

Jeugd Voeding en Gezondheid

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Remco Havermans

- Biologische psychologie; Radboud Universiteit (1994-1999)
- Experimentele psychopathologie (verslavingen, eetstoornissen, obesitas); Universiteit Maastricht (1999-2015)
- Laboratory of Behavioural Gastronomy (eten en proeven); Campus Venlo (2017-2027)
- Gedragswetenschap en de duurzame voedseltransitie; Campus Venlo

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Jeugd Voeding en Gezondheid

- Bijzondere leerstoel 2019 – 2024

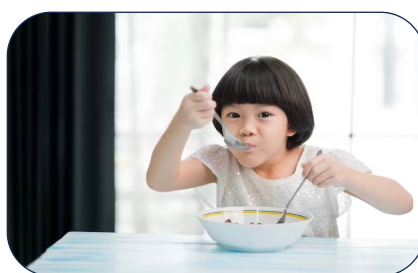
“Verbeteren van **gezondheid en welzijn van kinderen** door het **stimuleren van gezonde eetgewoonten** en voedselkeuzes”

- Joachim Schneider, Alex Umanets, Britt van Belkom, Ilse van Lier, Suzanne Bisschops, Edgar van Mil



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‘Stimuleren van gezonde eetgewoonten’?



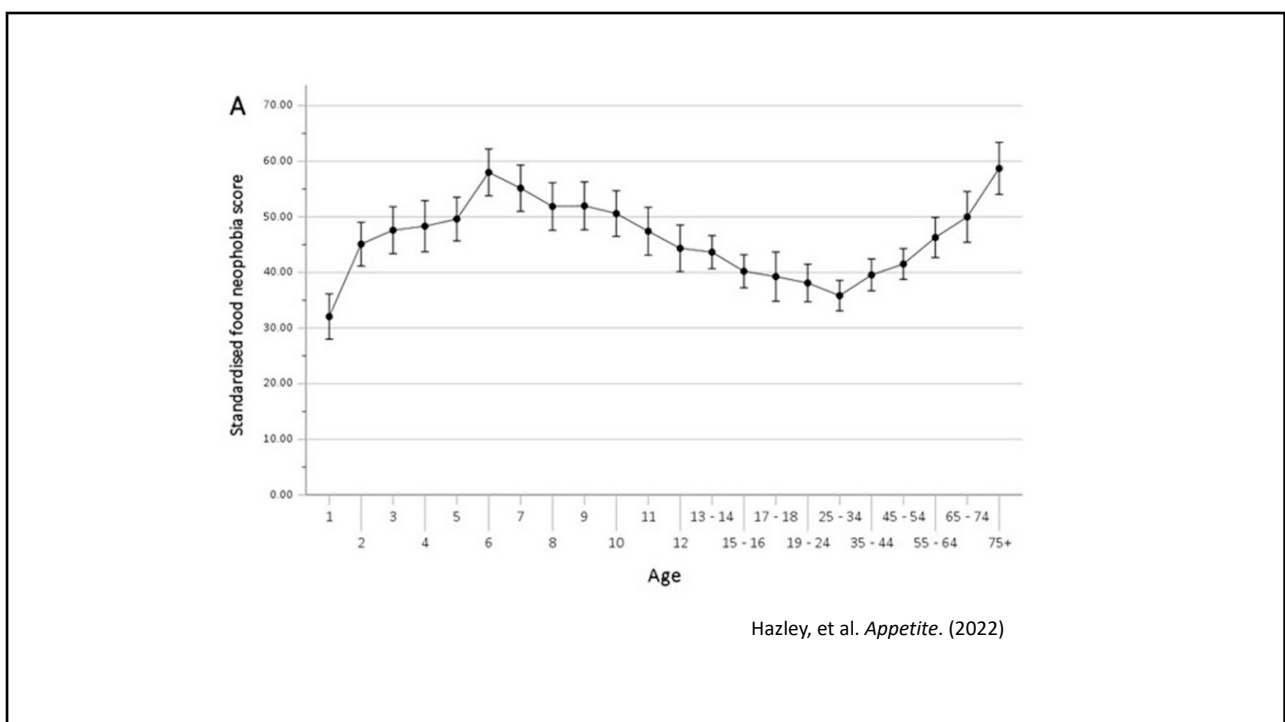
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“Mensen komen terecht bij de dokter en de diëtist, maar niet bij gedragskundigen terwijl het zo overduidelijk een gedragsprobleem is”

