

Effectiveness and implementation issues of school-based interventions

DOiT: a Dutch example

Amika Singh, PhD

Who is DOiT ?



Amika Singh



Femke van Nassau



Mai Chin A Paw



Hans Brug



Willem van Mechelen



- ➔ reduced opportunities for being physically active and increased availability of high energy foods
- ➔ lifestyle factors important targets of preventive efforts
- ➔ children and adolescents from low socio-economic background

What is DOiT ?



- ➡ school-based intervention
- ➡ targeting lower levels secondary education (12-14 years)
- ➡ individual components, integrating environmental elements to support behavioural changes
- ➡ developed according to the Intervention Mapping (IM) protocol (*Bartholomew*)

- ➡ target group:
adolescents, lowest levels
secondary schools
- ➡ tailored to their needs by
use of Intervention Mapping
- ➡ intervention: low cost,
easy to implement (time
constraints)

➡ careful literature research, fill the gaps and adapt to Dutch situation by focus group interviews and Delphi panel

➡ investment in development: 1 year

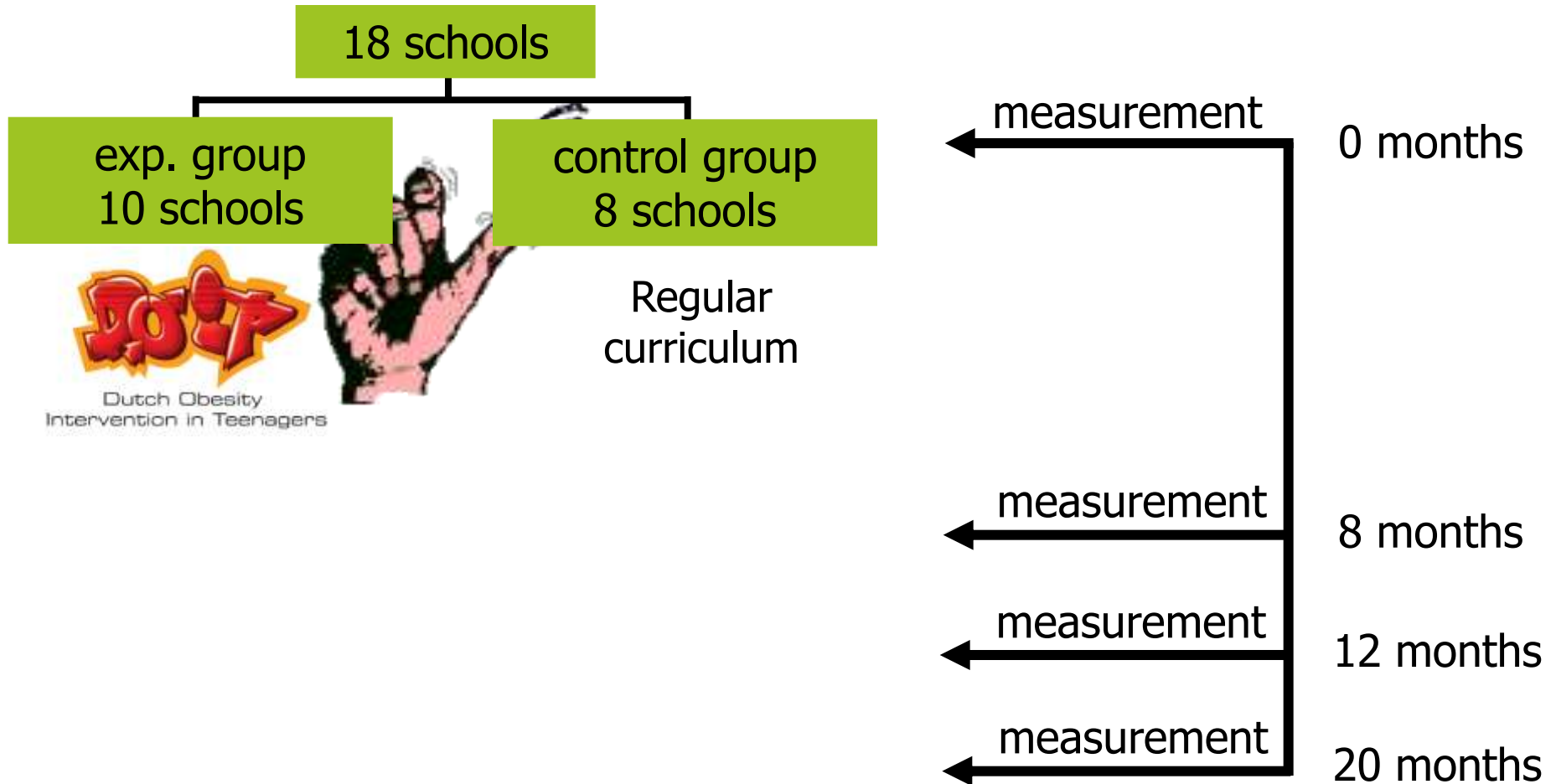
➡ how to involve target group? Best: during the development!

