

## Amsterdam University of Applied Sciences

### Which factors are important for effectiveness of sport- and health-related apps?

Dallinga, Joan; Janssen, Mark; van der Werf, Jet; Vos, Steven; Deutekom-Baart de la Faille, Marije

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# Which features are important for effectiveness of sport- and health-related apps?

Joan Dallinga, Mark Janssen, Jet van der Werf, Steven Vos, Marije Deutekom-Baart de la Faille



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- Apps
- Mijn apps
- Winkelen
- Games
- Familie
- Kruisje van de redactie

Gezondheid en fitness ▾

## Beste apps voor Gezondheid en fitness

 1. Stappenteller byzau ★★★★	 2. Calorieën Teller MyFitnessPal, Inc. ★★★★	 3. Mijn Eetmeter voedingssommum ★★★★	 4. 30-daagse Fitness Leap Fitness Group ★★★★	 5. RunKeeper - GPS FitnessKeeper Inc. ★★★★	 6. Strava Running Strava Inc. ★★★★	 7. Blauwlichtfilter Leap Fitness Group ★★★★	 8. Runtastic Handen Runtastic ★★★★	 9. Etos Etos ★★★★	 10. Samsung Health Samsung Electronics Co., Ltd. ★★★★	 11. Fitbit Fitbit, Inc. ★★★★	 12. Gratis Stappen 4Free Studio ★★★★	 13. Fitbit Calorie Counter Fitbit ★★★★	
 14. FitKnoedde - gratis Knoedde ★★★★	 15. 7 Minute Trainer Simple Design Ltd. ★★★★	 16. TomTom Sports TomTom International I. ★★★★	 17. Endomondo Fitness Endomondo.com ★★★★	 18. Calorie Teller - gratis FatSecret ★★★★	 19. Google Fit - Fitness Google Inc. ★★★★	 20. Calorieënteller Utsaam ★★★★	 21. Headspace - Mindfulness Headspace, Inc. ★★★★	 22. Pedometer & GPS Pacer Health ★★★★	 23. Sleep Cycle alarm Northcube AB ★★★★	 24. Stoopen Mel respDev ★★★★	 25. Garmin Connect Garmin ★★★★	 26. Twilight Urbanstad Team ★★★★	
 27. De IDO - Rode Kruis Het Nederlandse Rode Kruis ★★★★	 28. Geocaching® Groundspeak, Inc. ★★★★	 29. Monitor je gewicht Husain Al-Bustan ★★★★	 30. Basio-Fit Online Virtuagym Professional ★★★★	 31. AfsprakenApp Appotheek ★★★★	 32. Wandelen Wandelpatform Nester ★★★★	 33. Virtuagym Fitness Virtuagym ★★★★	 34. Cycilus Kalender Simple Design Ltd. ★★★★	 35. Hartslagmeter Azumo Inc. ★★★★	 36. Water Time Pro Mobile Creations ★★★★	 37. RouteYou RouteYou ★★★★	 38. monitor van de Care Fe Studio Care Fe Studio ★★★★	 39. Weight Watchers Weight Watchers Int'l ★★★★	
 40. Voor Goud - gratis Jod Boskers ★★★★	 41. Walk with Me MapMyFitness, Inc. ★★★★	 42. Eetdagboek My Daily Bits ★★★★	 43. Prenatal - Zwart Prenatal Monitor & Kind ★★★★	 44. Looptijden.nl MLAPS-Experience Lab ★★★★	 45. Calm - Meditatie Calm.com, Inc. ★★★★	 46. Nike+ Run Club Nike, Inc. ★★★★	 47. Step Counter - gratis Mario Hanna ★★★★	 48. Polar Flow - Actiefit Polar Electro ★★★★	 49. Reanimatie Hartstichting ★★★★	 50. Learn To Run foocoo ★★★★	 51. Gewichtswaarder aktWit GmbH ★★★★	 52. Belly Legs Butt Sebastian Steier ★★★★	
 53. Mi Fit Xiaomi Technology ★★★★	 54. Zwanger en Zwaaien Marra en Zo B.V. ★★★★	 55. Zwanger & Baby Sonoma Media ★★★★	 56. Alvalen met Bookman ★★★★	 57. Bloeddruk Detector Lemocrapp ★★★★	 58. Herinnering voor Leap Fitness Group ★★★★	 59. VitaDock voor Medisana AG ★★★★	 60. TomTom MyFitness TomTom International I. ★★★★						

7 Min Workout (workout van 7 min... 7 Minute Fitness - Free Workout Tr... Ab Workout X FREE+ Six-Pack Core...

BMI Calculator

Buikspieren Trainer Fitway - Train ...

Zwangerschapsmeter

Reanimatie

Runtastic Squats - Workouts, Coun...

KCT

# Introduction



# Introduction



- Running, bicycling, walking (Dallinga et al., 2016)
- Potential support + encourage physical activity
- Value of app features?

# Aim



Identify which features in sport- and health-related apps contribute to effectiveness of apps.

# Method



- Expert meeting (focus groups)
    - Two subgroups
  - Nominal group technique (Van de Ven, 1972)
- Identify and rank app features relevant for effectiveness of apps

# Nominal group technique



**Round 1:** Individually list all features that they found necessary for increasing effectiveness of apps.

All features were collected, explained and listed on a white board

**Round 2:** Individually rank the ten most important features

Rankings were discussed group wise

**Round 3:** Final ranking of the ten most important features. Score 0-100 importance.



# Results



Feature	Mean score	Frequency	Weighing
Usability	86,3	7	603,8
Monitoring / statistics	92,5	5	462,5
Fun	79,4	5	396,9
Motivating feedback	91,3	4	365,0
Works good technically	87,5	4	350,0
Tailoring start level	85,0	4	340,0
Anticipating / context awareness	60,4	5	302,1
Tailoring always	85,0	3	255,0
Check on health	73,3	3	220,0
Social	72,5	3	217,5
Instructional feedback	95,0	2	190,0

# Usability



“Does the app do what you expect from it and are certain functions working.”

“That the app is easy to use. And that you can easily find all functions.”

“Usability is really about if I can execute the task I want to do as good as possible.”

# Monitoring / statistics



“That you can monitor statistics, that you can see all activities you did and when.”

“Insight and measuring of exercise behavior.”

# Conclusion



- Usability, monitor/ statistics, fun
- Smart and tailored app + provide feedback + anticipate on the environment
- Usability = premise
- Currently available exercise app rating scales could be revised

# Next steps



- Preferences sport app users
  - Preferences sportprofessionals
- Develop decision tool for apps

# Thank you!



@DallingaJoan

@krachtvansport

j.m.dallinga@hva.nl



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# Discussion



# Topics to discuss



- How to deal with innovations as health care professional?
- What are the best ways to create user engagement and adherence?
- Blended interventions: how to combine the best of both worlds?
- How to collect user data while guaranteeing privacy?