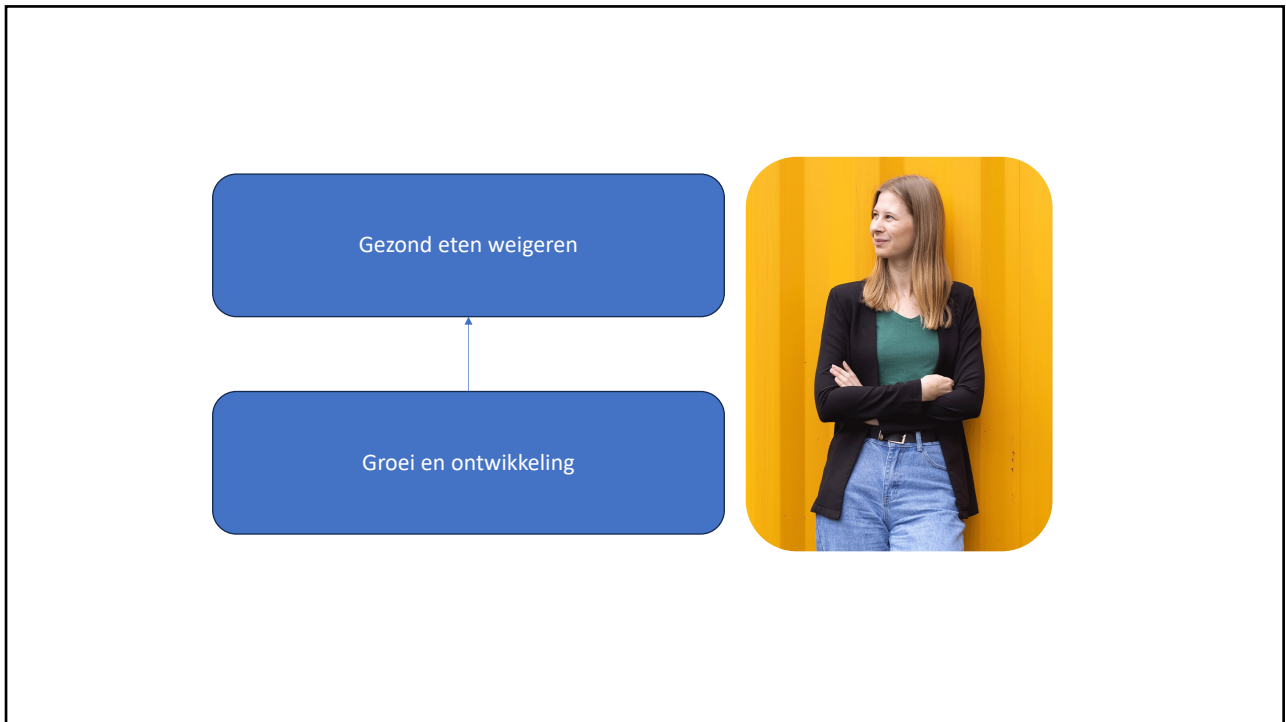
“Uit epidemiologische studies blijkt dat de consumptie van zogenaamde ‘ultra-bewerkte’ voedingsmiddelen samenhangt met overgewicht”

“De overheid moet zich sterk maken voor het creëren van een gezond makende omgeving”