- ➡ main ingredients:
knowledge transfer, role
modelling, implementation
intentions, habit forming,
awareness of environment
- ➡ DOiT implemented in
lessons biology/physical
education (11 lessons)
- ➡ adapted to curriculum, no
extra time needed

- ➔ reduce consumption of sugar-sweetened drinks
- ➔ reduce consumption of high energy snacks
- ➔ increase levels of active transport
- ➔ decrease levels of sedentary behaviour

- ➔ evaluation of DOiT 2003-2005: RCT
- ➔ > 1100 children
- ➔ mean age 13 years

Study design





... vragenlijst over ...
 ... houding / aan / computeren
 ... bewegen / lopen
 ... bewegen
 ... bewegen / lopen



Evaluation

Do it



Dutch Obesity Intervention in Teenagers



- School books (12 lessons)
- pocket-sized diary
- computer tailored advice
- pedometer
- educational video on clandestine advertising



- Advice on canteen assortment
- Extra lessons physical activity

Did DOiT work?



DOiT positively influenced body composition & behaviour

- ➔ sum of skin folds (girls)
- ➔ sugar-sweetened beverages (boys and girls), TV viewing (boys)
- ➔ results faded away after intervention stopped
- ➔ results pilot study (2010) confirm these results





- ➔ overall positive evaluation (maintenance)
- ➔ 16 lessons instead of 11
- ➔ 2 year program instead of 1 year program
- ➔ increased parental involvement
- ➔ more flexible use of materials





- ➔ DOiT positively influenced body composition & behaviour
- ➔ DOiT is feasible
- ➔ next step: further development and implementation

