

Unraveling the complexity of health inequalities: challenges and solutions

Conference Institute4PreventiveHealth, Utrecht, December 7 2023

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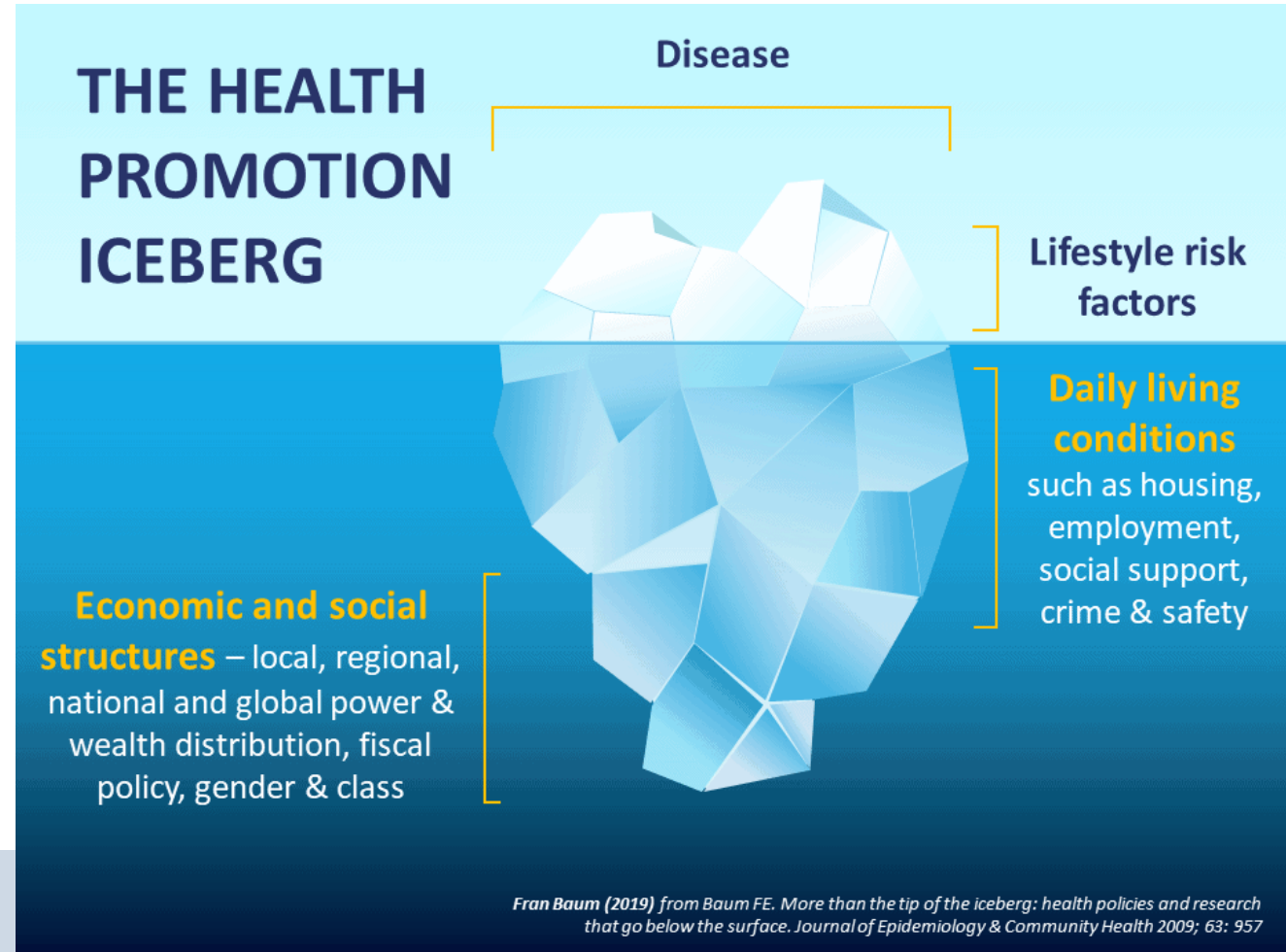
Why are health inequalities persistent?