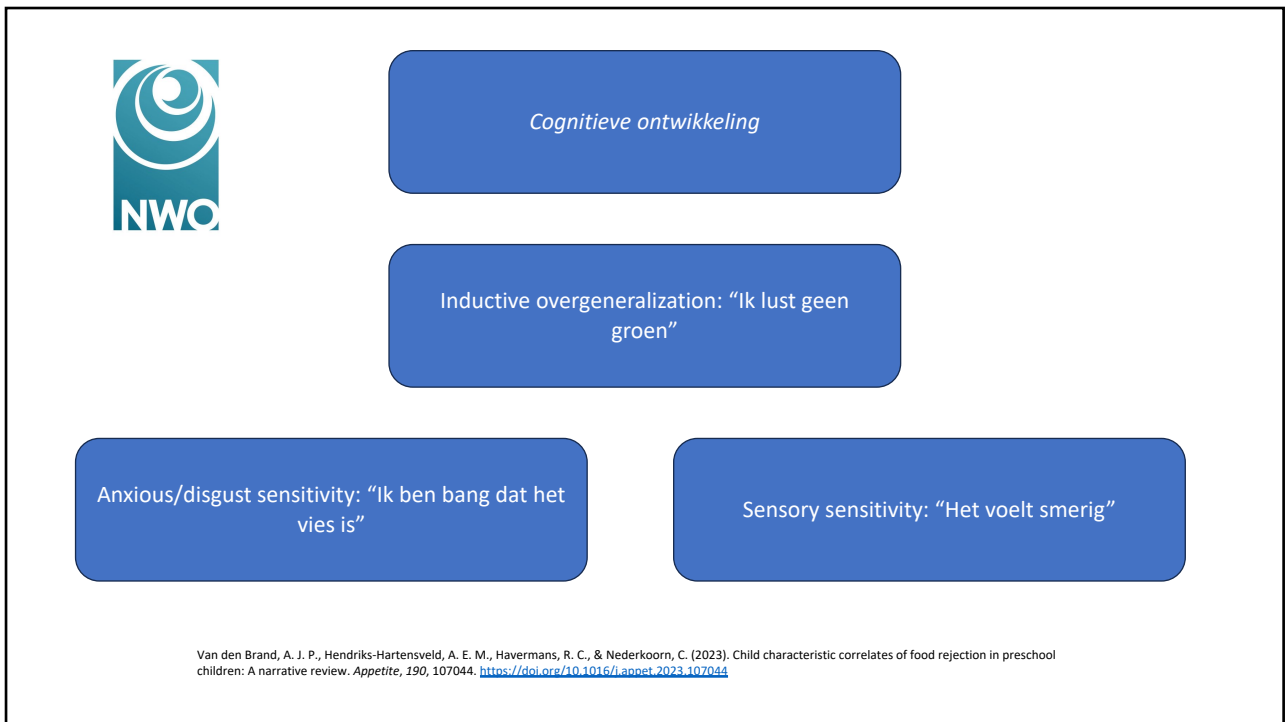
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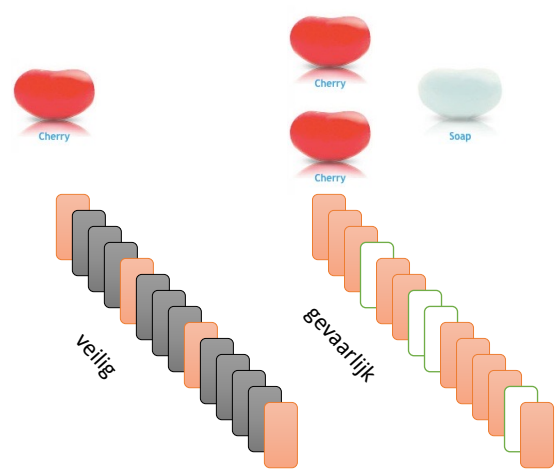


Bittergevoelige, bange kinderen?



Are food neophobic kids more sensitive to bitter taste?

Are food neophobic kids more risk averse?



“trek 5 kaarten”



Hendriks-Hartensveld, A. E. M., Nederkoorn, C., van den Brand, A. J. P., & Havermans, R. C. (2023). Child-reported vegetable neophobia is associated with risk avoidance for distaste in children aged 4–15 years. *Appetite*, 189, 106993. <https://doi.org/10.1016/j.appet.2023.106993>

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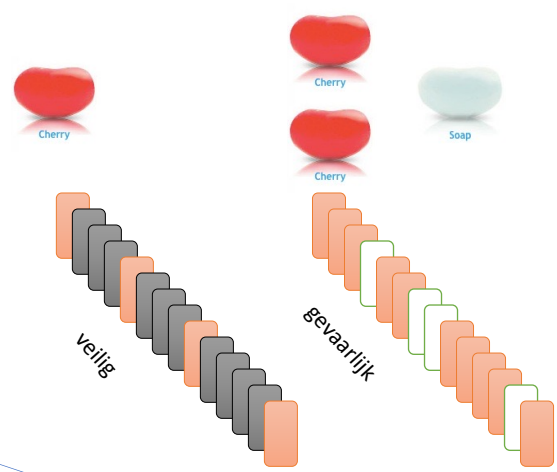
Bittergevoelige, bange kinderen?



