

# PsyMate for people who are visually impaired

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**ENVITER**

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# Background – PsyMate project RCF

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## RCF

- outreaching & residential care
- adults with visual impairment & multiple problems

## PsyMate

- monitoring psychological complaints
- impact activities & environment on emotions, thoughts & behavior
- insight, self-management & tailored care ↑

## Project

- initiated by the behavioral scientists

# Background - PsyMate

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## Experience Sampling Method (ESM)

vs

## Retrospective Questionnaires

- data from everyday life
  - subjective experiences
  - context
- several times
- in real-time

- relying on long-term memory
- over-report (negative) symptoms
- problematic with affected memory & cognitive functions

# Background - PsyMate

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Traditionally: diary-method, pen-and-paper

Today: m-health applications such as PsyMate

- advantages
  - less bias
  - fluctuations within persons
  - time and context
  - instead of means or total scores “informative variability”



# Questions PsyMate - Examples

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**I feel**

- cheerful
- insecure
- relaxed
- irritated
- satisfied
- lonely
- anxious
- down
- guilty

**Personal question**

**I am**

- hungry
- tired
- in pain

**What am I doing?**

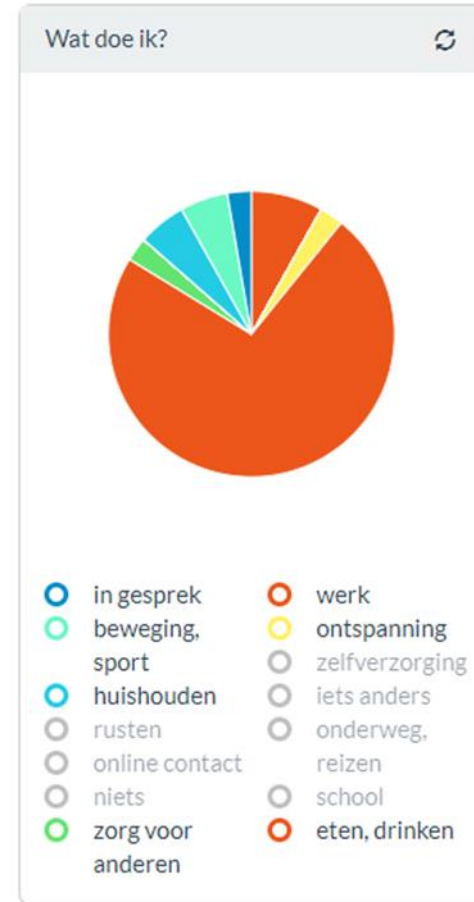
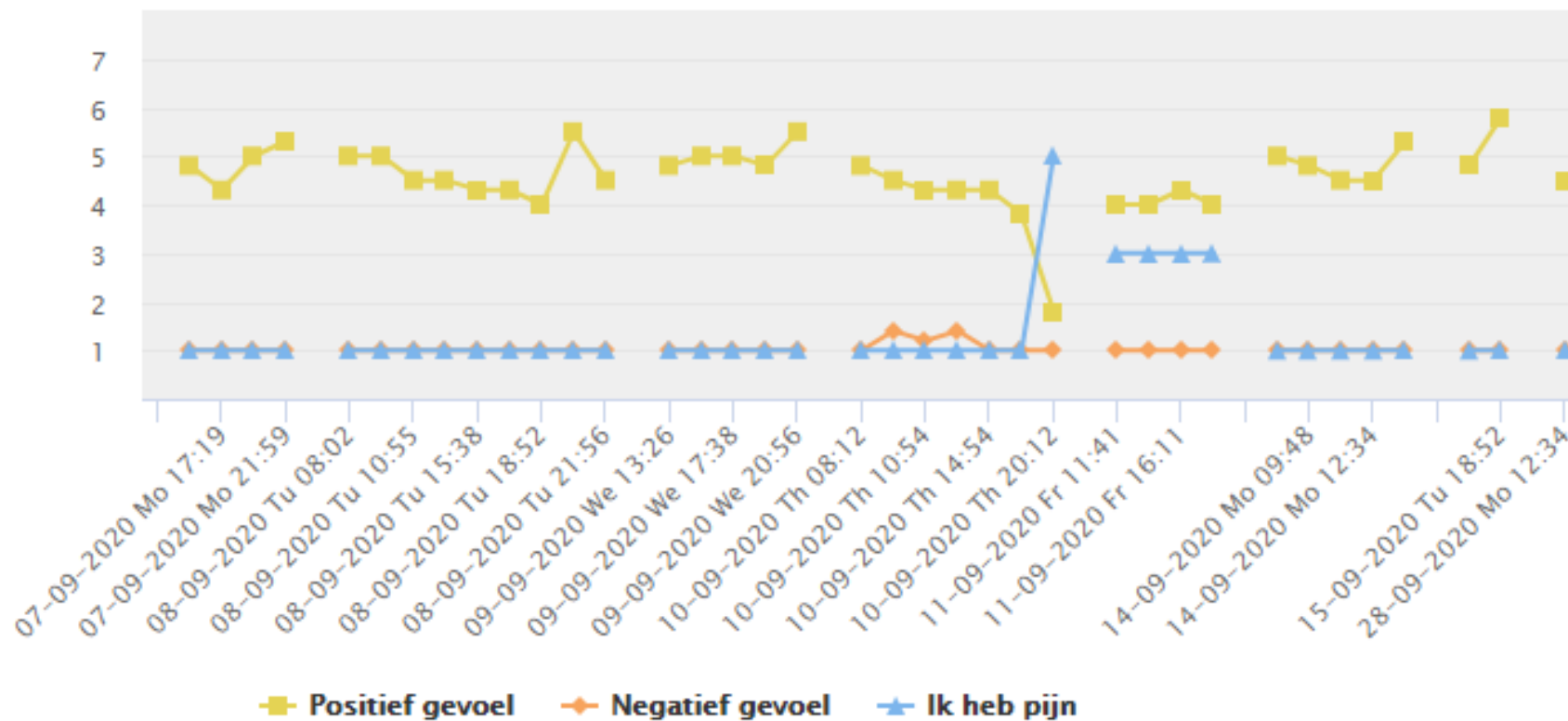
**I would rather do something else**

