

Maastricht University *Leading in Learning!*

ACT in Daily Life

Mobile technology fostering ACT-practice in daily life.

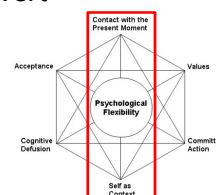


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Background: ACT & Context

- Acceptance and Commitment Therapy (ACT), act-in-context (Hayes et al, 1999).
- Get ACT outside of the therapy room, and into the daily life of the patient.
- Assessment in context : Experience Sampling Method (ESM). (Larson et al, 1983)
 - Ambulatory monitoring technique.
 - In the moment assessment of experiences (covert behaviour) and overt behaviour (in the context), not retrospective.
 - Direct evaluation of the context itself.
 - Multiple assessments per day (10x).



Background: Technology & Context

- Technology, enabling assessments and intervention in context.
- eHealth (1999) => Telemedicine (2000) => mHealth (2006)
- mHealth: Assessment & intervention in natural context via PDA, (smart)phone or tablet.
- mHealth: Potential for large scale behavior change.
 - Availability, Costs & Approachable.
- mHealth-interventions beneficial in several health-areas (Systematic review by Free et al, 2013).



ACT in Daily Life Training (AiDLT)

ACT in Daily Life Training.

- **Ingredients:**
 - ACT: ACT-exercises & metaphors (practice).
 - ESM: Multiple assessments during the day (awareness).
 - Mobile technology: PsyMate (facilitation in own context).
- **What:** Additional mobile ACT-intervention, delivered with PsyMate in daily life of patients (prior ACT-training required).
- **How:** Monitoring (awareness) & ACT-training in context.
- **Duration:** 4 weeks, 3 consecutive days a week (1 hour a day).
- **Goal:** Practising ACT-skills in daily life, to improve PF & QOL.



AiDLT: ACT

- ACT-exercises (shortened to 3 minutes):
 - Interval-contingent exercises (when waking up, and before going to bed).
 - Signal-contingent exercises (prompted 5x a day).
 - Event-contingent exercises (when someone is aware of a negative experience => ACTION).
 - Exercises on demand (Standard).
- ACT-metaphors (cue):
 - Illustrated metaphors (acceptance, defusion & values) as a visual cue, to trigger the ACT-concept and awareness.
 - Signal-contingent (5x a day) and on demand.

AiDLT: ESM

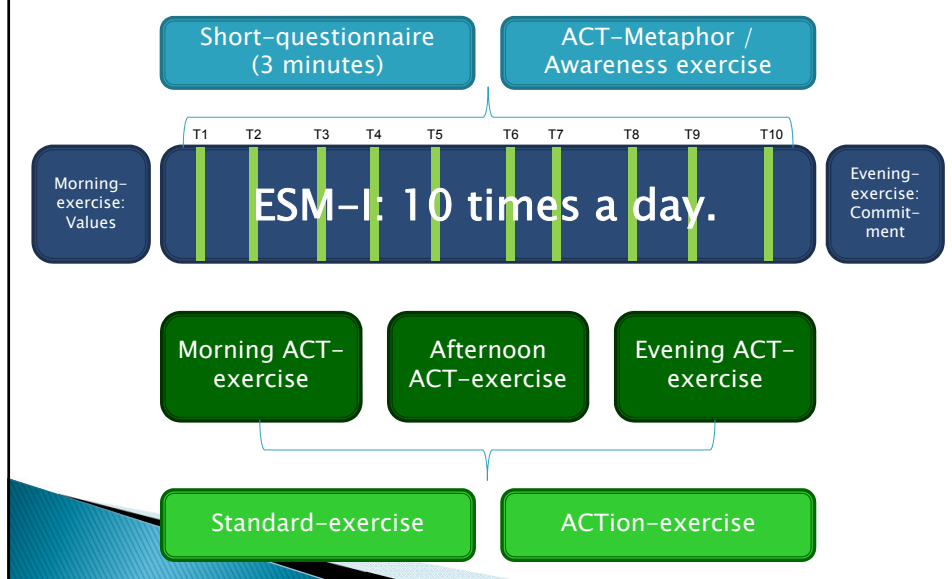
- ESM: Repeated sampling of experience.
 - Signal-contingent, 10x a day, 3 minutes.
 - Affect (eg: I feel down)
 - Cognition (eg: I am worrying)
 - Activity (eg: What am I doing)
 - Context (eg: Where am I / With whom am I)
 - Response-scales
 - Likert-Scale (1 - 7)
 - Categorical-scale (predefined, with other option).
 - ESM-I: ESM + Intervention. Following each assessment, we offer an ACT-metaphor or a short awareness exercise.