Bitter taste sensitivity (PROP-test)

Distaste sensitivity (Candy Gambling Game)

N = 367 kinderen (166 jongens); 8/9 jaar oud



“trek 5 kaarten”

Hendriks-Hartensveld, A. E. M., Nederkoorn, C., van den Brand, A. J. P., & Havermans, R. C. (2023). Child-reported vegetable neophobia is associated with risk avoidance for distaste in children aged 4–15 years. *Appetite*, 189, 106993. <https://doi.org/10.1016/j.appet.2023.106993>

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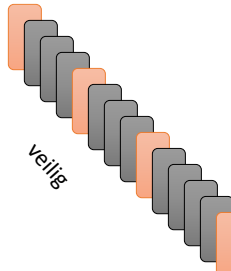

Bittergevoelige, bange kinderen?



Geen bewijs voor bittergevoeligheid; Wel bewijs voor neofobie



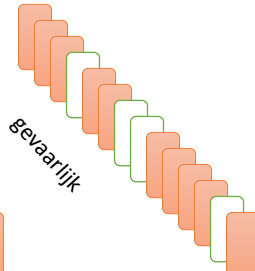
Cherry



veilig



Cherry



gevaarlijk



Soap

“trek 5 kaarten”

Hendriks-Hartensveld, A. E. M., Nederkoorn, C., van den Brand, A. J. P., & Havermans, R. C. (2023). Child-reported vegetable neophobia is associated with risk avoidance for distaste in children aged 4–15 years. *Appetite*, 189, 106993. <https://doi.org/10.1016/j.appet.2023.106993>

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Smaakgevoeligheid en eetgedrag

Smaak- en reukfunctie bij kinderen met kanker:

