

COMPLEMENTARY FEEDING AND MATERNAL RESPONSIVENESS IN 8 TO 24-MONTH-OLD INFANTS: A LONGITUDINAL STUDY

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INTRODUCTION

- In **Baby-led weaning** the infant participates in family meals and eats independently finger food cut accordingly to her chewing and motor abilities (1)
- **Responsive feeding** entails those feeding practices that encourage the child to eat autonomously and in **response to physiological and developmental needs**, which may encourage self-regulation in eating and support cognitive, emotional and social development (2)
- A misalignment between the child's internal state and the caregiver's behavior may alter **self-regulation** in food consumption and increase the risk of being overweight (3)

OBJECTIVES

- What is the relationship between **complementary feeding approaches** and maternal **responsiveness**?



VARIABLES:

- **Proportion of self-feeding:** proportion of times in which the infant self-feeds (i.e., is not fed by the caregiver)
- **Responsiveness to receptiveness:** caregiver's sensitivity to 20 child's hunger cues at the beginning of the meal
- **Responsiveness to fullness:** caregiver's sensitivity to 28 child's satiety cues at the end of the meal

METHOD

- **Observation** of 166 Italian children with typical development at **8, 12, 18** and **24** months old

Mothers reported:

- The complementary feeding approach chosen
- Child's frequency of consumption of six food categories
- Linguistic production (*MacArthur-Bates Communicative Development Inventory, MCDI: Words and Gestures*)
- Demographic information about themselves and their child

By video call

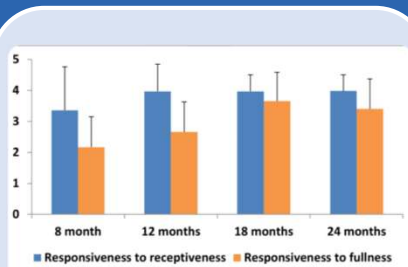
- For each age group we recorded a child's typical meal from which we calculated the **proportion of self-feeding**
- The "**Responsiveness to Child Feeding Cues Scale**" was used to assess maternal responsiveness (4)

RESULTS

Demographics	Age (months)	N	Average	SD
Proportion Self feeding	8	166	0.237	0.354
	12	166	0.525	0.371
	18	165	0.767	0.287
	24	166	0.815	0.258
Exclusive milk feeding (months)	8	164	4.316	2.405
	12	164	4.285	2.423
	18	166	4.336	2.398
	24	166	4.342	2.403
Weaning age (months)	8	166	5.636	0.666
	12	166	5.636	0.666
	18	166	5.642	0.665
	24	166	5.648	0.673

Weaning type (8 month old)	Frequencies	% Total	% Cumulative
PLW	69	41.6 %	41.6 %
MIX	40	24.1 %	65.7 %
BLW	57	34.3 %	100.0 %

Mother responsiveness	Age (months)	N	Average	SD
Responsiveness to receptiveness	8	165	3.36	1.402
	12	166	3.97	0.884
	18	165	3.97	0.534
	24	166	3.98	0.527
Responsiveness to fullness	8	166	2.17	0.908
	12	166	2.66	0.976
	18	166	3.65	0.933
	24	166	3.40	0.978



Responsiveness to receptiveness

- Mothers were more responsive to child **receptiveness** to eat when their children were 12- ($z = 3.50, p < 0.001$) and 18- ($z = 2.34, p = .019$) months old, than when they were 8 months old. Moreover, regardless of age, there was a significant effect of **gender**: mothers of girls were more responsive to receptiveness to eat than those of boys ($z = 2.26, p = 0.024$)
- There was a significant interaction between age and **linguistic production** ($\chi^2(3) = 14.01, p < 0.01$): at 12 months of age, mothers reporting a lower level of verbal production by their children, were more responsive to child receptiveness ($z = -2.35, p = 0.019$)

Responsiveness to fullness

- Mothers were more responsive to child **fullness** when their children were 12- than 8 months old ($z = 3.25, p < .001$), and 18- than 12 months old ($z = 5.90, p < .001$), but less responsive to fullness when children were 24- than 18 months old ($z = -3.60, p < .001$). Moreover, regardless of age, responsiveness to fullness was positively related to **proportion of self-feeding** ($z = 3.21, p < .001$)
- Regardless of age, mothers reporting a higher level of verbal production by their children, were more responsive to child fullness ($z = 2.33, p = 0.020$)
- At 24 months of age, there was a positive correlation between **maternal responsiveness to child fullness** and the frequency of children's **fruit** ($r_s = .238, p = .014$, Benjamini-Hochberg adjusted) and **vegetables** consumption ($r_s = .187, p = .052$, Benjamini-Hochberg adjusted)

CONCLUSIONS

- Responsiveness to **receptiveness** was higher when children were 12 and 18 months old compared to when they were 8 months old, but the difference was no longer significant when children reached 24 months old. This could be due to the fact that 2-year-old children are more self-sufficient during meals
- The higher responsiveness to receptiveness observed in mothers of girls is supported by past literature attesting that mothers are more controlling toward daughters during meals and more concerned about their weight (5)
- Mothers of children with a reported low **language production** compensate their potential communications struggles showing a higher responsiveness to receptiveness when children were 12 months old
- Responsiveness to **fullness** increased with age until 24 months of age, when it decreased compared to 18 months of age. This could be due to the onset of **food neophobia**, which leads mothers to be less responsive to child's fullness cues. Indeed, mothers more responsive to fullness had children with a higher consumption of fruit and vegetables
- A complementary feeding approach that emphasizes **independence** promotes more **child-centred** maternal responses at the end of the meal, with potential benefits for children's self-regulation and possibly for socio-emotional development even after the complementary feeding period

RELEVANT BIBLIOGRAPHY

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