

# **UNIVERSITY OF TWENTE.** Hanzehogeschool Groningen University of Applied Sciences



# 'Denk je zèlf!' A personalised mHealth virtual coach for obese emotional eaters \*

## Introduction/background

**Related work** 

only a few apps on the market for emotional eaters

Lisanne:

feels.

"I wish that I was more

confident about myself ...."

Lisanne feels insecure about

her body / Is not able to sense

the difference between hunger,

appetite or emotion / Fears to

experience what she really

Why an app? ehealth is proven effective

need for ehealth tools

emotional eaters need privacy

Dialectical Behaviour Therapy - succesful in treating eating disorders and emotional eating	rational or reasonable
mindfulness	mind
<ul> <li>awareness and acceptance</li> <li>developing a wise mind</li> </ul>	wise mind

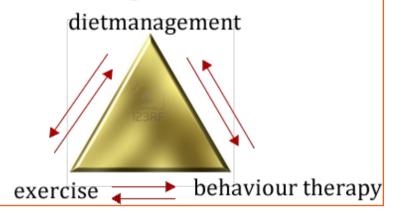
**obesity = chronic disorder** 12% = obese (BMI > 30) / 50% = overweight

comorbidities: heart failure, diabetes, depression, low self esteem etc.

**causes:** bad eating habits, lack of physical activity, obesogenic environment, eating disorders, genetic, metabolic, medication.

Golden triangle in treatment





#### 40% of obese - emotional eaters

eating in response to negative emotional states; food is comfort, stress relief; - emotional eaters don't benefit fully from existing treatment programs; treatment do not focus on problems with emotion regulation.

result: yoyo effect

diets are not the answer!

### Approach and methods

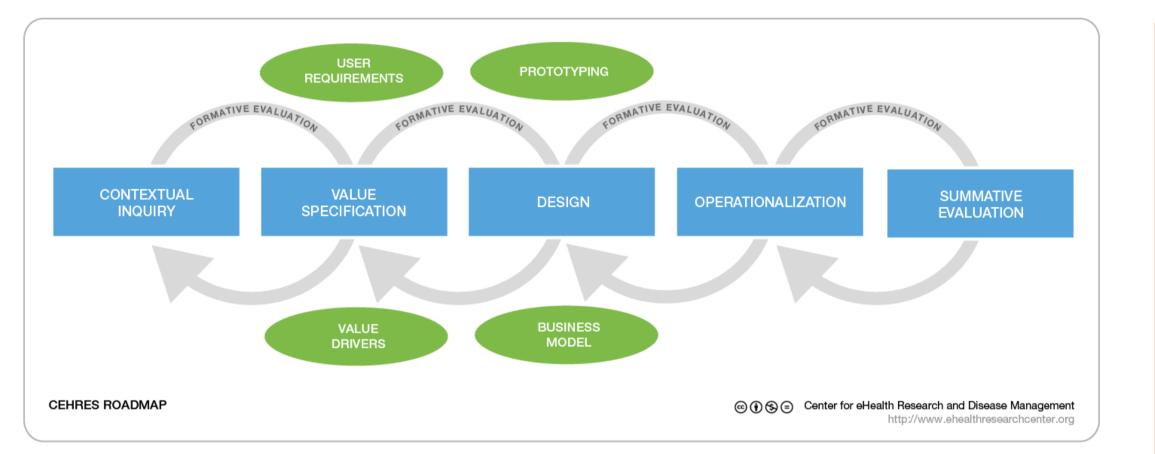
### Objective

Develop a personalised self-management intervention based on Dialectical Behaviour Therapy for young adult emotional eaters (from moderate overweight to obesity).

data gathering: literature review, interviews and questionnaires developing personas (leRouge)

user profile / persona: healthcare specifics, demographic info Internet (technical skills)

Method: the CeHRes roadmap (Center for eHealth Research University of Twente)



# Results

#### Personas



### Anita: "When I am stressed out I start snatching the cookie



#### emotion regulation

- observing and describing your emotions
- controlling the chain *emotion* <-> *behaviour*
- decreasing emotional vulnerability,
- increasing amount of positive emotions