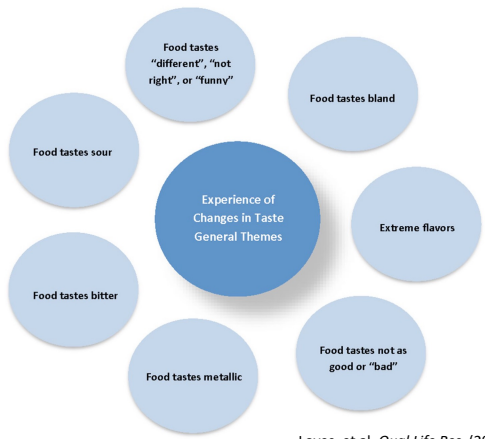
T0: binnen 6 weken

T1: 3 maanden

T2: 6 maanden

T3: 3 na einde behandeling



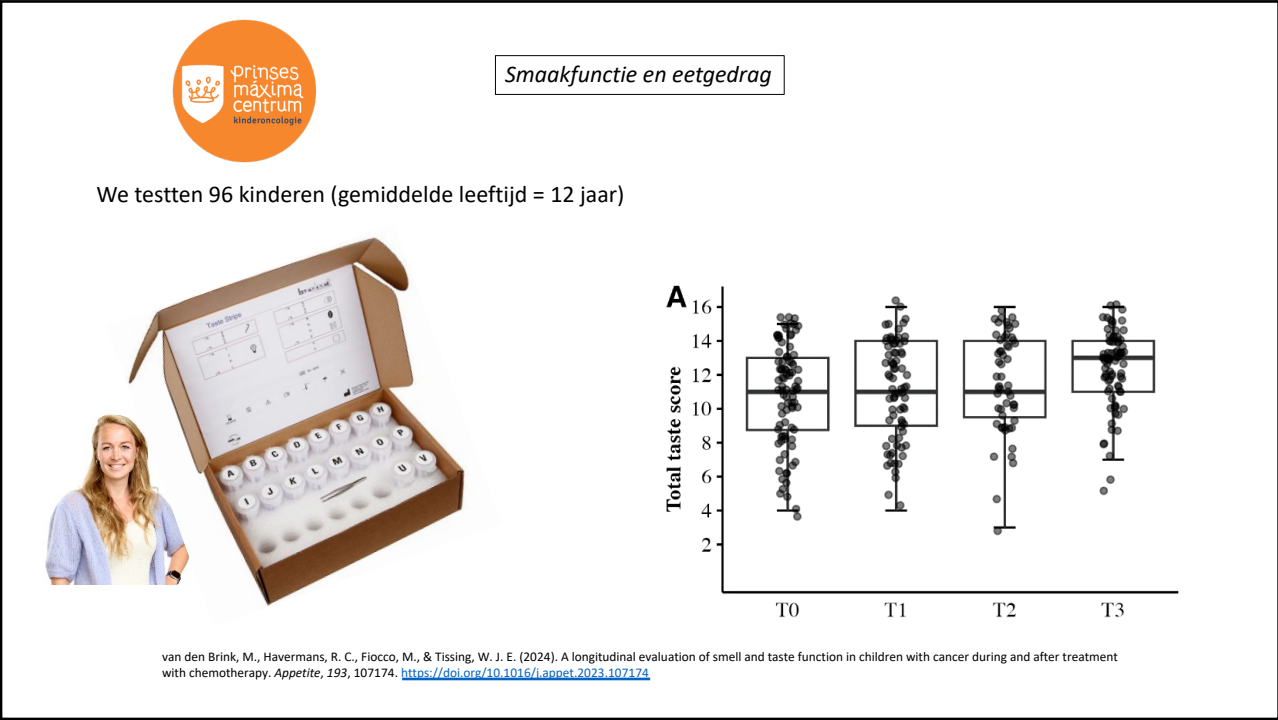


Loves, et al. *Qual Life Res.* (2019)

van den Brink, M., Havermans, R. C., Fiocco, M., & Tissing, W. J. E. (2024). A longitudinal evaluation of smell and taste function in children with cancer during and after treatment with chemotherapy. *Appetite*, 193, 107174. <https://doi.org/10.1016/j.appet.2023.107174>

van den Brink, M., Tissing, W. J. E., Grootenhuys, M. A., Fiocco, M., & Havermans, R. C. (2024). Taste and smell are associated with dietary intake, eating behavior, nutritional status, and health-related quality of life in children with cancer. *Clinical Nutrition*, 43(12), 140-145. <https://doi.org/10.1016/j.clnu.2024.10.006>

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Smaakfunctie en eetgedrag

Heb je last van smaakveranderingen tijdens chemotherapie en zo ja, wat doet dat met je eetlust?

N = 27 (6 – 17 jaar)

Chemotherapie heeft meteen effect

"I think that after 1 or 2 days you already notice it and that lasts for about the first week. Then you really notice it, your tongue also feels a bit numb. Then after a week and a half you may have it [normal sense of taste] back, but then you have half a week to taste your food and then you have a new course [of chemotherapy]" (boy, 17 years)

Smaakveranderingen hebben grote impact

"It was extremely frustrating. I smelled yummy food everywhere, but when it ended up in my mouth, I didn't like it. It was just really annoying to go through that, it makes you not want to eat" (girl, 17 years)

"I really noticed that I couldn't really enjoy my food because those flavors didn't come out properly. I didn't like that at the time either" (girl, 14 years)

Het is niet eenvoudig om te eten wanneer niks smaakt

"If we have chips, I'll have sweet chili sauce with them, and I'll dip the chips in it. That has a very strong flavor which I could taste" (girl, 13 years)

"I try to eat some things more often to get used to the new taste" (girl, 11 years)

Van den Brink, M., ter Hedde, M. M., van den Heuvel, E., Tissing, W. J. E., & Havermans, R. C. (2022). The impact of changes in taste, smell, and eating behavior in children with cancer undergoing chemotherapy: A qualitative study. *Frontiers in Nutrition*, 9. <https://www.frontiersin.org/articles/10.3389/fnut.2022.984101>

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Mondgevoel en smaak

Wat beïnvloedt het 'willen eten'
nu het meest?
Kleur, textuur, of smaak?



