetes to increase their PA level.¹⁰ The study is ongoing, recruiting participants in waves and planned to be completed by January 2020. In a program of such long duration process evaluation becomes essential; to evaluate whether the program components are implemented and if the program is accepted. Yet, it is important to explore participants' perspectives on the strengths and weaknesses of a program.¹¹ In addition, what we as researchers have guidance for active ingredients might not be con-

Mekanismer



En kvalitativ
intervjustudie
med 18 deltagare

Deltagarnas erfarenheter

Professionell styrning

Hälsokontroller och
återkoppling- värdefullt

Externa faciliteter- ökar
motivationen för fysisk
aktivitet

Emotionellt stöd genom
vänskapliga relationer

En inre resa

Ett nytt förhållningssätt till
fysisk aktivitet

Tankesätt för att bemöta
hinder för fysisk aktivitet

Gav interventionerna någon effekt?

RESEARCH

Open Access



Effects of a three-armed randomised controlled trial using self-monitoring of daily steps with and without counselling in prediabetes and type 2 diabetes—the Sophia Step Study

Jenny Rossen^{1*} , Kristina Larsson¹, Maria Hagströmer^{1,2,3}, Agneta Yngve^{4,5}, Kerstin Brismar^{6,7}, Barbara Ainsworth^{8,9}, Linda Åberg¹⁰ and Unn-Britt Johansson^{1,11}

Abstract

Background: This aimed to evaluate the effects of self-monitoring of daily steps with or without counselling support on HbA1c, other cardiometabolic risk factors and objectively measured physical activity (PA) during a 2-year intervention in a population with prediabetes or type 2 diabetes.

Methods: The Sophia Step Study was a three-armed parallel randomised controlled trial. Participants with prediabetes or type 2 diabetes were recruited in a primary care setting. Allocation (1:1:1) was made to a multi-component intervention (self-monitoring of steps with counselling support), a single-component intervention (self-monitoring of steps without counselling support) or standard care. Data were collected for primary outcome HbA1c at baseline and month 6, 12, 18 and 24. Physical activity was assessed as an intermediate outcome by accelerometer (ActiGraph GT1M) for 1 week at baseline and the 6-, 12-, 18- and 24-month follow-up visits. The intervention effects were evaluated by a robust linear mixed model.

Results: In total, 188 subjects (64, 59, 65 in each group) were included. The mean (SD) age was 64 (7.7) years, BMI was 30.0 (4.4) kg/m² and HbA1c was 50 (11) mmol/mol, 21% had prediabetes and 40% were female. The dropout rate was 11% at 24 months. Effect size (CI) for the primary outcome (HbA1c) ranged from -1.3 (-4.8 to 2.2) to 1.1 (-2.4 to 4.6) mmol/mol for the multi-component vs control group and from 0.3 (-3.3 to 3.9) to 3.1 (-0.5 to 6.7) mmol/mol for the single-component vs control group. Effect size (CI) for moderate-to-vigorous physical activity ranged from 8.0 (0.4 to 15.7) to 11.1 (3.3 to 19.0) min/day for the multi-component vs control group and from 7.6 (-0.4 to 15.6) to 9.4 (1.4 to 17.4) min/day for the single-component group vs control group.

Conclusion: This 2-year intervention, including self-monitoring of steps with or without counselling, prevented a decrease in PA but did not provide evidence for improved metabolic control and cardiometabolic risk factors in a population with prediabetes or type 2 diabetes.

Trial registration: ClinicalTrials.gov, NCT02374788. Registered 2 March 2015—Retrospectively registered.

