reward REWARDING HEALTHY FOOD CHOICES

HOW CAN CLASSICAL CONDITIONING LEARNING PROCEDURES SUPPORT THE TASTE DEVELOPMENT IN TODDLERS?

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*granted by FWO

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UNHEALTHY FOOD CHOICES

Daily intake of most essential food groups: below minimum recommendations

High intake of energy-dense and low-nutrious foods

Strongest barrier for vegetable consumption = preference

Vereecken & Maes (2010); Huybrechts & De Henauw (2009)

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DEVELOPMENT OF FOOD PREFERENCES = LEARNING PROCESS

?

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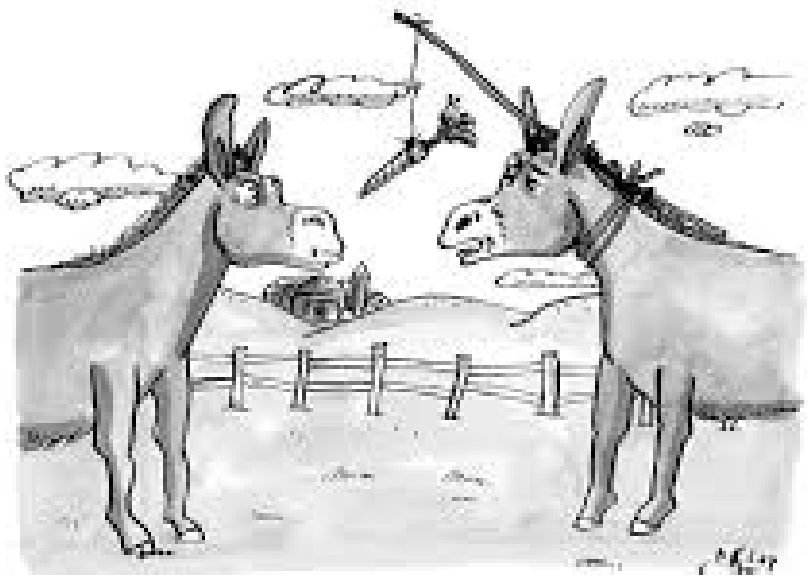
CHILD CHARACTERISTICS: REWARD SENSITIVITY



Research has suggested to take into account a **child's individual Reward Sensitivity** (RS) as a biological predisposition
that guides human **behavior** (Beaver et al., 2006).
→ the specific role of RS in the learning process of food preferences?

CONTEXT

The development of foodpreferences takes place within the caregiver-child feeding relation:

- **When?**
- **What?**
- **How children learn their food preferences?**

  Evidence for 3 processes:

  - Exposure = making food frequently available
  - Observational learning = modeling by parents or siblings
  - Associative learning: the association of the food with a positive climate (UCS)→ **underresearched**

Birch & Doub, 2014

CONTEXT: how?

- Focus group study on effective strategies and environmental cues to enhance tasting in young children
- 3 focusgroups: **Parents, nannies and day care assistents**
- **Results:** 3 important aspects for context learning:

Results of the Focusgroups	Involvement	Involvement/modeling	Positive atmosphere /presentation
	Identify and illustrate the vegetable to be tasted	Safety figure present	Colorfull plates and cutlery

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Aims

To compare the effects of

- **context learning with**
- **mere repeated exposure**

→on the intake of vegetables and

→how this is interrelated with individual differences in **Reward Sensitivity**

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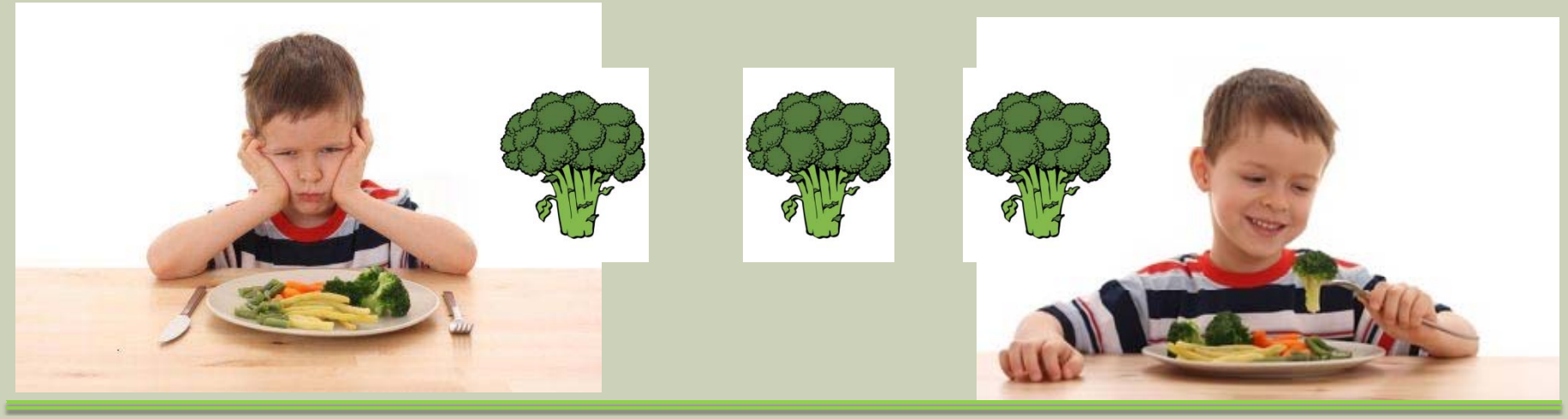