Werthmann, J., Jansen, A., Havermans, R., Nederkoorn, C., Kremers, S., & Roefs, A. (2015). Bits and pieces. Food texture influences food acceptance in young children. *Appetite*, 84, 181–187. <http://dx.doi.org/10.1016/j.appet.2014.09.025>

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Mondgevoel en smaak

N = 32 (12 jongens); 3 / 4 jaar oud



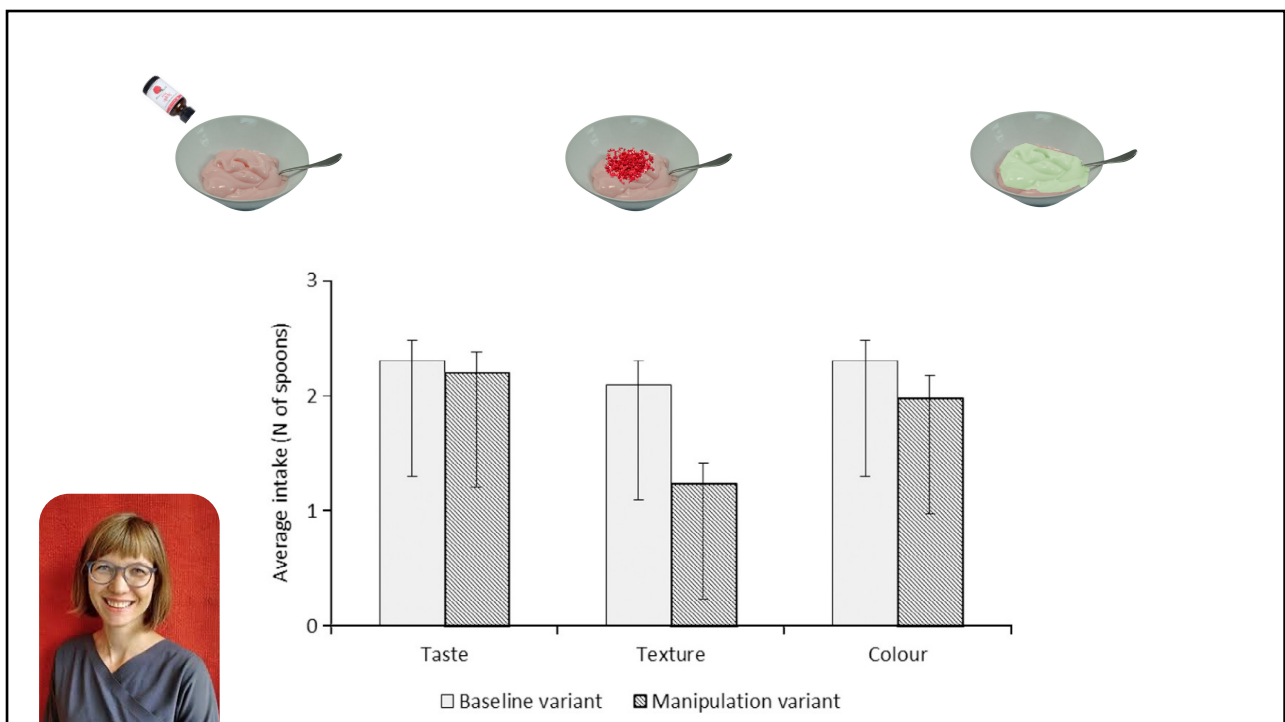






Werthmann, J., Jansen, A., Havermans, R., Nederkoorn, C., Kremers, S., & Roefs, A. (2015). Bits and pieces. Food texture influences food acceptance in young children. *Appetite*, 84, 181–187. <http://dx.doi.org/10.1016/j.appet.2014.09.025>

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Mondgevoel en smaak

De relatie tussen selectief eten en de waardering voor tastprikkelers

N = 44 (20 jongens); ± 7 jaar oud

Picky eating test

10 verschillende dingen proeven:



Tactile sensitivity test

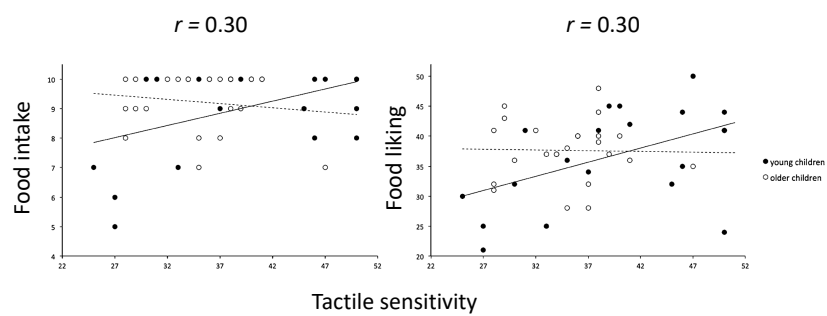
10 verschillende dingen voelen:



Nederkoorn, C., Jansen, A., & Havermans, R. C. (2015). Feel your food. The influence of tactile sensitivity on picky eating in children. *Appetite*, 84, 7–10. <https://doi.org/10.1016/j.appet.2014.09.014>

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Tastgevoeligheid en proeven



Nederkoorn, C., Jansen, A., & Havermans, R. C. (2015). Feel your food. The influence of tactile sensitivity on picky eating in children. *Appetite*, 84, 7–10. <https://doi.org/10.1016/j.appet.2014.09.014>

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Mere exposure effect



Het mere exposure effect en de rol van beloning

26 kinderopvangcentra;
N = 598 (2/3 jaar oud)





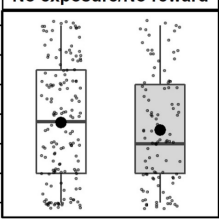
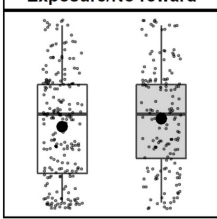
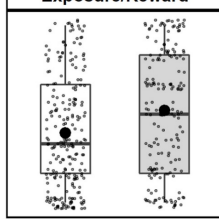
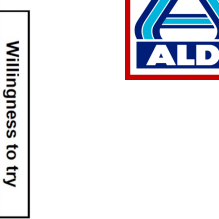
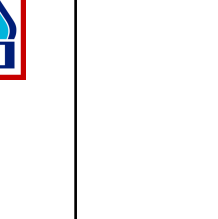
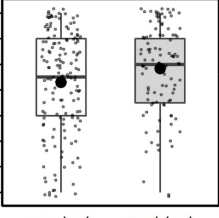
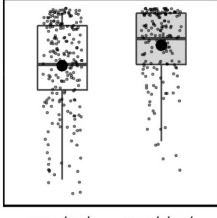
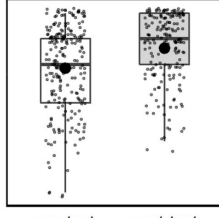
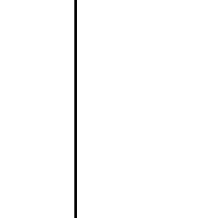
Van Belkom, B., Umanets, A., van Mil, E., & Havermans, R. C. (2023). Promoting vegetable acceptance in toddlers using a contingency management program: A cluster randomised trial. *Appetite*, 184, 106513. <https://doi.org/10.1016/j.appet.2023.106513>

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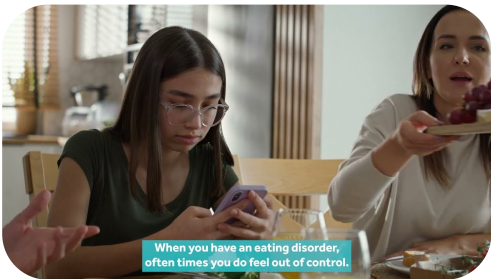


No exposure/No reward		Exposure/No reward		Exposure/Reward		
						Willingness to try
						Recognition score
pre-test	post-test	pre-test	post-test	pre-test	post-test	

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Kinderen met obesitas

Studie naar psychologische kenmerken die eetbuien voorspellen bij kinderen met obesitas