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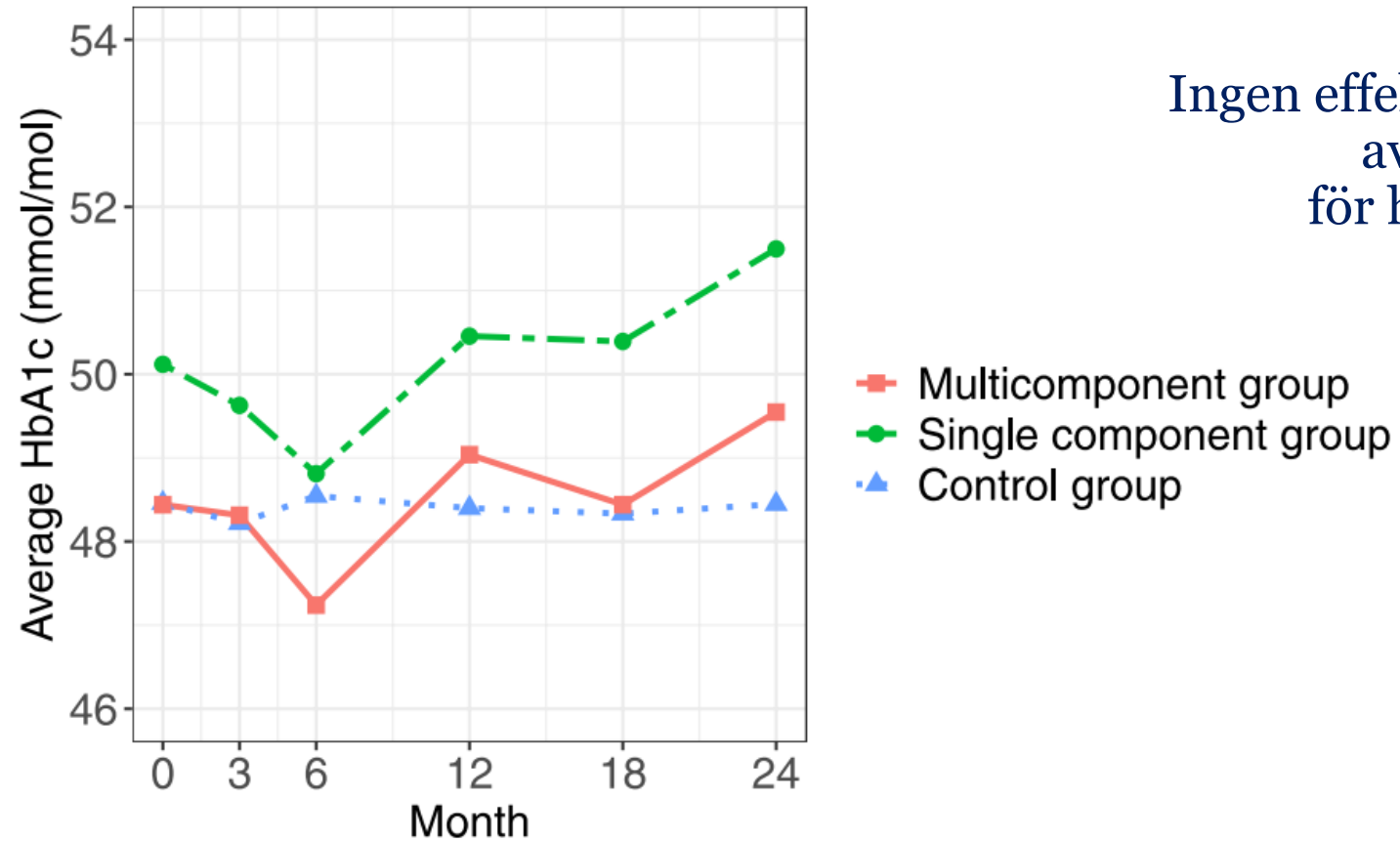
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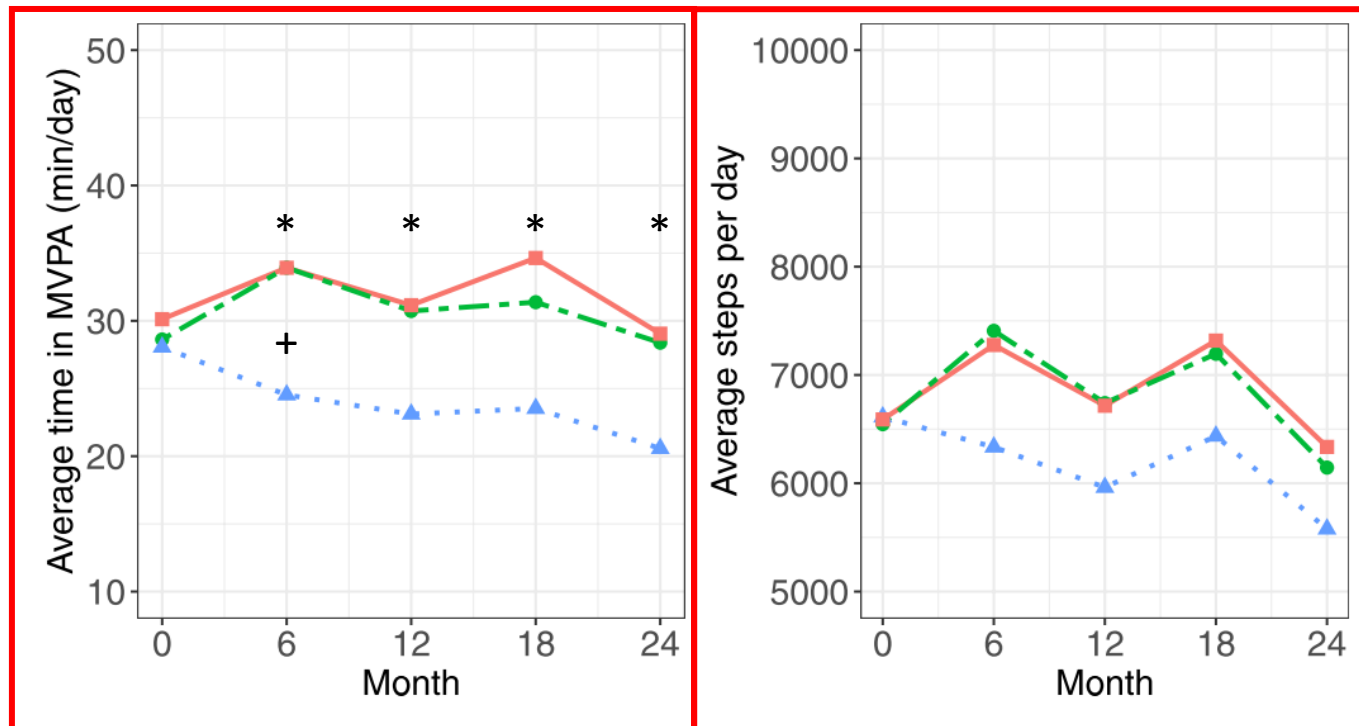
Resultat- HbA1c



Ingen effekt på HbA1c eller någon
av riskfaktorerna
för hjärt-kärlsjukdom

Resultat- fysisk aktivitet

Skillnad i fysisk aktivitet
mellan grupperna tack vare
att kontrollgruppen
minskade sin aktivitet



* Signifikans mellan multikomponentgruppen och kontrollgruppen

+ Signifikans mellan singelkomponentgruppen och kontrollgruppen

Vilka lyckades? Vilka faktorer förklarade framgång?