- ChatGPT:

- "Health inequalities persist for a variety of **complex** and **interconnected** reasons, and addressing them requires a **comprehensive** understanding of the social, economic, and environmental factors that contribute to disparities in health outcomes."
- [list of factors]
- "Addressing persistent health inequalities requires a **multi-faceted** approach that involves changes at **individual, community, and societal levels**. Efforts should include policy interventions, community engagement, education, and targeted initiatives to reduce disparities and improve overall population health."



Practice: symptom management





1. ... approach that involves changes at individual, community, and societal levels (1)

- Existing knowledge: emphasis on individual-level risk factors
- Needed knowledge: Recognition of health inequalities as symptomatic of deeper, underlying problems at meso and macro levels
- E.g. social norms emerge from interactions among individuals and are not solely visible at the individual level



Why do we adhere to symptom management?

- The existing knowledge (paradigm?) is inadequate for guiding the comprehensive approach required to address health inequalities
- We require a different type of knowledge to inform both policy and practice



Social norms and prevalence of obesity

Social norms regarding overweight influenced by the actual prevalence of overweight which then impacts on the individual behaviour, which then... (feedback loop) + knowledge of what healthy BMI is

Received: 27 January 2020 | Revised: 14 April 2020 | Accepted: 15 April 2020

DOI: 10.1111/obr.13044

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Social norms and obesity prevalence: From cohort to system dynamics models