Ongeveer 30 – 40% van kinderen met obesitas, ervaart regelmatige eetbuien

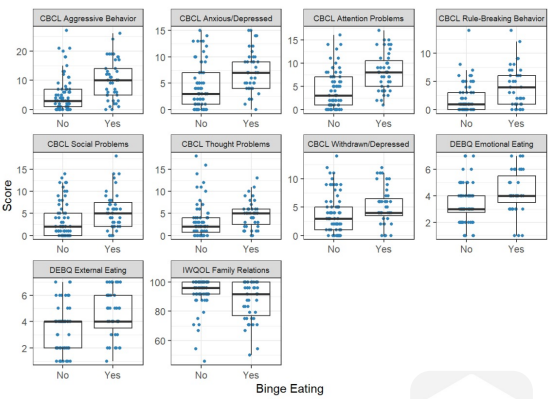
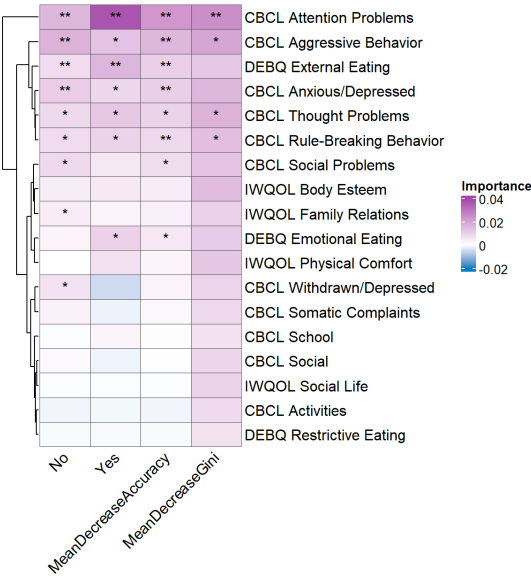


- 1. Quality of life / well-being (IWQOL)
- 2. Child problem behaviour (CBCL)
- 3. Child eating behaviour (DEBQ)

N = 115 (gem. leeftijd = 12,5 jaar);
37% rapporteert eetbuien

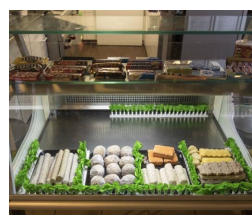


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Obesogene omgeving



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Leren eten in een obesogene omgeving?



Terug naar voor scholen



Voedingseducatie

Ervaringsgerichte Leerstraten over gezonde voeding voor kinderen van 8 tot 12 jaar.

In de Leerstraten zien, voelen, ruiken, bereiden, proeven en leren de kinderen over groente en fruit én over de gezondheidseffecten van gezonde voeding.



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Leren eten in een obesogene omgeving?



Lange termijneffecten van de leerstraten op:

1. Attitude
2. Waardering (van groente en fruit)
3. Inname (van groente en fruit)
4. Kennis

87 Leerstraat-kinderen versus 102 Leerstraatloze-kinderen

van Lier, I., van Mil, E., & Havermans, R. C. (2024). Long-term effects of a school-based experiential nutrition education intervention. *International Journal of Health Promotion and Education*, 1-10. <https://doi.org/10.1080/14635240.2024.2421557>



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Leren eten in een obesogene omgeving?



Lange termijneffecten van de leerstraten op:

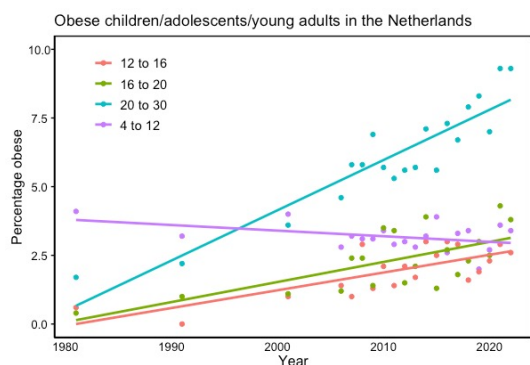
- 1. Attitude**
- ~~2. Waardering (van groente en fruit)~~
- ~~3. Inname (van groente en fruit)~~
- ~~4. Kennis~~

Leerstraat-kinderen vinden gezondheid en gezonde voeding belangrijker

van Lier, I., van Mil, E., & Havermans, R. C. (2024). Long-term effects of a school-based experiential nutrition education intervention. *International Journal of Health Promotion and Education*, 1-10. <https://doi.org/10.1080/14635240.2024.2421557>

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Tot slot



Obesitas/overgewicht neemt sterk toe onder jongeren en jong-volwassenen,
...niet onder kinderen (4-12 jarigen)

Nederland: 3%

Frankrijk: 4%

Duitsland: 6%

Engeland: 15%

Amerika: 20%

UNICEF (2025): “Nederlandse kinderen scoren het hoogst op algemeen welbevinden”

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Youth Food and Health



Kokkerelli
Kids University for Food & Health



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