Vi studerade vilka faktorer vid studiens start som var kopplade till en effekt vid sex och 24 månader

RESEARCH

Open Access



Predictors associated with an increase in daily steps among people with prediabetes or type 2 diabetes participating in a two-year pedometer intervention

Kristina Larsson^{1*}, Jenny Rossen¹, Åsa Norman², Unn-Britt Johansson^{1,3} and Maria Hagströmer^{1,4,5}

Abstract

Background This study aimed to explore predictors associated with intermediate (six months) and post-intervention (24 months) increases in daily steps among people with prediabetes or type 2 diabetes participating in a two-year pedometer intervention.

Methods A secondary analysis was conducted based on data from people with prediabetes or type 2 diabetes from two intervention arms of the randomised controlled trial Sophia Step Study. Daily steps were measured with an ActiGraph GT1M accelerometer. Participants were divided into two groups based on their response to the intervention: Group 1) ≥ 500 increase in daily steps or Group 2) a decrease or < 500 increase in daily steps. Data from baseline and from six- and 24-month follow-ups were used for analysis. The response groups were used as outcomes in a multiple logistic regression together with baseline predictors including self-efficacy, social support, health-related variables, intervention group, demographics and steps at baseline. Predictors were included in the regression if they had a p -value < 0.2 from bivariate analyses.

Results In total, 83 participants were included. The mean $\pm$ SD age was 65.2 ± 6.8 years and 33% were female. At six months, a lower number of steps at baseline was a significant predictor for increasing ≥ 500 steps per day (OR = 0.82, 95% CI 0.69–0.98). At 24 months, women had 79% lower odds of increasing ≥ 500 steps per day (OR = 0.21, 95% CI 0.05–0.88), compared to men. For every year of increase in age, the odds of increasing ≥ 500 steps per day decreased by 13% (OR = 0.87, 95% CI 0.78–0.97). Also, for every step increase in baseline self-efficacy, measured with the Self-Efficacy for Exercise Scale, the odds of increasing ≥ 500 steps per day increased by 14% (OR = 1.14, 95% CI 1.02–1.27).

Conclusions In the Sophia Step Study pedometer intervention, participants with a lower number of steps at baseline, male gender, lower age or higher baseline self-efficacy were more likely to respond to the intervention with a step increase above 500 steps per day. More knowledge is needed about factors that influence response to pedometer interventions.

Trial registration ClinicalTrials.gov, NCT02374788.

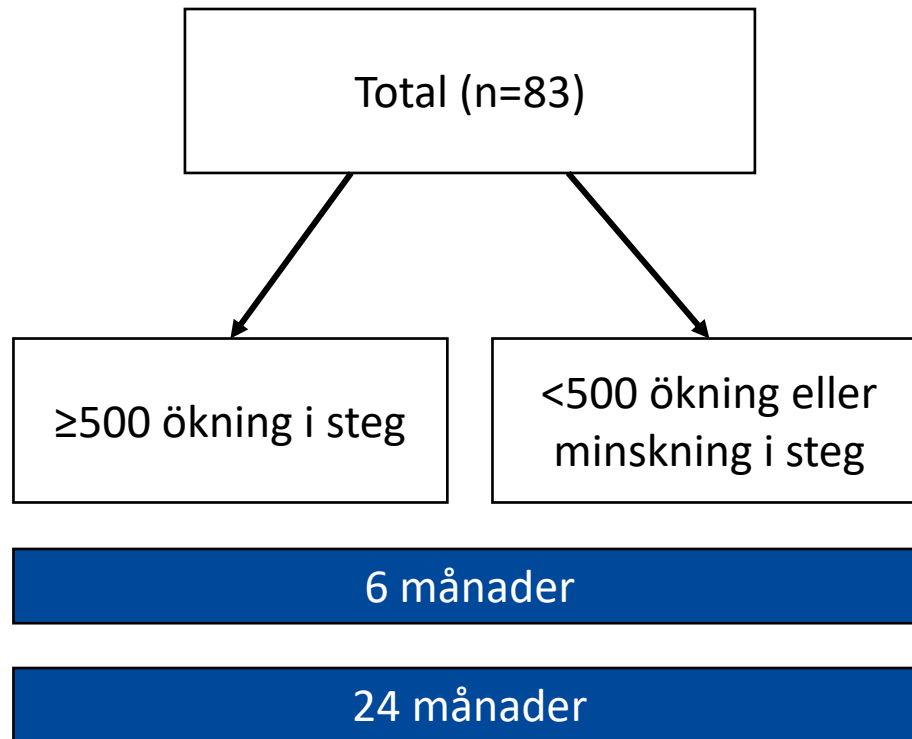
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Interventionsdeltagarna delades in i grupper utifrån om de ökat sina steg med mer än 500 steg/dag eller inte.



Sambanden mellan ökat antal steg och olika faktorer studerades:

Faktorer

- Kön
- Ålder
- Högskoleutbildning
- Diagnos, prediabetes/typ 2 diabetes
- Samsjuklighet
- BMI
- Skattad hälsostatus
- Self-efficacy
- Socialt stöd
- Grupptillhörighet

	OR (95% CI)
6 månader (n=75)	
Diagnos, diabetes	0.63 (0.14-3.13)
Samsjuklighet, ≥2 sjukdomar	0.40 (0.13-1.27)
Steg vid baslinjen	0.82 (0.69-0.98)
Socialt stöd	1.33 (0.92-1.92)
24 månader (n=64)	
Kön, kvinnor	0.21 (0.05-0.88)
Ålder	0.87 (0.78-0.97)
Skattad hälsostatus	1.01 (0.96-1.05)
Self-efficacy	1.14 (1.02-1.27)

Ökning:

De som hade lägre antal steg vid början hade ökat vid 6 månader.