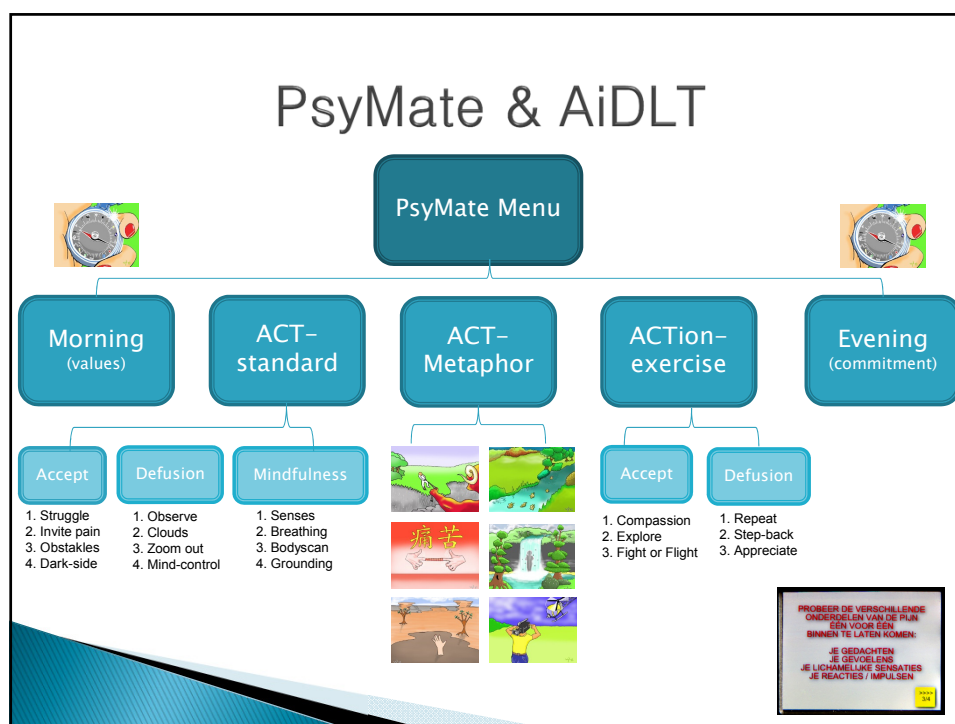
AiDLT: Technology

- Technology: PsyMate (PDA-like mobile device).
 - Presenting ESM-questions (onscreen rating-scales).
 - Presenting ACT-exercises (onscreen instructions).
 - Presenting ACT-metaphors (onscreen illustrations).
 - Menu available for ACT-exercises on demand.
- Signals: Screen flashes, sound (beep), vibrations.
- Input: Touchscreen, Function-wheel & Buttons.
- Dedicated device: Robust, reliable & high durability (4 weeks on one battery-charge).



AiDLT overview trainingday





Research Focus

- Feasibility Study
- Primary focus: Feasibility
 - Feasibility
 - Acceptability
- Secondary focus: Effectiveness
 - Psychological Flexibility
 - Coping (general)
 - Quality of Life
 - Symptom reduction (!)
 - PA, NA & Mindfulness.



Design Study

- Participants: Patients broad-spectrum clinic NL.
- Design: Treatment (*ACT + AiDLT*) vs Matched controls (*ACT*).
- Instruments:
 - Telephone evaluation: User experience (Qualitative & Quantitative).
 - PsyMate (ESM): Positive Affect, Negative Affect & Mindfulness.
 - Self-report questionnaires (ROM): Psychological Flexibility (FIT-60), Coping (UCL), Symptom reduction (BSI), Quality of Life (VAS-Scale).
- Procedure



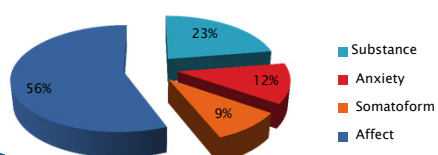
- Statistical analyses:
 - Analyses of variance for interviews & questionnaires.
 - Multilevel-analyses for ESM-data.

Results

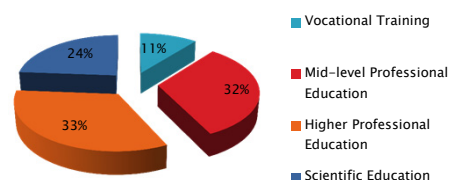


- Participant descriptives ($n = 98$)
 - **Groups:** 49 AiDLT vs 49 Matched Controls.
 - **Gender:** 36,7 % male – 63,3 % female.
 - **Age:** 46,17 (SD 11,51), Min 22 – Max 72.

Primary Diagnosis



Education Level



Results



- Primary focus: Feasibility (Phone)
 - Doubled recruitment aim: From 20 to 50.
 - Completers AiDLT: 36/49 (73,5%).
 - Usefulness ACT-metaphor cue's: 5 / 7
 - Usefulness ACT-exercises: 5 / 7
 - 6,5 completed ACT-exercises per week.
 - 27 minutes total time needed for exercises per week.
 - Usefulness ACT-Training: 5 / 7
 - Recommending ACT-training to others: 6 / 7

"It helped me practice more with ACT than I would normally do"
"It kept me aware of myself"

