

Development and evaluation of a personalised webbased diet and PA intervention based on motivational interviewing and SDT

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Development and evaluation of a personalised web-based diet and PA intervention based on motivational interviewing and SDT: MyLifestyleCoach

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Background

- Aim 1:** describe the systematic development of a new web-based computer-tailored Intervention *MyLifestyleCoach* to promote eating healthier (*I Eat*) & physical activity (PA) levels (*I Move* - already effective), based on self-determination theory (SDT) & motivational interviewing (MI)
- Aim 2:** describe the evaluation design

Methods & Results

This intervention was systematically developed using the **Intervention Mapping (IM)** protocol (focus on *I Eat*; *I Move* already exists)

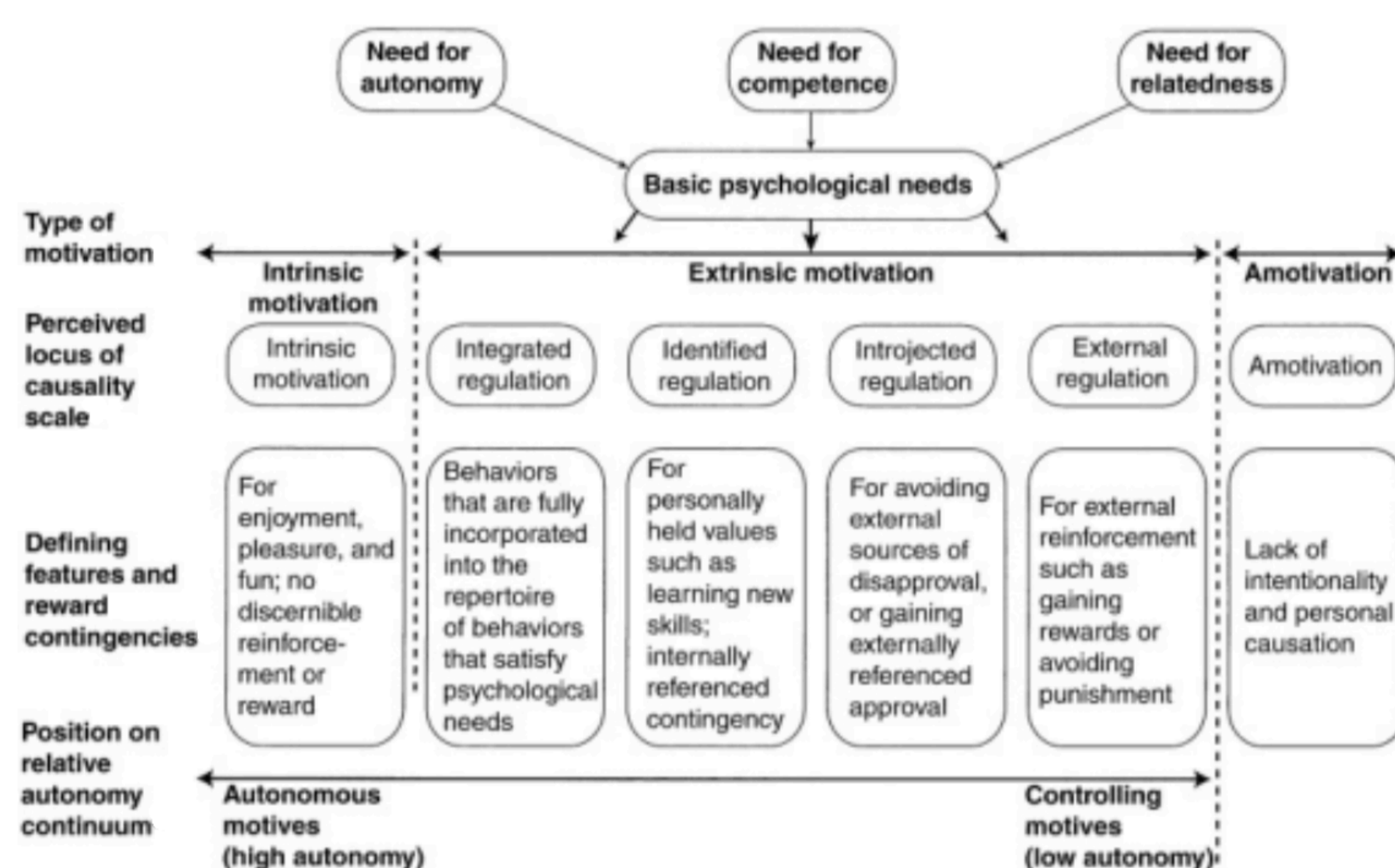
Step 1 Problem analysis: Unhealthy lifestyle → **negative health outcomes** (CVD, type 2 diabetes, cancer)