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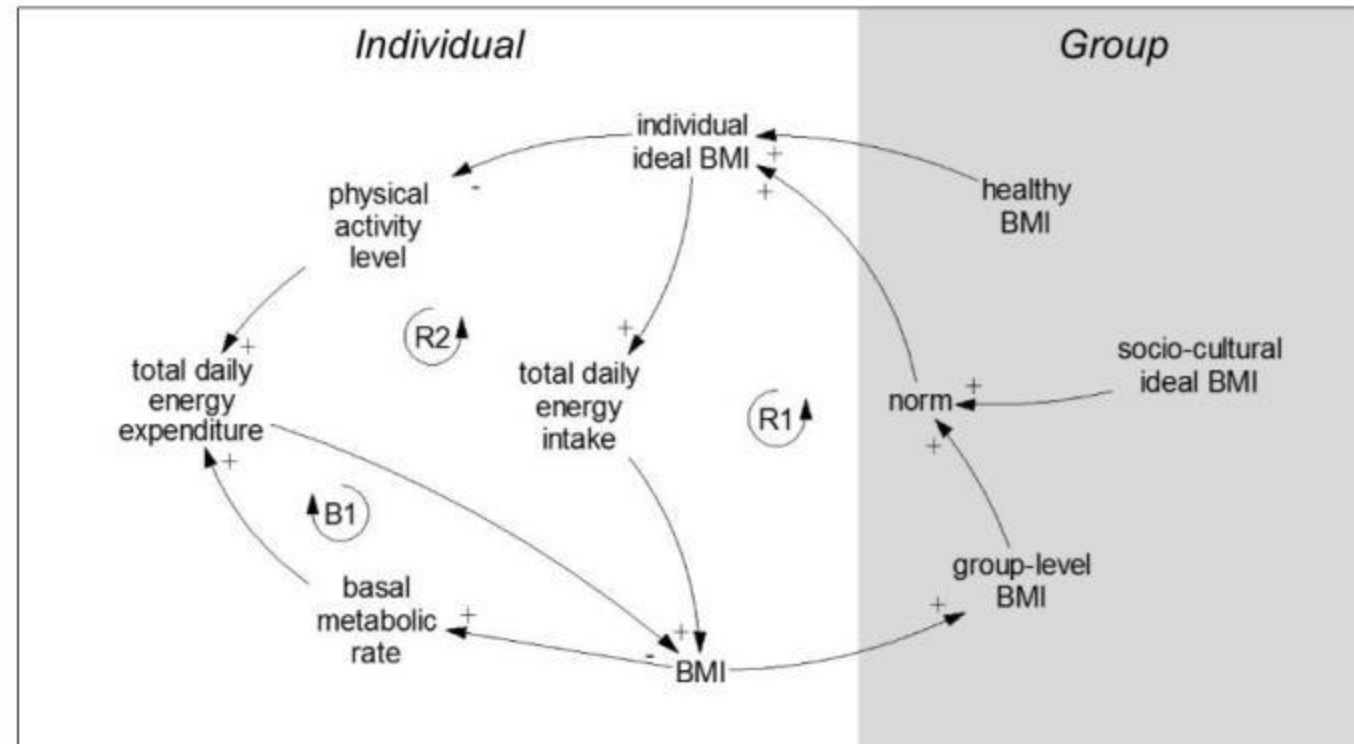
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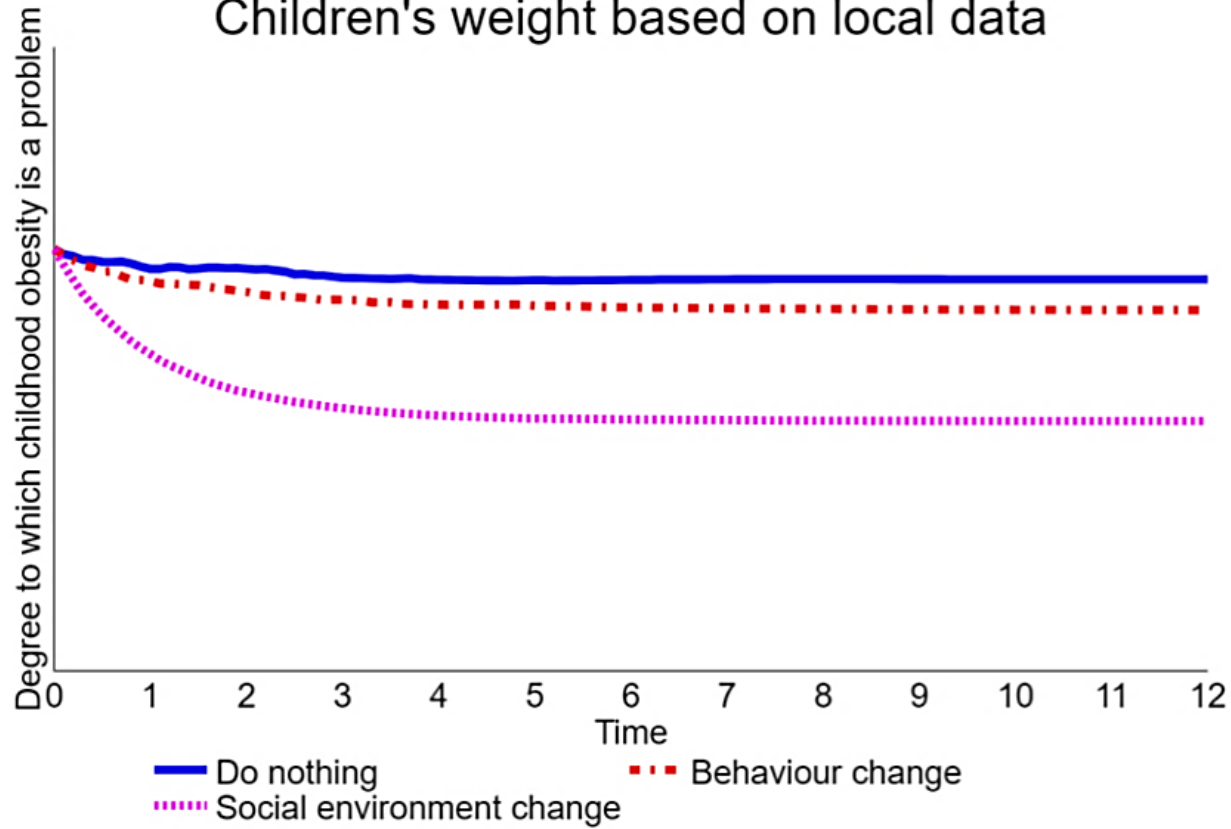
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Summary

Group-level obesity can be seen as an emergent property of a complex system, consisting of feedback loops between individual body weight perception, individual weight-related behaviour and group-level social norms (a product of group-level 'normal' body mass index (BMI) and sociocultural 'ideal' BMI). As overweight becomes normal, the norm might be counteracting health awareness in shaping individual weight-related behaviour. System dynamics modelling facilitates understanding and



Children's weight based on local data



Degree to which health action is focused on...