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DESIGN

- Children in day care (18-30 months)
- paradigm: **Flavour-context learning**

Positive context (**UCS**) → positive affect (**UCR**)

Unliked food + Positive context (**UCS**) → positive affect (**UCR**)

Unliked food (**CS**) → positive affect (**CR**)

- **Positive context:** 3 aspects based on focusgroups

9 TASTING TRIALS WITH UNLIKED VEGETABLE (BEET)

	Week1	Week2	Week3	Week4	Week 5	Week 12
Pre test liking assessment	X					
Pre test intake assessment	X					
Tasting trials (WtT and liking)		Trial 1, 2 & 3	Trial 4, 5 & 6	Trial 7, 8 & 9		
Post test liking assessment					X	
Post test intake assessment					X	
Follow up liking assessment						X
Follow up intake assessment						X

Table 2: Assessment procedure based on Anzman-Frasca, Savage, Marini, Fisher & Birch (2011)

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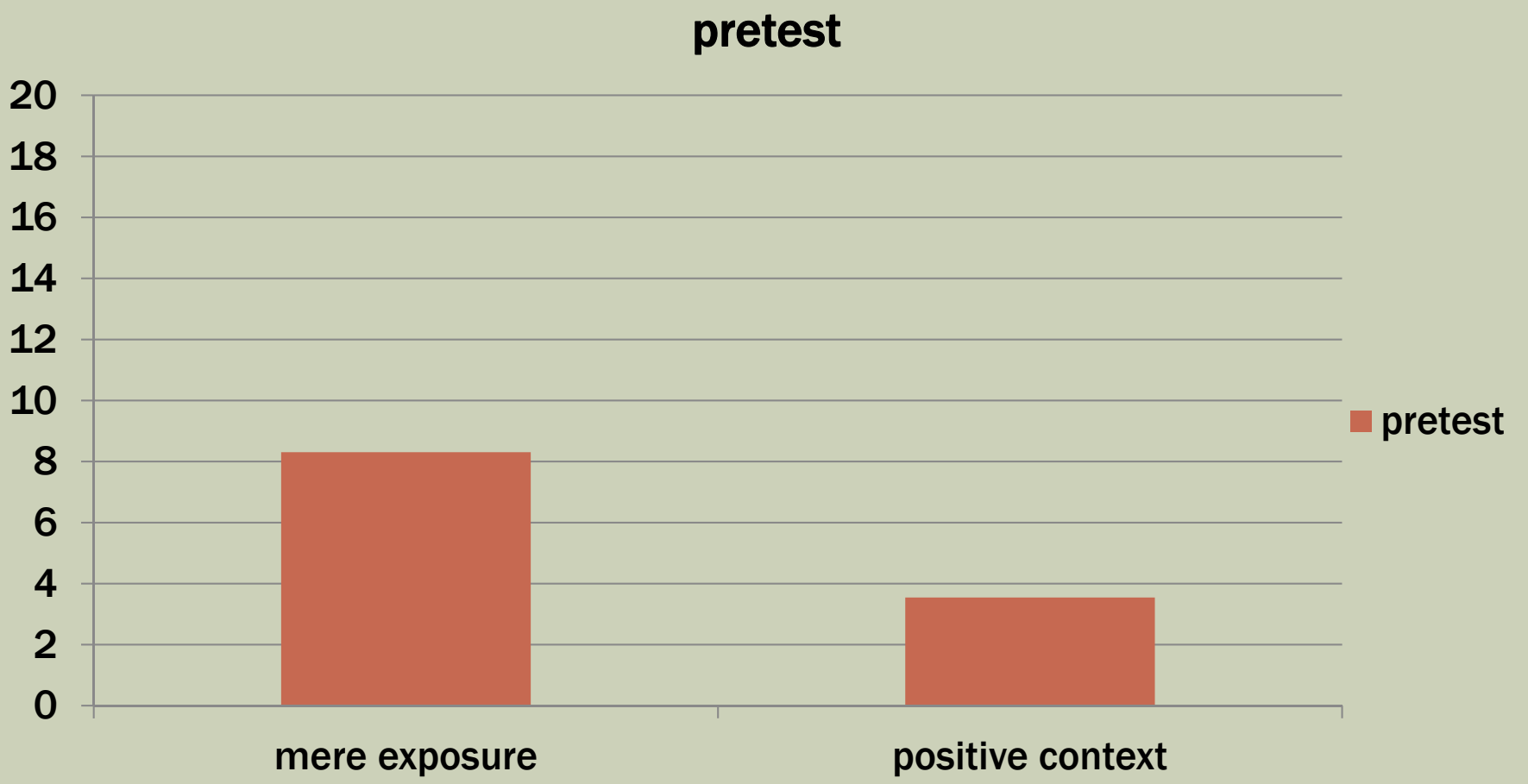
RESULTS