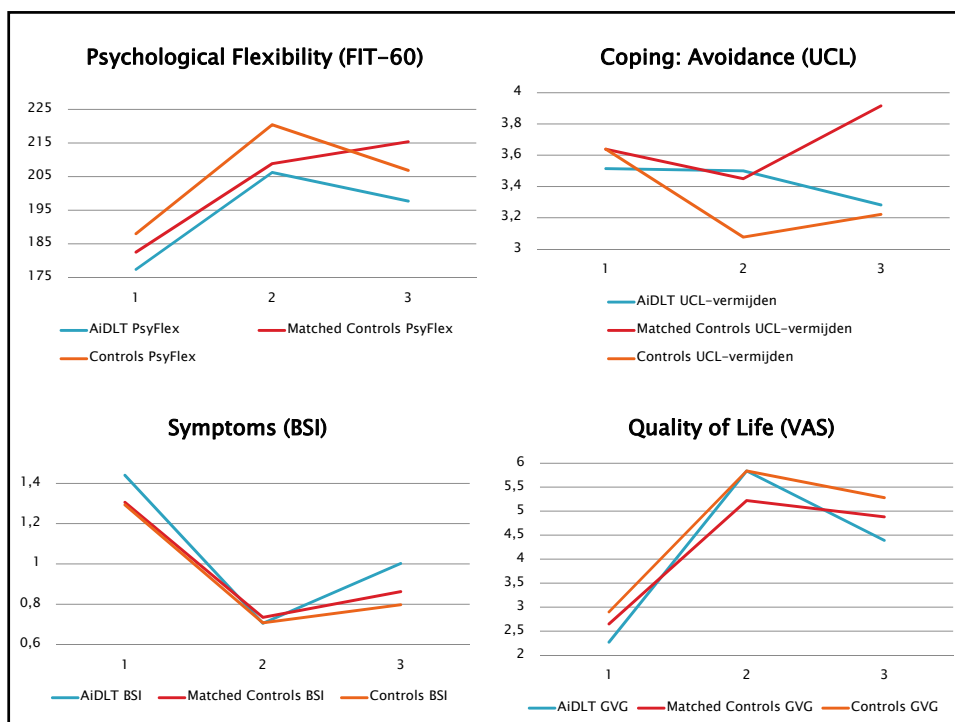
Results



- Secondary focus: Effectiveness (ROM)



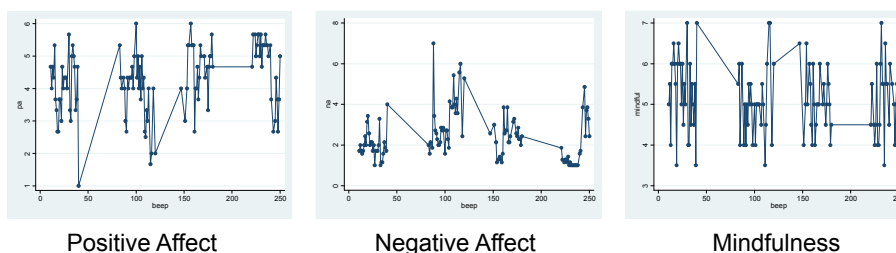
- After T2 there is a switch from treatment context; from inpatient to outpatient. This causes a (*temporary*) decline in treatment results.
- Groups: AiDLT ($n = 49$), Matched Controls ($n = 49$), & Controls ($n = 658$).



Results



➤ Secondary focus: Effectiveness (ESM)



➤ Multi-level regression analyses (preliminary).

- PA: Not significant ($p = .107$), $b = -.0011$
- NA: Not significant ($p = .564$), $b = .0003$
- Mindfulness: Significant ($p = .021$), $b = -.0009$

Discussion

- ACT & Technology = ACT in context
 - *Feasibility & Acceptability AiDLT?*
 - 73,5% completed full 4-week AiDLT.
 - It helped participants to practise more with ACT.
 - Applicable for a variety of mental health issues.
 - *Effectiveness AiDLT?*
 - Subjective reported add-on effect (usefulness).
 - No objective add-on effects on short term measurements (ROM & ESM).
 - Small add-on effect.
 - Effects of the AiDLT might be long term.

Future developments

- Follow-up studies
 - INTERACT ($n = 80$): RCT with AiDLT vs Placebo in population at risk state for psychosis (16–35 y.o.).
 - SMARTSCAN ($n = 66$): RCT with AiDLT vs Placebo in population with subclinical stage of psychosis & depression (16–25 y.o.).
- New technology: PsyMate 2.0 (app)

Past: Watch & Booklet



Present: PsyMate (PDA)

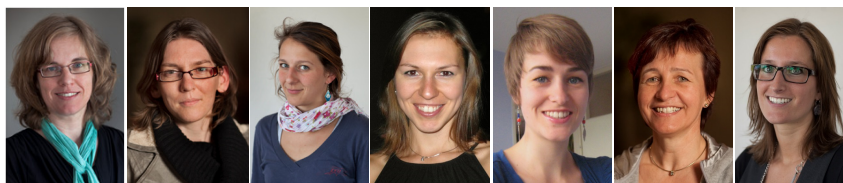


Future: PsyMate 2.0 (app)



Acknowledgements

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Thank you, for your attention!



Free ACT-illustrations

www.timetoact.nl/act-illustrated

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