Män, yngre deltagare och de med högre self-efficacy hade ökat vid 24 månader.

Hur påverkade vädret rörelsevanorna?

Syftet var att studera om väderfaktorer (solljus, nederbörd och temperatur) förklarar variationen i antal steg.

Article

Association between Weather and Self-Monitored Steps in Individuals with Prediabetes and Type 2 Diabetes in Sweden over Two Years

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Abstract: Background: Many studies have identified key factors affecting the rates of engagement in physical activity in older adults with chronic disease. Environmental conditions, such as weather variations, can present challenges for individuals with chronic diseases, such as type 2 diabetes when engaging in physical activity. However, few studies have investigated the influence of weather on daily steps in people with chronic diseases, especially those with prediabetes and type 2 diabetes. Objective: This study investigated the association between weather variations and daily self-monitored step counts over two years among individuals with prediabetes and type 2 diabetes in Sweden. Methods: The study is a secondary analysis using data from the Sophia Step Study, aimed at promoting physical activity among people with prediabetes and type 2 diabetes, which recruited participants from two urban primary care centers in Stockholm and one rural primary care center in southern Sweden over eight rounds. This study measured physical activity using step counters (Yamax Digiwalker SW200) and collected self-reported daily steps. Environmental factors such as daily average temperature, precipitation, and hours of sunshine were obtained from the Swedish Meteorological and Hydrological Institute. A robust linear mixed-effects model was applied as the analysis method. Results: There was no association found between weather variations and the number of steps taken on a daily basis. The analysis indicated that only 10% of the variation in daily steps could be explained by the average temperature, precipitation, and sunshine hours after controlling for age, gender, and BMI. Conversely, individual factors explained approximately 38% of the variation in the observations. Conclusion: This study revealed that there was no association between weather conditions and the number of daily steps reported by individuals with prediabetes and type 2 diabetes taking part in a physical activity intervention over two years. Despite the weather conditions, women and younger people reported more steps than their male and older counterparts.

Keywords: physical activity; precipitation; prediabetes; steps; sunshine; temperature; type 2 diabetes



Citation: Woldamanuel, Y.; Bergman, P.; von Rosen, P.; Johansson, U.-B.; Hagströmer, M.; Rossen, J. Association between Weather and Self-Monitored Steps in Individuals with Prediabetes and Type 2 Diabetes in Sweden over Two Years. *Int. J. Environ. Res. Public Health* **2024**, *21*, 379. <https://doi.org/10.3390/ijerph21040379>

