Food rejections in children: Cognitive and social/environmental factors involved in food neophobia and picky/fussy eating behavior

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Introduction

Food neophobia and picky/fussy eating behavior are presented as the two main factors responsible for food rejections in children, and mostly concern the rejection of healthy items like fruits and vegetables. However, despite extensive research in the area, the mechanisms underlying these two types of food rejection in children are still unclear, as the main factors influencing food rejection have not been clearly identified yet.

Food neophobia and picky/fussy eating behavior

-the reluctance to eat, or the avoidance of, new foods (Dovey et al., 2008)
-present among omnivorous species (Adessi, Galloway, Visalberghi & Birch, 2005)
-an efficient adaptive strategy to avoid the risk of ingesting novel (unknown) and potentially poisonous items (see Milton, 1993; Rozin, 1977, 1979)
-correlated with physiological responses reflected fear toward novel foods (Raudenbush & Capiola, 2012)

Picky/fussy eating

-the rejection of a substantial number of foods that are familiar (as well as unfamiliar) to the children (Birch, Johnson, Andresen, Peters, 1991; Galloway, Fiorito, Lee, & Birch, 2005; Smith, Roux, Naaido, & Venter, 2005; Story & Brown, 1987).
-the consumption of an inadequate amount of food (Ryedel, Dahl, & Sundelin, 1995)
-the rejection of certain food textures (Smith et al., 2005).

Objectives

Our aim is to review a selected range of research studies on food neophobia and picky/fussy eating so as to point to a series of factors that play a key role in food rejections in childhood.

Varieties of explanatory and modulating factors

Physical context

Visual and olfactory cues play a key role in food rejections.

It is likely that food neophobia and pickiness depend partly on preferences for certain perceptual properties of food (color, visually texture, shape, smell, etc.).

It is possible that some children prefer dishes with space between items because overlap can cause contamination-based disgust.

In addition, because the large majority of preferences are learned through experience, food rejections are often reduced by repeated visual exposure during infancy.

Social context

Facilitation and modeling effects play major roles in children’s willingness to try new food and even in changing their food preferences. Children’s inclination to modify their choices based on mind reading seems to be weaker for food than non-food items. Food domain seems to be a specific domain in social cognition.

Mental context

Information given by the physical context is perceived and categorized by the child, with the food categorization system possibly delivering output on edibility, familiarity, or attractiveness of items.

Food rejections peak around 2-3 years when rapid improvements appear in the categorization system.

One might consider food neophobia and pickiness as the result of a perceptual mismatch between food items improvements appear in the child’s food categorization system.

Conclusion

The literature lacks decisive empirical evidence in favor of an independence or a correlation between the two components of food rejection, food neophobia and pickiness.

Few studies have linked improvements that appear in the child’s food categorization system and their inclination toward food rejections. The concomitance of these two phenomena is not a sheer coincidence, and calls for investigation.

Perspectives:

1) Psychometric studies in order to develop and validate a scale of food rejections for children
2) Investigation of the developmental characteristics of children’s food categorization system

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