Each week, support each 1 in 4 children to...

do 1 extra hour of exercise
+ eat 1 less snack

do 3 extra hours of exercise
+ eat 3 less snacks

do 5 extra hours of exercise
+ eat 5 less snacks

No school-based
intervention

Run

Restore





Reframing health inequalities as a societal issue

- This type of knowledge can not only guide strategies involving changes at community and societal level ...
- ... but also contribute to reframing socioeconomic inequalities in health as a societal issue rather than solely a problem associated with individuals of lower socio-economic status

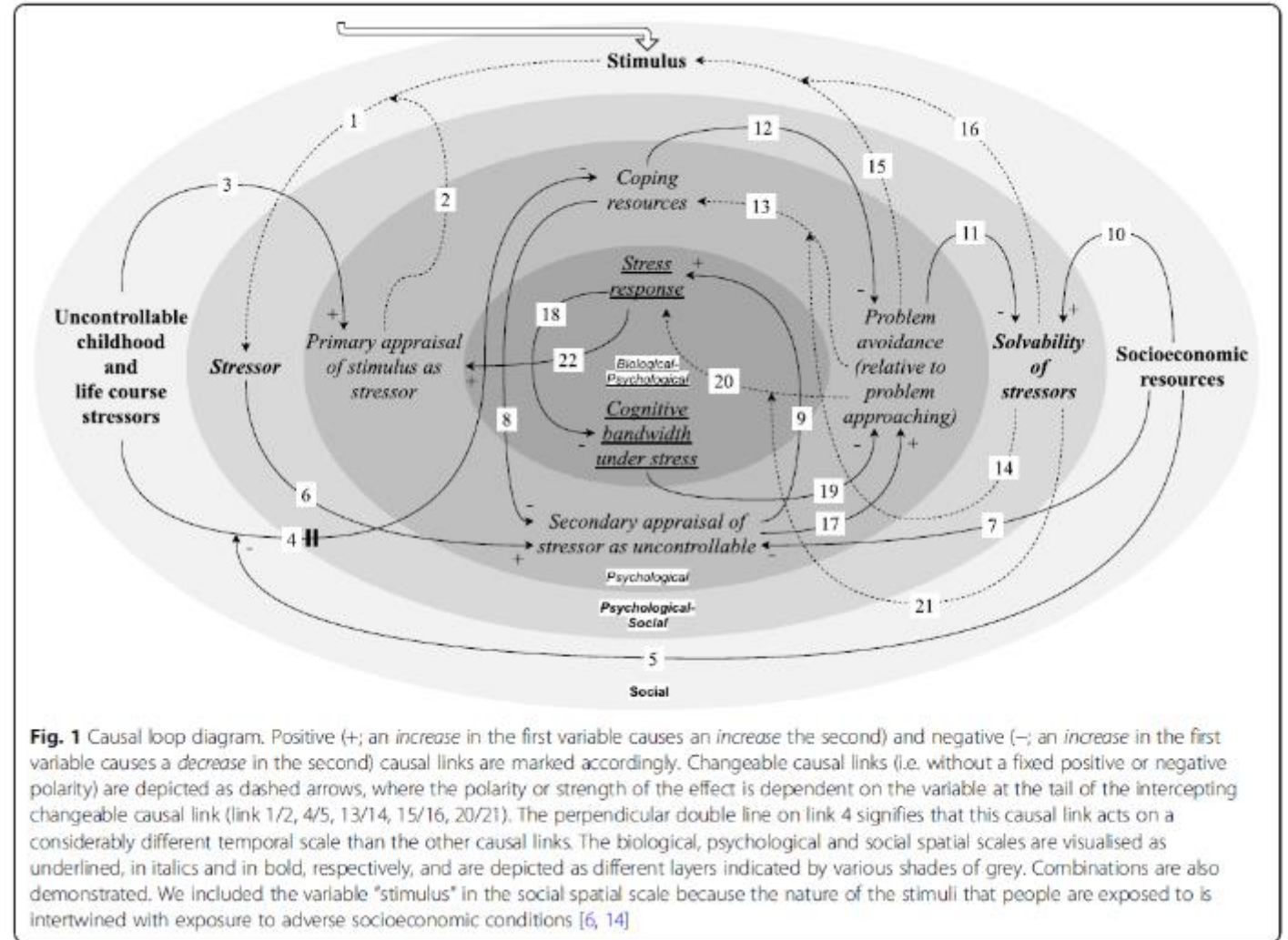
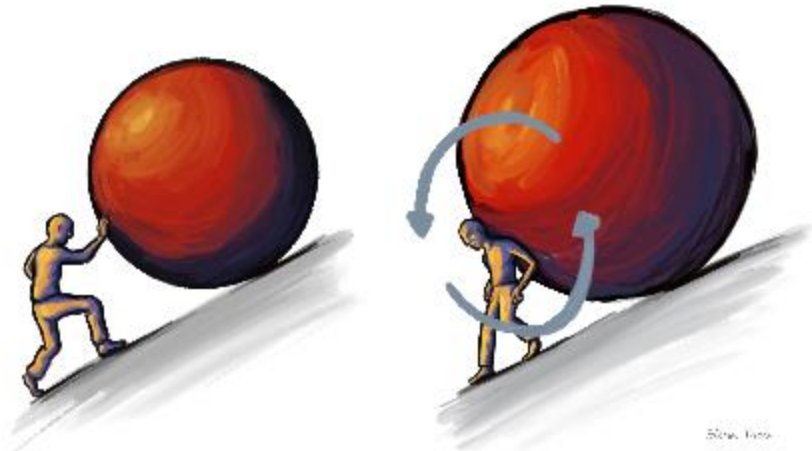