**Where am I?**

**Who am I with?**

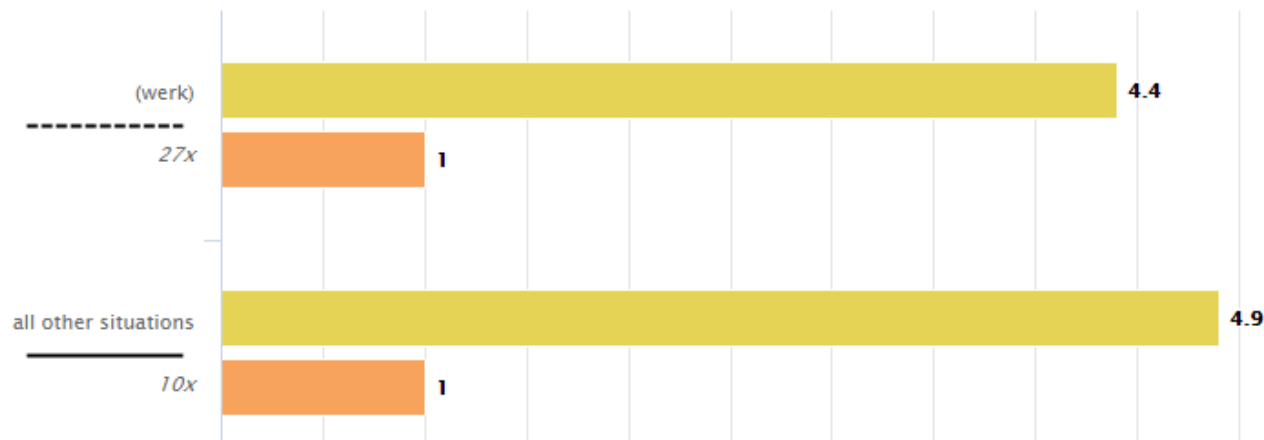
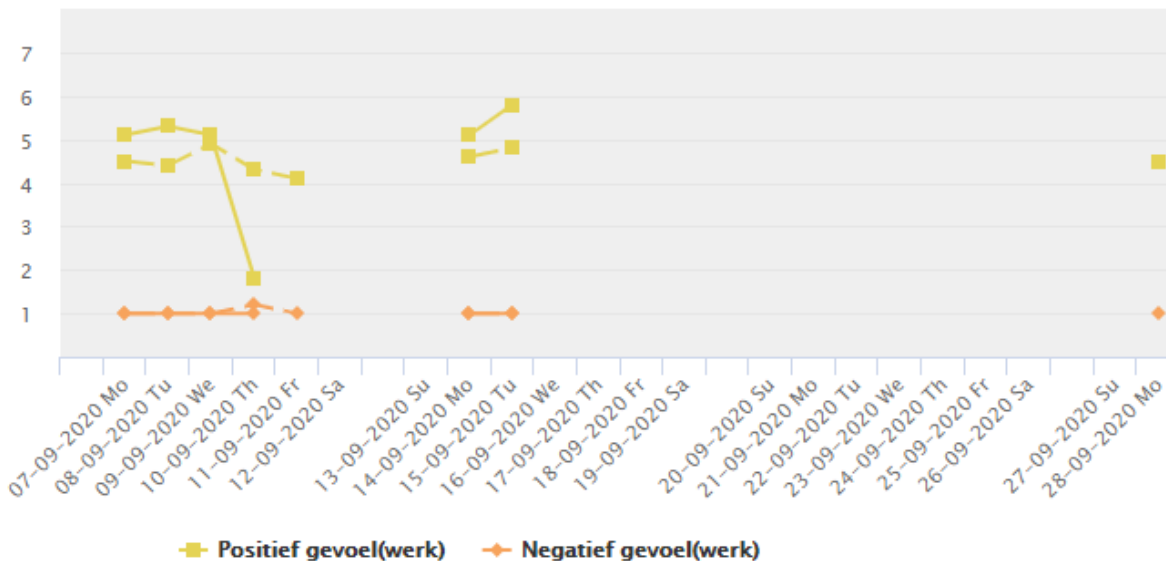
# Reporting PsyMate - Examples

Time range: 07-09-2020 – 28-09-2020



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Wat doe ik?