Pilot study: how do Dutch adults (N = 78) define healthy eating? → intake of fruit, vegetables, fish & snacks

Step 2 determine program goals:

- Deciding** to eat healthier, **eat** healthier and **maintain** the new healthier diet
- Pilot study (N = 66): beliefs about importance and confidence towards eating healthier + factors supporting and hindering eating healthier

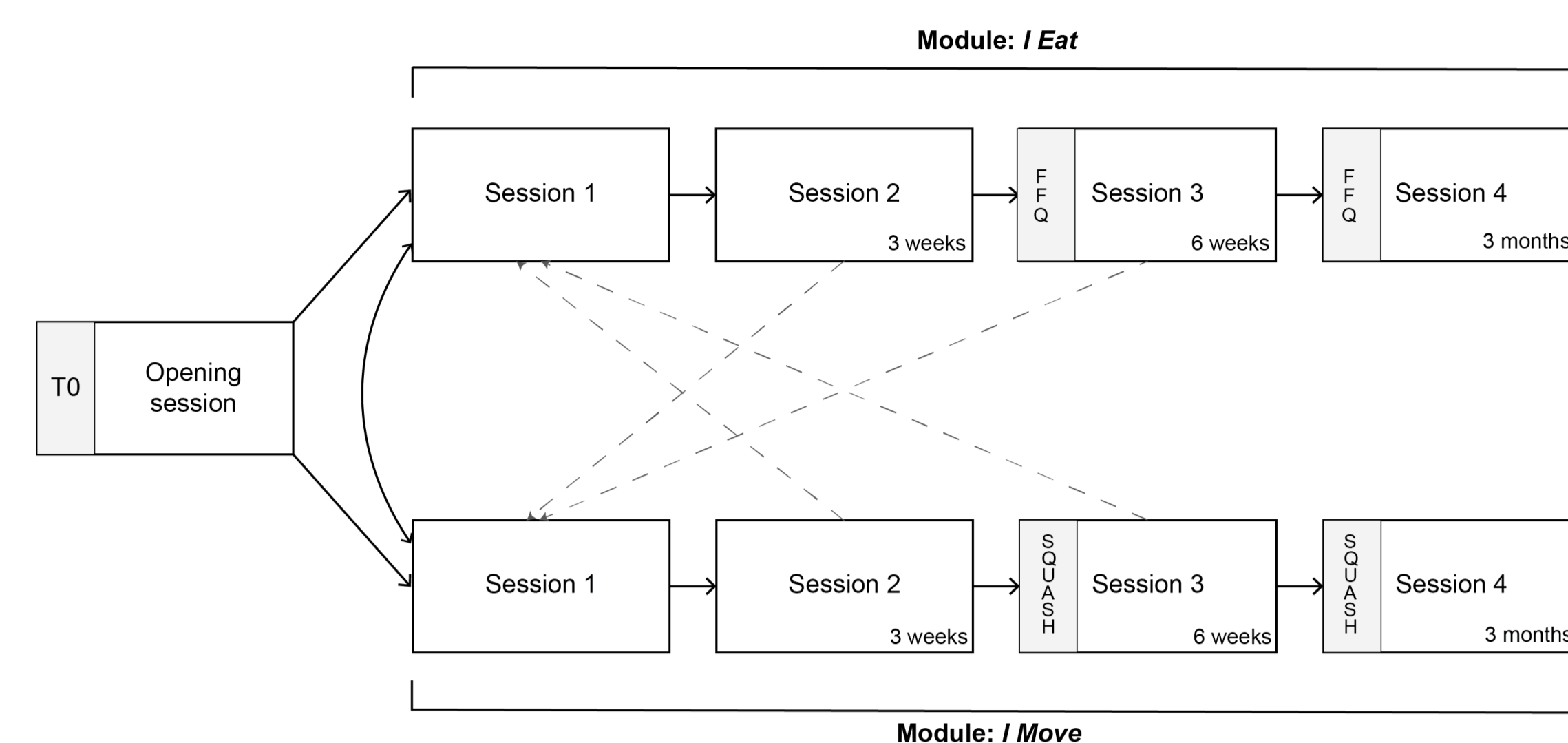
Step 3 program design (theory): SDT - motivation