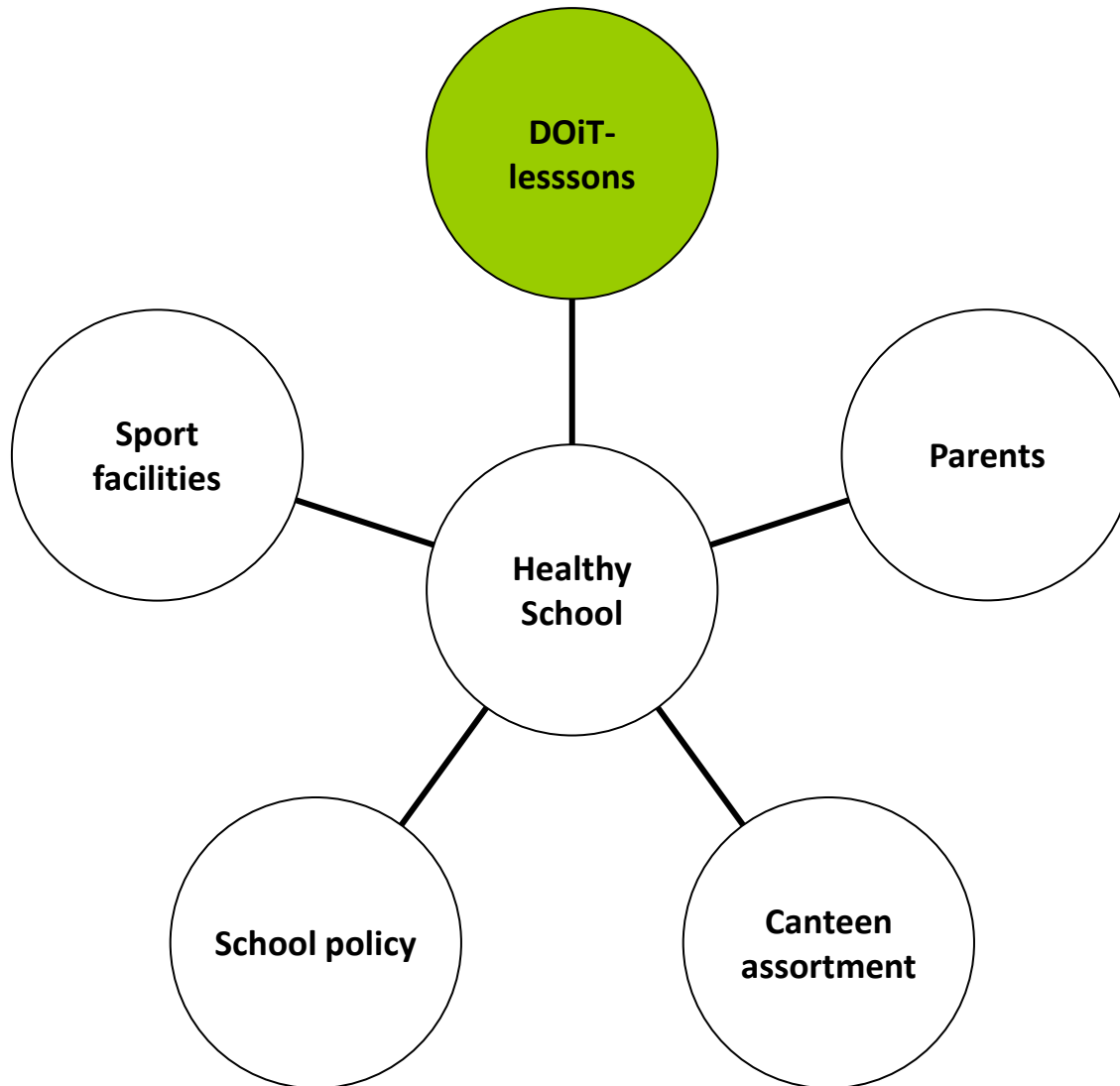


DOiT AGAIN



- easy/difficult version textbook (incl. work sheets, teacher manuals)
- CHECKiT (diary)
- parent booklet
- pedometer
- website
- DOiT -office

DOiT – as part of the ‘whole’





- ➔ impeding and facilitating factors (on socio-political, organizational, user and intervention level) for adoption, implementation and continuation of DOiT?
- ➔ to what extent do teachers know, adopt and implement the DOiT-intervention?
- ➔ sustained dose-response effects (body composition & behaviour)
- ➔ effects on school & home environment

Overview DOiT



➡ 2002-2007

Development and evaluation in RCT

Singh AS et al: Systematic development, implementation and evaluation of a school-based intervention aimed at the prevention of excessive weight gain in adolescents. *BMC Public Health* 2006; 6(1):304.

Singh AS et al: Short-term Effects of School-Based Weight Gain Prevention Among Adolescents. *Arch Pediatr Adolesc Med* 2007; 161(6):565-571.

Singh AS et al: Dutch Obesity Intervention in Teenagers: Effectiveness of a School-Based Program on Body Composition and Behavior. *Arch Pediatr Adolesc Med* 2009; 163(4):309-317.

Singh AS et al: Process evaluation of a school-based weight gain prevention program: the Dutch Obesity Intervention in Teenagers (DOiT). *Health Educ Res* 2009; 24(5):772-7.

➡ 2009-2010

Adjustments after evaluation, tested in pilot study

➡ 2011-2013

Implementation study

➡ 2011 - ????

country-wide implementation



- ➡ VUmc – intellectual property
- ➡ funding by SNS REAAL FONDS, Dutch Heart Foundation
- ➡ collaboration with Dutch organization for Sports (NISB) Food (Voedingscentrum)

Thank you for your attention!



www.doitproject.com

a.singh@vumc.nl