- in gesprek
- beweging, sport
- huishouden
- rusten
- online contact
- niets
- zorg voor anderen
- werk
- ontspanning
- zelfverzorging
- iets anders
- onderweg, reizen
- school
- eten, drinken



# PsyMate project RCF - Objectives

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1. Fully accessible and usable app for people who are visually impaired
2. Application possibilities
3. Experienced added value

# Phase 1: accessibility and preparation

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- Making the app accessible
  - conform W3C guidelines
  - developers from Maastricht University
- Individual face-to-face test sessions / meetings with clients and professionals

# Phase 2: usability evaluation

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- Test of the first version of the accessible app
  - all functions and functionalities
  - “think-aloud” method + structured observations
  - time needed and number of “mistakes”
  - users’ satisfaction: face-to-face interview, based on PSSUQ (Lewis, 1995)
  - professionals: report collected data (graphs)
- Further development & improvement

# Results - participants

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## 5 clients

- 3 female, 2 male
- mean age 55 (34-81)
- 3 totally blind, 2 remaining vision 2-3%
- iPhone + VoiceOver

## 4 professionals

- 3 female, 1 male
- behavioral scientists

# Results – usability testing

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- many crashes when used with VoiceOver
- VoiceOver did not start automatically reading the question
- terms as “not” or “very” need to be linked to the numbers 1 or 7
  - VoiceOver should read “previous”
- instruction for multiple choice questions
- VoiceOver needs to read out pop-ups
  - selection of answers should be disabled
- announcement end of the questionnaire

# Results – PSSUQ

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- Strengths
  - easy to learn how to use PsyMate
  - able to perform the tasks quickly, efficient & effective
  - becoming productive quickly
- Weaknesses
  - interface of the app
    - arrangement & presentation of information
    - difficult to find the information needed
    - display of error messages & information

# Discussion

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- study had to be put on hold
  - delay in further development of completely accessible version
  - Covid-19
- difficult to find enough participants for the following steps of the study
- doubts about its applicability
  - clients' complex problems and limited capacity

# Conclusion

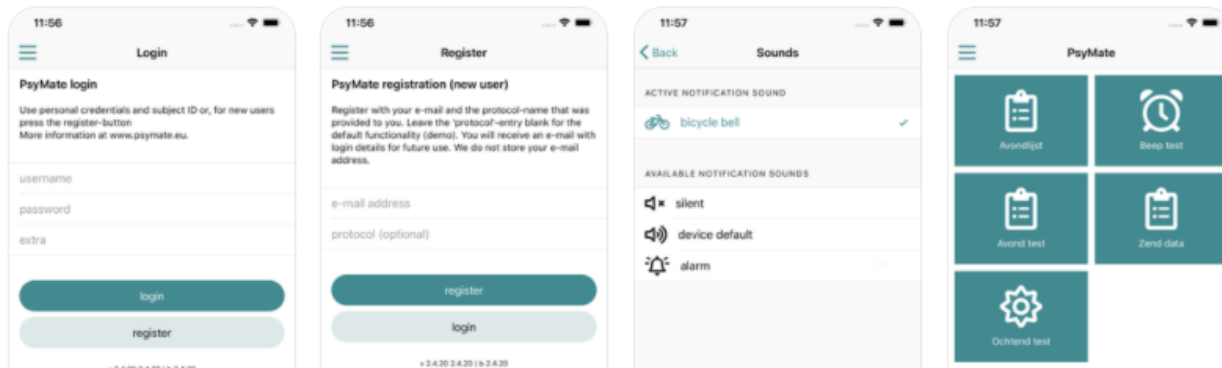
Despite technical problems and delay, a fully accessible version of the app for persons who are visually impaired was realised and can be downloaded via App Store or Google play

App Store Preview



**PsyMate 2** 4+  
PsyMate BV  
Free

Screenshots [iPhone](#) [iPad](#)





# References

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Apple. (2018). *Accessibility on iOS*. <https://developer.apple.com/accessibility/ios/>

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Lewis, J.R. (1995). IBM computer usability satisfaction questionnaires: psychometric evaluation and instructions for use. *International Journal of Human-Computer Interaction*, 7(1), 57-78.

PsyMate (n.d.). <https://www.psymate.eu/nl/home-2/>

PsyMate 2 on the App Store. <https://apps.apple.com/us/app/psymate-2/id1185231488>

# Thank you for your attention

## Any questions?

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