Academic Editor: Noël Christopher Baccigo

Received: 14 February 2024

Revised: 18 March 2024

Accepted: 19 March 2024

Published: 22 March 2024

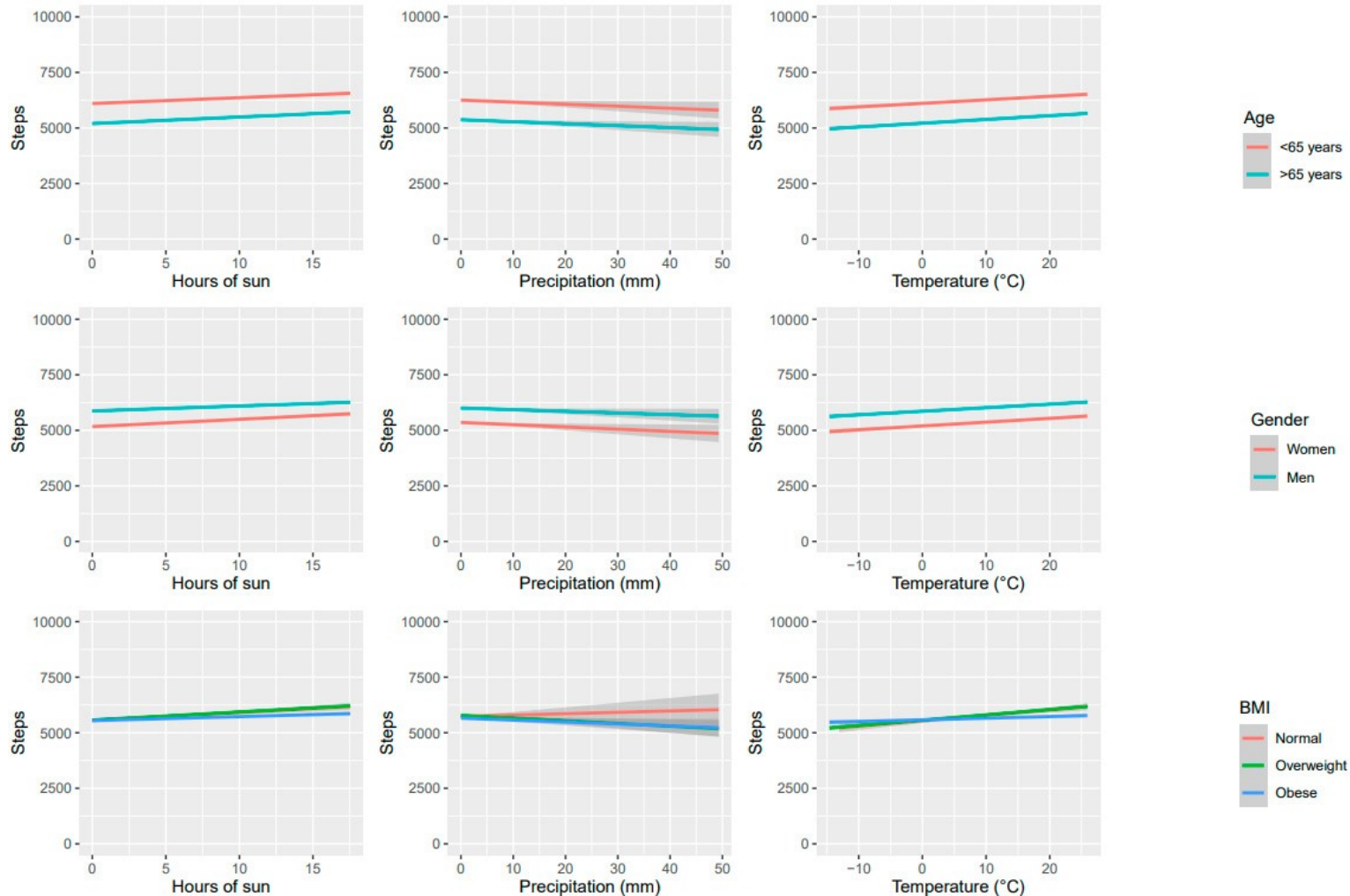


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1. Introduction

Research strongly suggests that physical activity promotes healthy aging [1,2]. According to a 2016 estimation, approximately 28% of the world's adult population is insufficiently physically active [3]. Individuals with type 2 diabetes are typically less physically active than those without this condition [4,5], and this can negatively affect their health. The evidence indicates that regular physical activity can effectively manage blood glucose levels and delay and even prevent complications in individuals with prediabetes and type

Hur påverkade vädret rörelsevanorna?



Till viss en viss del spelade vädret en roll, men ålder och kön var starkare påverkansfaktorer.

Män och yngre deltagare rapporterade fler steg.

Slutsatser från Sophia Step Study

Deltagarna i Sophia Step Study hade ganska höga nivåer av fysisk aktivitet vid baslinjen, men stöd för bibehållen fysisk aktivitet är också viktigt!

De viktigaste lärdomarna från Sophia Step-studien är att mer stöd för hälsosamma vanor är önskvärt och uppskattat, men att alla människor är olika och har sina egna omständigheter som måste beaktas.

Män och yngre deltagare verkar lyckas lite bättre, behöver kvinnor och äldre mer eller annan typ av stöd?



Forskargruppen i Sophia Step Study



Unn-Britt Johansson,
Professor



Kerstin Brismar,
Professor



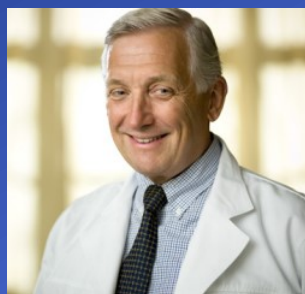
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Professor



Barbara Ainsworth,
Professor



Maria Hagströmer,
Professor



Peter Möller,
PhD, MD



Christina Iskull,
Diabetes-
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Linda Åberg,
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sjuksköterska



Jenny Rossen,
Docent



Yohannes
Woldamanuel,
doktorand



Kristina Larsson,
Doktorand

Finansiärer Sophia Step Study: Sophiahemmet Ideell förening, Diabetesfonden, Konung Gustaf V:s och Drottning Victorias Frimurarestiftelse, Forte, Skandia och Syskonen Svensson stiftelse för medicinsk forskning



Vad händer nu?





Utveckling av ett digitalt stöd för goda levnadsvanor

Forskningsprojektet LongLife Active -> ReachAll



Målet är att utveckla, testa och utvärdera implementeringen och effekten av en personligt anpassad och användarvänlig digital intervention som syftar till att stödja hälsosamma vanor och främja välbefinnande i den vuxna befolkningen.

Forskargruppen

Ingen av forskarna har ekonomiska intressen i appen,
i företaget bakom appen eller i något av företagets samarbetspartners