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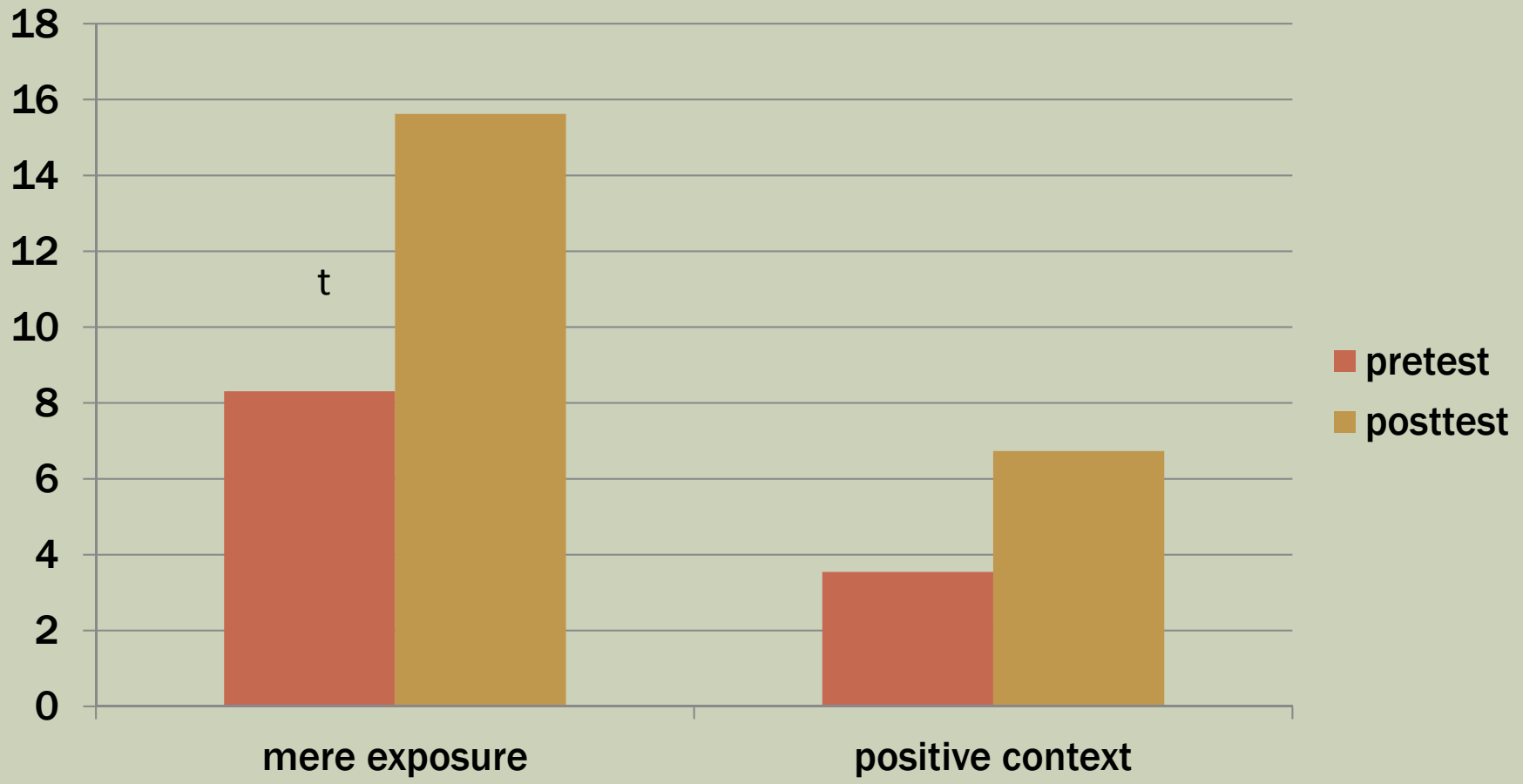