2. ... addressing health inequalities requires a comprehensive understanding of the social, economic, and environmental factors .. (1)

- Existing knowledge: isolating the effect of a single factor, e.g. smoking / diet
- Needed knowledge: Acknowledgement that health inequalities result from a complex interplay of factors, ranging from cells to society
- Including feedback loops, crucial contributors to the enduring nature of health inequalities



Feedbackloop between chronic stress and psychological capacity





Combining measures

- What explains this vicious circle? The more stress someone experiences and has experienced, the ..
 - ..fewer tools to resolve the causes of stress (coping),
 - ..less sense of control (learned helplessness),
 - ..less mental capacity to deal with stress (cognitive bandwidth),
 - ..more intense perception of the causes of stress (appraisal).
- These mechanisms do not simply disappear as stress diminishes → combine measures addressing sources of stress with psychological interventions to enhance the mental health of individuals



Such mechanisms might differ between socioeconomic groups

- When considering measures to promote healthy behaviours, there is a tendency to heavily depend on individual experiences
- Risky approach: living conditions of decision-makers often significantly differ from people in lower socio-economic groups
- Tip: use ChatGPT for a summary of scientific studies!



3. ... addressing health inequalities requires a multi-faceted approach

- Existing knowledge: emphasis on interventions controlled by researchers, resulting in distinct interventions handed over to policy and practice for further implementation
- Needed knowledge: Recognition that addressing health inequalities requires collaboration among research, policy and practice. This calls for *transdisciplinary* research to achieve the necessary changes





Conclusions (1)

- ChatGPT/literature: “Health inequalities persist for a variety of complex and interconnected reasons requires comprehensive understanding ... a multi-faceted approach involving changes at individual, community and society levels”.
- To inform policy and practice, we need a different type of knowledge:
 - multiple levels (beyond individual)
 - mechanisms (beyond single risk factors)
 - transdisciplinary (beyond knowledge generated in silos)
- Hopefully: inspiration to critically reflect on your own research, and to embrace complexity



A System Dynamics and Participatory Action Research Approach to Promote Healthy Living and a Healthy Weight among 10-14-Year-Old Adolescents in Amsterdam: The LIKE Programme