Unn-Britt Johansson
Professor



Jenny Rossen
Docent

Klara Drake af Hagelsrum
Doktorand

Sophiahemmet
Högskola



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Karolinska Institutet

Adina König
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Doktorand



Lena Kallings
Docent



Elin Ekblom Bak
Professor



Amanda Lönn
PhD

Gymnastik och
idrottshögskolan



Therese Anderbro
Med Dr, lektor

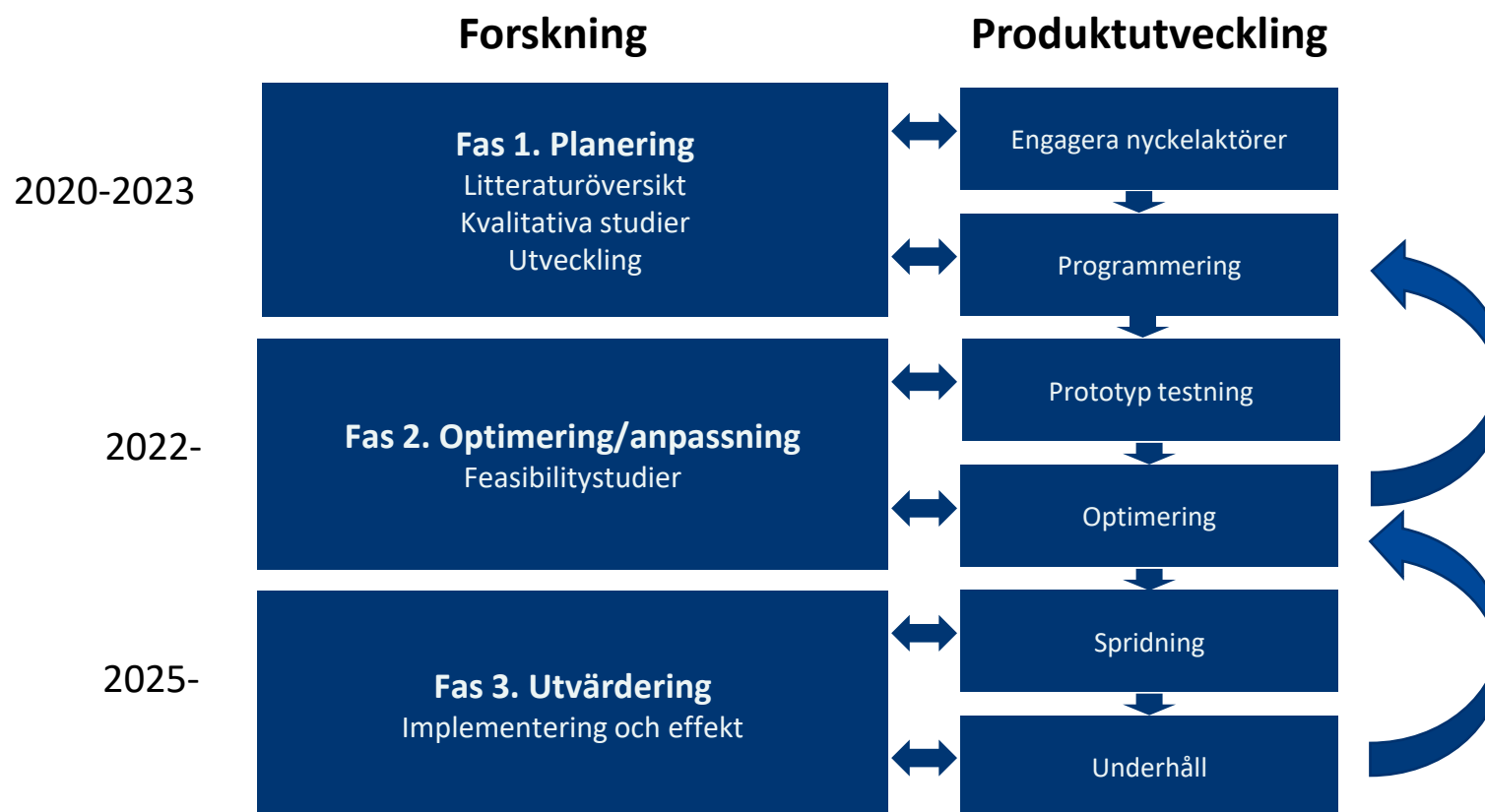
Stockholms
Universitet



Patrick Bergman
Docent

Linnéuniversitetet

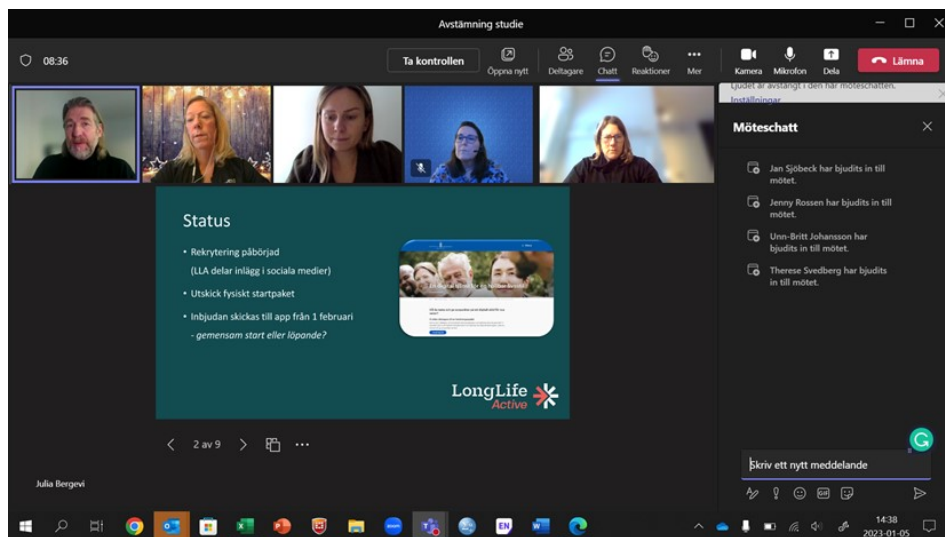
Ett samverkansprojekt med tre faser



Morrison L et.al. The person-based approach to planning, optimising, evaluating and implementing behavioural health interventions. The European Health Psychologist. 2018;20

Fas 1- Interventionsplanering 2020-2023

- Litteraturoversikt- användares synpunkter
- Fokusgrupper- med hälso-och sjukvårdspersonal och potentiella användare
- Co-design: 10 workshops + mindre möten



SCANDINAVIAN JOURNAL OF PRIMARY HEALTH CARE
2023, VOL. 41, NO. 2, 116-131
<https://doi.org/10.1080/02813432.2023.2187068>



RESEARCH ARTICLE

OPEN ACCESS

Health care professionals' experiences of supporting persons with metabolic risk factors to increase their physical activity level – a qualitative study in primary care

Kristina Larsson^a, Maria Hagströmer^{a,b,c}, Jenny Rossen^a, Unn-Britt Johansson^{a,d} and Åsa Norman^{a,e}

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ABSTRACT

Objective: To be regularly physically active is of major importance for the health of people with metabolic risk factors. Many of these persons are insufficiently active and in need of support. This study aimed to explore barriers and facilitators perceived by health care professionals' within Swedish primary care in their work to support persons with metabolic risk factors to increase their physical activity.