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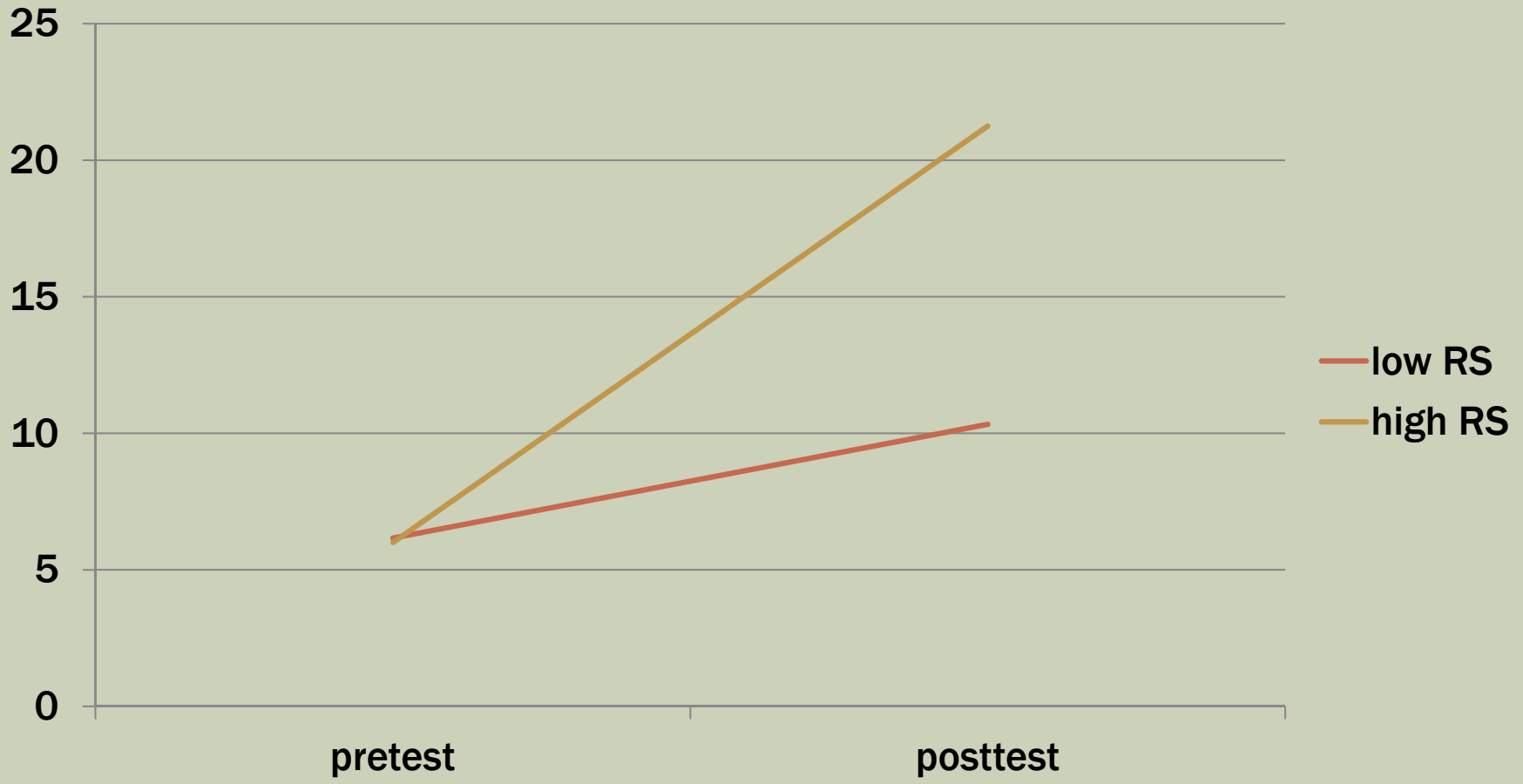
ROLE OF INDIVIDUAL CHARACTERISTICS



DISCUSSION

- Repeated exposure (9 tasting trials) is effective!
  - AND generalization to other unliked vegetable (fennel)

- So far, lack of evidence of postive context learning:
  - Positive climate realized?
  - Positive context learning in both conditions?
  - Other positive aspects like social or tangible rewards, encouragement?
  - Only for some children BUT not for others (adverse effect)?

  →Will be further explored by the REWARD project

- Individual characteristics are important!
  - Serving vegetables is a challenging strategy, especially for children with low levels of RS (not easy to stimulate)

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THANK YOU FOR YOUR ATTENTION