#### stress tolerance

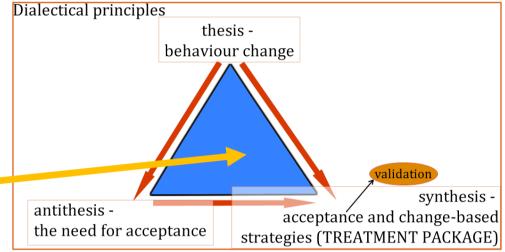
- dealing with pain

- suffering = pain + no acceptance

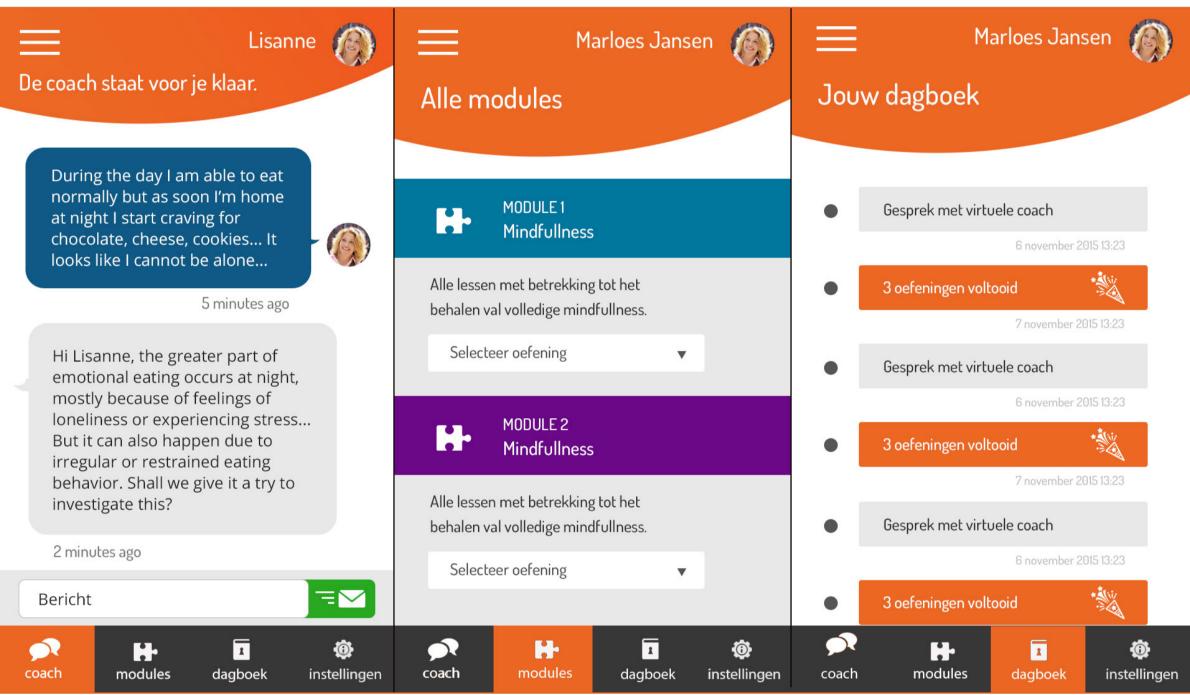
#### dialectical focus

validation vs problem solving (change)

emotional mind



#### User interface concept design



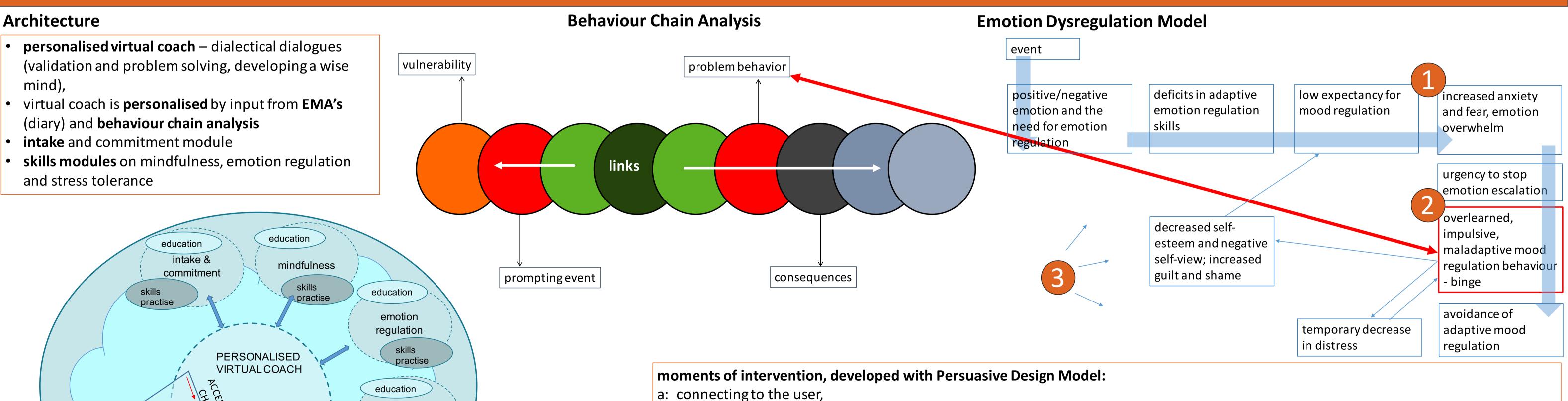
tin' Anita is worried about putting on more weight / Suffers from stress and finds comfort in food / Has a sweet tooth / Hates to be patronized (authorities).



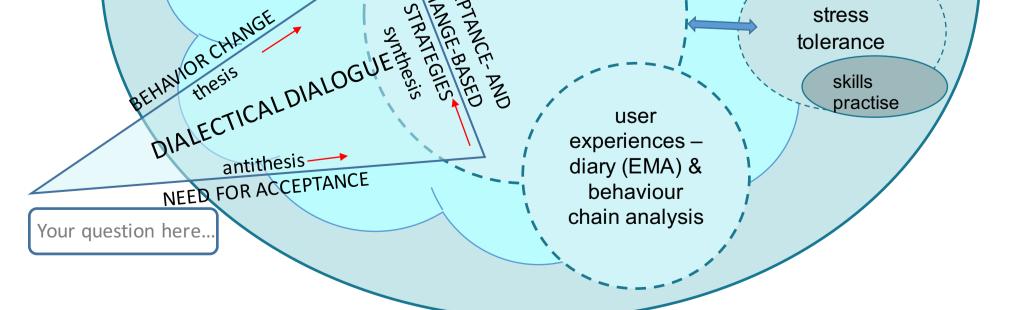
#### next steps user interface

test results from eye tracking lab and expert interviews

#### Future work



b: having the user to connect to the app (to seek advice and support just before or right after problem behaviour has taken place). by:



Dialectical strategies (validating vs. problem solving (change) to encourage the user to make the right choices before problem behaviour occurs,

2. Behaviour Chain Analysis,

Ecological Momentary Assessments (at random) to get a picture on problem behaviour patterns. 3.

'Denk je zèlf!' : develop a wise mind and counsel yourself



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