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Affiliations + expand

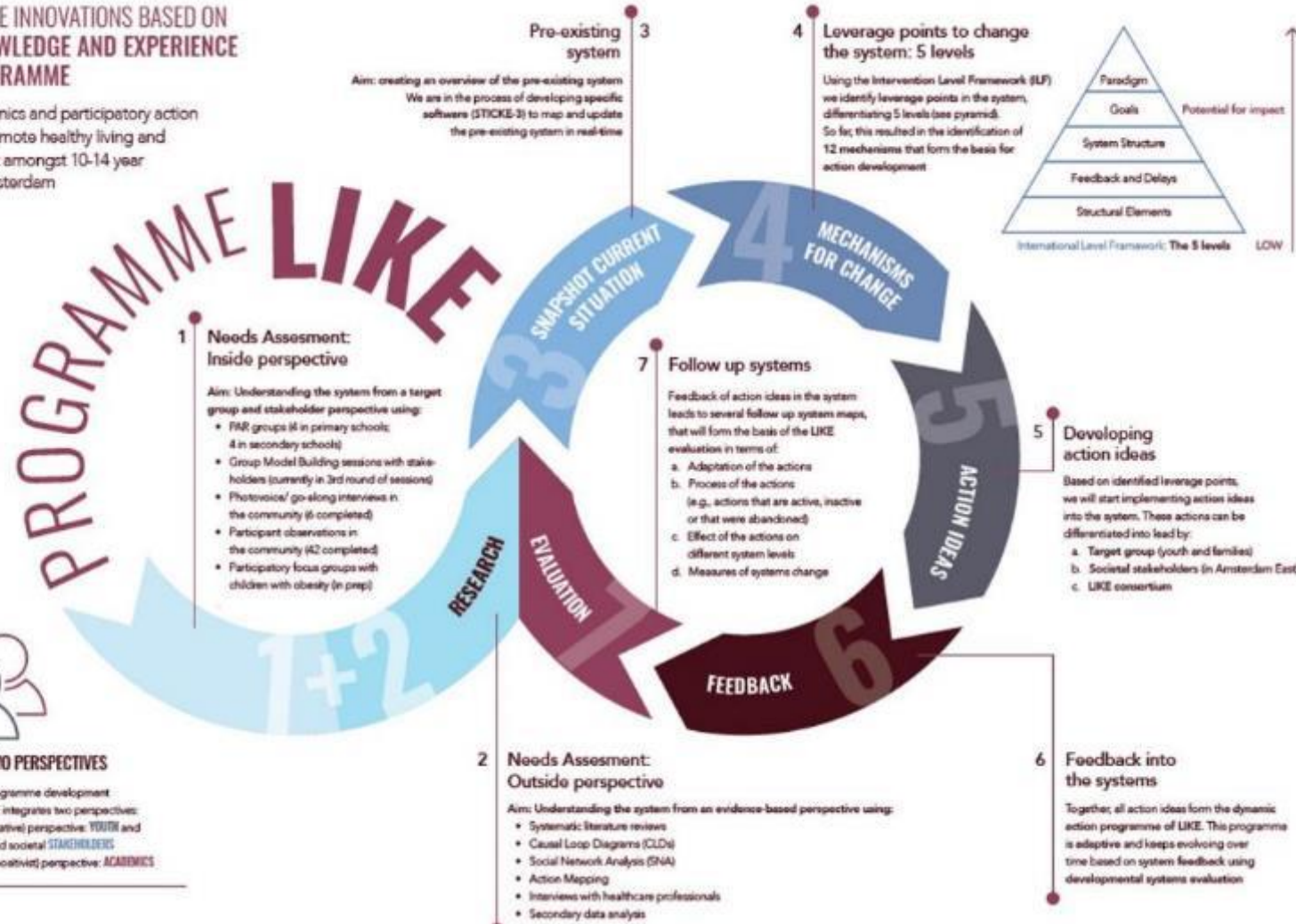
PMID: 32650571 PMCID: PMC7400640 DOI: 10.3390/ijerph17144928