Design: A qualitative design with focus group discussions was used. The data were analysed using qualitative content analysis with a manifest, inductive approach.

Setting: Primary health care in five Swedish healthcare regions.

Subjects: Nine physiotherapists, ten physicians and five nurses participated in six digital focus group discussions including two to six participants.

Results: Barriers and facilitators to supporting persons with metabolic risk factors to increase their physical activity were found within four generic categories, where the barriers and facilitators related to each generic category: 'Patient readiness for change', 'Supporting the process of change', 'The professional role', and 'The organisation of primary care'.

Conclusion: The findings suggests that barriers and facilitators for supporting patients with metabolic risk factors can be found at several levels within primary care, from individual patient and the health care professionals to the organisational level. In the primary care setting, this should be highlighted when implementing support to increase physical activity in people with metabolic risk factors.

KEY POINTS

- Health care professionals within primary care are in a position to support people with metabolic risk factors to increase their physical activity.
- Barriers and facilitators to support the patients should be addressed at several levels within primary care.
- The study highlights factors on multiple levels such as professional responsibility, organisational prioritisation and resources, and the challenge to motivate behaviour change.

ARTICLE HISTORY

Received 20 October 2022
Accepted 1 March 2023

KEYWORDS

Barriers; facilitators; health care professionals; physical activity; primary care; Sweden

Introduction

There is high quality evidence that regular physical activity and limited time spent sedentary can prevent non-communicable diseases such as cardiovascular disease, type 2 diabetes, and cancer [1–3]. However, about one-third of the adult population globally is not physically active enough to confer health benefits, and

the numbers are higher in high-income countries compared to low- and middle-income countries [4]. Also, physical inactivity is more common in people with chronic conditions [5]. It is recommended that all adults should engage in physical activity of at least moderate intensity for 150–300 min per week, perform strength training at least twice a week, and limit

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Woldmanuel et al

Bergevi et al

Health in
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noting

^{1,4}, PhD; Maria

³ PhD; Linda Åberg⁴,

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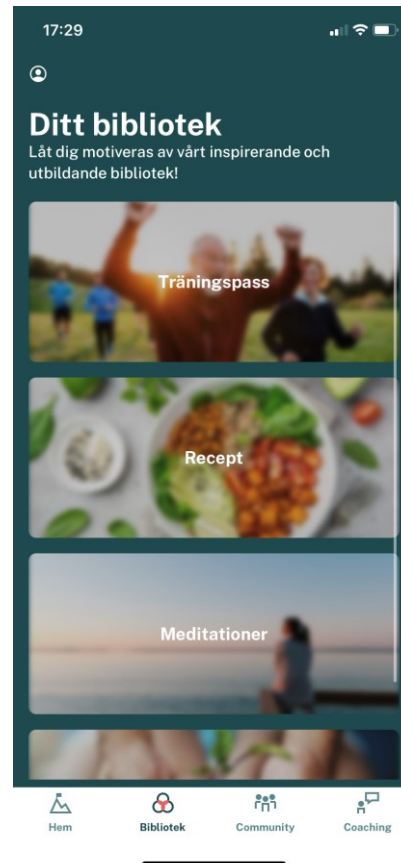
back; qualitative

⁹ (iss. 21 c34278) p. 1
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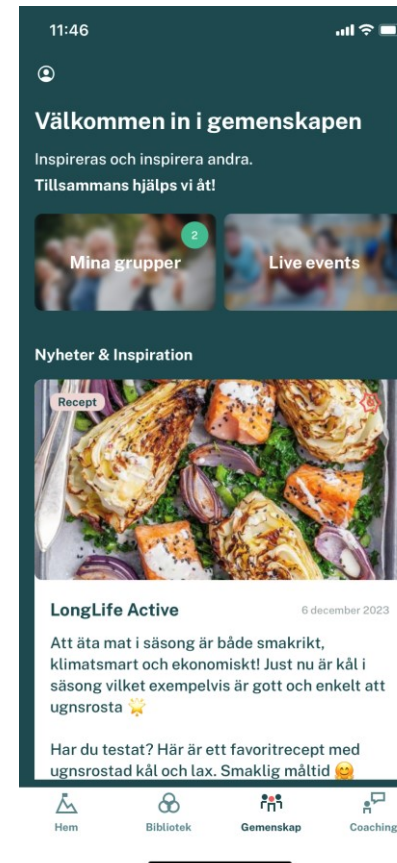
Handlingsplan och återkoppling



Bibliotek



Gemenskap



Coaching



Med stöd av AI ska användare få personanpassade påminnelser, uppmuntran och inspiration.