Use of **MI** counselling style = collaborative conversation style to strengthen a person's own motivation and commitment to change → foster basic psychological needs

OPENING SESSION	SESSION 1	SESSION 2	SESSION 3	SESSION 4
Engaging: intro video coach	Engaging: intro video coach	Engaging: intro video coach	Engaging: intro video coach	Engaging: intro video coach
Focusing: FB on current diet	Focusing: guidelines	Evoking: identify new reasons	Evoking: importance ruler and ipsative FB	Focusing: ipsative FB on diet
Evoking: importance ruler + follow up questions and FB	Focusing: detailed FB current behaviour	Evoking: consequences in 5 years?	Evoking: confidence ruler and ipsative FB	Engaging: videos narratives on motivation
Focusing: FB on current PA behaviour	Evoking: importance ruler + follow up questions and FB	Evoking: identify personal strengths	Evoking: tips and tricks	Evoking: important motivation + pleasant thing new behaviour
Evoking: importance ruler for PA + follow up questions and FB	Engaging/evoking: videos narratives importance	Evoking: expert video information about consequences	Focusing: ipsative FB on behaviour	Evoking: description of a challenging situation but still attained to plan
Evoking: make choice which module to follow	Evoking: personal important values, and link to behaviour	Planning: indication of successful execution of the plan	Engaging/planning: videos narratives on coping planning	Engaging: outro video coach
Engaging: outro video coach	Evoking: expert videos information possible benefits	Planning: anticipation of a difficult situation	Planning: identify difficult situations plan + coping	
	Evoking: confidence ruler + follow up questions and FB	Engaging/planning: videos narratives on planning	Planning: indication of how successfully executing the plan	
	Engaging/evoking: videos narratives on confidence	Planning: possible adjustment of plan	Planning: possible adjustment of plan	
	Evoking: description of succeeding a challenging task	Engaging: outro video coach	Engaging: outro video coach	
	Planning: option to make an action plan			
	Engaging: outro video coach			

Step 4 production: Program overview



Step 5 implementation:

- Advertisement spread via an **internet research panel** to recruit participants
- Minimal human action required to participate in the intervention

Step 6 develop evaluation plan: RCT - intervention vs. waiting list control condition (randomisation) in **1200 Dutch adults** (18 - 70 years)

TIMEFRAME	MYLIFESTYLECOACH	CONTROL
Baseline (T0)	Varying starting point	Questionnaire 1: Demographics, awareness diet/PA, FFQ, SQUASH, commitment, TSRQ, BREQ, PCS, intention, stages, health status
	Opening session	
	Session 1	
	Session 2	
	Session 3	
	Questionnaire A: FFQ/SQUASH	
	Session 4	
	Questionnaire B: FFQ/SQUASH	
	Session 4	
6 months (T1)	Questionnaire 2: Awareness diet/PA, FFQ, SQUASH, commitment, TSRQ, BREQ, PCS, intention, stages, health status	
12 months (T2)	Questionnaire 3: Awareness diet/PA, FFQ, SQUASH, commitment, intention, stages, health status	

Discussion

- Developing interventions in a systematic way increases the likelihood of effectiveness. IM proves a relevant protocol.
- Following the IM protocol to change an existing intervention's goal (promoting PA → eating healthier), leads to a thorough insight into which steps have to be undertaken to adapt the intervention
- This is one of the first attempts to integrate MI and SDT in a web-based intervention to promote PA & diet. Does it work? RCT will provide results
- Challenge: how to apply human counselling strategies (e.g. nonverbal communication) in a web-based environment?

Take-home message

- Using a systematic approach in the development/extension of an intervention is essential
- This is one of the first attempts to integrate SDT and MI into a web-based CT intervention combining diet and PA
- Results from the RCT will provide insight into this approach's efficacy → development and optimisation of future web-based interventions in several domains of public health



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