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Example: LIKE project

THE LIFESTYLE INNOVATIONS BASED ON YOUTH KNOWLEDGE AND EXPERIENCE (LIKE) PROGRAMME

A systems dynamics and participatory action approach to promote healthy living and a healthy weight amongst 10-14 year old youth in Amsterdam



www.like-onderzoek.nl



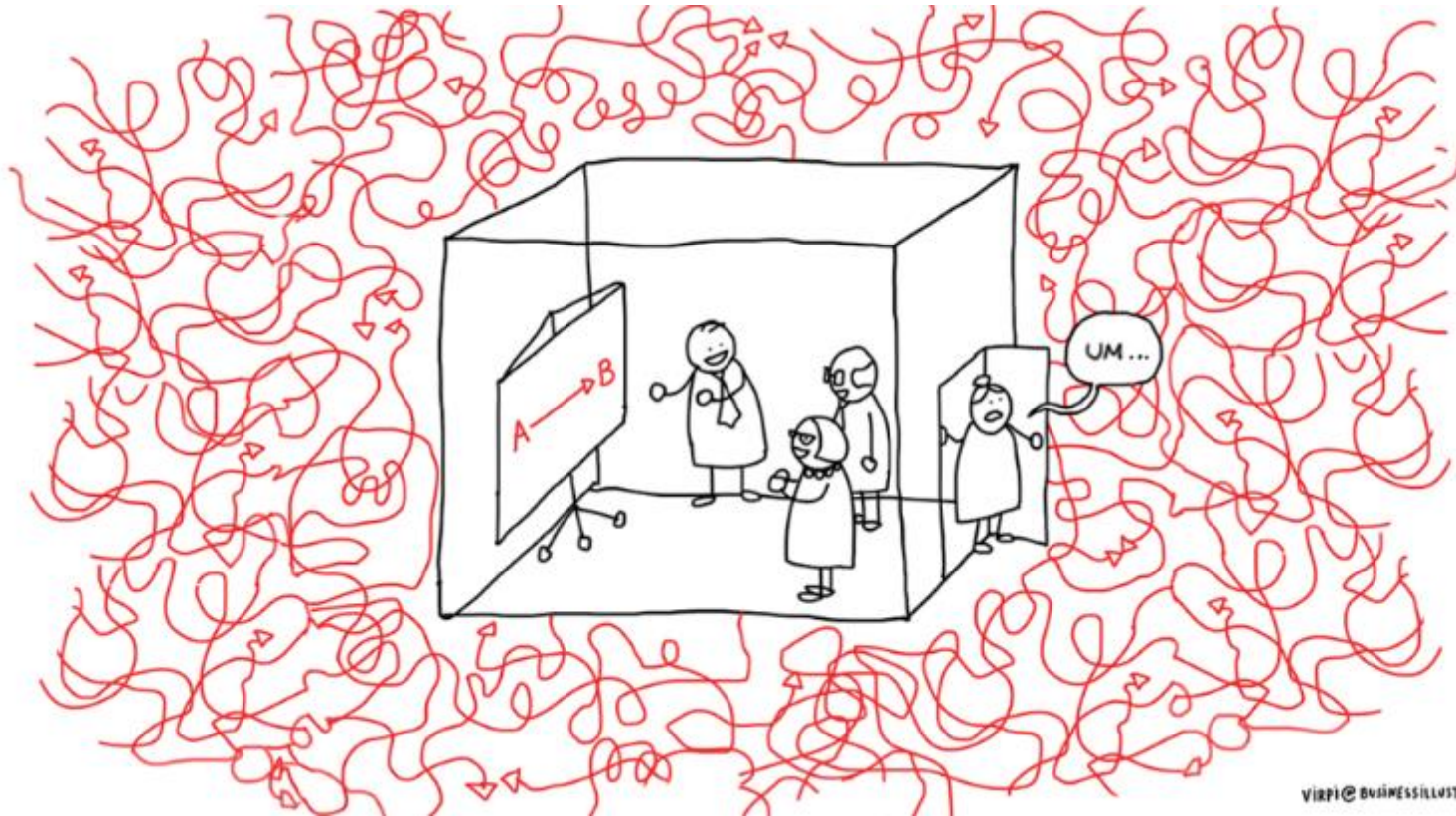
COMBINING TWO PERSPECTIVES

Throughout the programme development and evaluation LIKE integrates two perspectives:

- a. Inside (interpretative) perspective: **YOUTH** and their families and societal **STAKEHOLDERS**
- b. Outside (post-positivist) perspective: **ACADEMICS**



Conclusions (2)



The proof of the pudding is
of course in the eating ...



Thank you for your attention

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