Fas 2- optimering, feasibilitystudier 2022-

Syfte: Att utvärdera användarsynpunkter, användarmönster och acceptans av appen i olika grupper

Längd: 1-3 månader

Data:

Enskilda intervjuer

Statistik över användning

System Usability Scale och Mobile Application Rating Scale

Matvanor och fysisk aktivitet

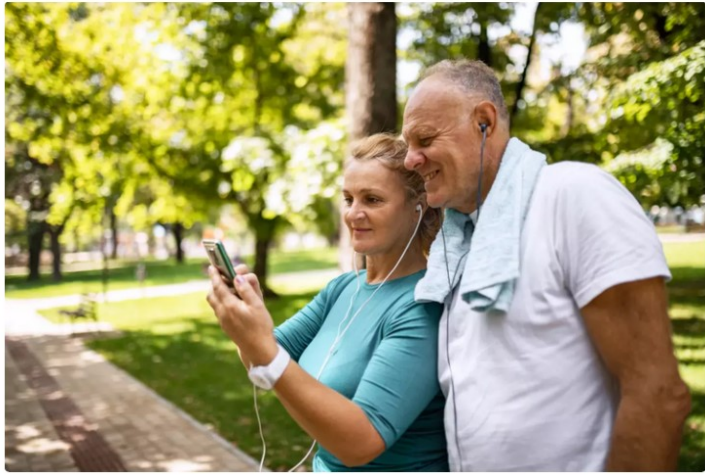
Utöver dessa påbörjade studier planeras studier med andra grupper



Inbjudan till deltagande

Do you want to improve your health and well-being with the help of a new app?

Today, many people struggle to prioritize their health, where lack of physical activity, poor dietary habits, and excessive stress are significant societal issues. Researchers at the Karolinska Institutet are now investigating how a new app, supported by artificial intelligence, can help individuals become more physically active, improve dietary habits, and enhance mental health. The responsible researchers are currently seeking participants for a study that will test a new app.



Reglerad fysisk aktivitet och mental hälsa.

Läs mer på baksidan eller besök www.shh.se/motivation



The acceptability, usability, engagement and optimisation of a mHealth service promoting healthy lifestyle behaviours: A mixed method feasibility study

DIGITAL HEALTH
Volume 10: 1–15
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sagepub.com/journals-permissions
DOI: 10.1177/20552076241247935
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Sage

Callum Regan¹, Phillip Von Rosen¹, Susanne Andermo^{2,3},
Maria Hagström^{1,4,5}, Unn-Britt Johansson^{5,6} and Jenny Rossen⁵

Abstract

Objective: Mobile health (mHealth) services suffer from high attrition rates yet represent a viable strategy for adults to improve their health. There is a need to develop evidence-based mHealth services and to constantly evaluate their feasibility. This study explored the acceptability, usability, engagement and optimisation of a co-developed mHealth service, aiming to promote healthy lifestyle behaviours.

Methods: The service LongLife Active® (LLA) is a mobile app with coaching. Adults were recruited from the general population. Quantitative results and qualitative findings guided the reasoning for the acceptability, usability, engagement and optimisation of LLA. Data from: questionnaires, log data, eight semi-structured interviews with users, feedback comments from users and two focus groups with product developers and coaches were collected. Inductive content analysis was used to analyse the qualitative data. A mixed method approach was used to interpret the findings.

Results: The final sample was 55 users (82% female), who signed up to use the service for 12 weeks. Engagement data was available for 43 (78%). The action plan was the most popular function engaged with by users. The mean scores for acceptability and usability were 3.3/5.0 and 50/100, respectively, rated by 15 users. Users expressed that the service's health focus was unique, and the service gave them a "kickstart" in their behaviour change. Many ways to optimise the service were identified, including to increase personalisation, promote motivation and improve usability.

Conclusion: By incorporating suggestions for optimisation, this service has the potential to support peoples' healthy lifestyle behaviours.

Keywords

Acceptability, behaviour change, engagement, feasibility studies, lifestyle, mHealth, mixed methods, mobile applications, public health and usability testing

Submission date: 28 September 2023; Acceptance date: 28 March 2024

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55 användare (82% kvinnor)

Användardata över 12 veckor var tillgänglig för 43 st (78%)

Handlingsplanen var den mest använda funktionen

Medelpoängen för acceptans och användbarhet var tillfredsställande

Användarna uttryckte

- att appens hälsofokus var unikt
- att tjänsten gav dem en "kickstart" i beteendeförändring
- många sätt att optimera tjänsten, inklusive att öka individanpassning, främja motivation och förbättra användbarheten



Optimering

Utmaningen har framförallt varit kring handlingsplanen, att individanpassa den och göra den mer flexibel

En AI-coach har tagits fram för att hjälpa till med bl.a. målsättning och aktiviteter

För att anpassa det stöd deltagarna får har frågor om "readiness for change" lagts till

Navigering och design har också förbättrats



Fas 3 utvärdering av implementering och effekt

Ett real-world project

Appen sprids genom företagets kanaler och samverkanspartners

Användare som registrerar sig i appen får en fråga om de vill delta i en forskningsstudie

Primär utfallsvariabel: välbefinnande

<https://evibody.se/>



Exempel på forskningsfrågor

Reach

Vilka är användarna? Hur ser användarmönstren och engagemanget ut över tid?

Effekt

Förbättrar tjänsten motivation, self-efficacy, uppnåendet av självidentifierade mål, mat- och fysisk aktivitetsvanor, mental hälsa och välbefinnande?

Bestämningsfaktorer, mediatorer och respons

Vilka demografiska faktorer och funktioner i appen förutsäger förbättringar i välbefinnande, motivation, beteenden och mental hälsa?

Tack för er uppmärksamhet!



Jenny Rossen,
Sophiahemmet Högskola
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