



Summer Conference 2022, 12–15 July 2022, Food and Nutrition: pathways to a sustainable future

## Evaluation of maternal food choice and its association with the quality of the complementary diet in Singapore

A.C.F. Lin<sup>1</sup>, C.J. Seal<sup>2</sup>, S. Kuznesof<sup>2</sup> and I.A. Brownlee<sup>3</sup>

<sup>1</sup>Nestlé Singapore,

<sup>2</sup>Newcastle University, Newcastle, UK and

<sup>3</sup>Northumbria University, Newcastle, UK

Compelling evidence suggests that the mothers' diets, and motives in making food choices for their children are the key determinants of the quality of a child's diet. Complementary feeding represents a critical period when food preferences and eating behaviours are established. This study aimed to examine the associations between the diet of mothers and their weaning child, as well as to gain an understanding of the food choice motives of mothers for their child in the home environment. A total of 488 mother-child dyads were recruited. Food intake data were collected using validated food frequency questionnaires, and the maternal experience of weaning a child was discussed through interviews with a subset of twelve mothers. Healthy eating indices for mother-child dyads were developed to calculate diet quality scores, the interrelationship of which were examined further using Spearman correlations and linear regressions. The associations between socio-demographic characteristics and BMI status on the scores were also evaluated. The median diet quality scores for mother-child dyads were 57/100 (IQR 48.7- 65.9) and 65/100 (IQR 56.5- 72.3) respectively. A correlation between diet quality of mothers and children ( $r = 0.176$ ;  $p < 0.01$ ) was observed, and weak to moderate correlations for vegetables ( $r = 0.125$ ;  $p < 0.01$ ), fruit ( $r = 0.325$ ;  $p < 0.01$ ) and whole grain scores ( $r = 0.330$ ;  $p < 0.01$ ) of the mother-child dyads were noted. Maternal education was associated with the quality of mothers' diet; as well as the quality of a child's diet ( $p < 0.009$ ). Breastfeeding was the strongest predictor of the quality of the child's diet, followed by household income and mother's diet quality. Mothers ranked 'healthiness and nutrition', 'quality and authenticity' and 'food safety' as the most important motives determining the choice of food for their children. 'Healthiness' of food was universally cited by the interviewees as the most critical driver of food choice for their child. The factor 'quality and authenticity' was positively correlated with the child's diet quality scores ( $r = 0.175$ ;  $p < 0.001$ ). This aligned with maternal aspirations to provide quality foods, while naturalness and authenticity dictated the choice to some extent. To the authors' knowledge, this work is the first study to explore the concordance of Singaporean mother and child food intake across different food groups. The results provide information which can be used to develop targeted interventions and provision of dietary advice to mothers to improve the quality of the diet during the complementary feeding period.

### Acknowledgments

The authors would like to thank all participants for their time and effort on this project. This work was completed as part of an Economic Development Board-Nestlé Singapore funded PhD studentship. IB has been partially funded by the European Joint Programming Initiative "A Healthy Diet for a Healthy Life" (JPI HDHL) and of the ERANET Cofund ERA-HDHL (GA N° 696295 of the EU Horizon 2020 Research and Innovation Programme) during the abstract preparation.

### References

1. Chen LW, Fung SM, Fok D, *et al.* (2019) *Nutrients* **11**, 535.
2. Tay ME, Foster E, Stevenson L, *et al.* (2020) *Nutrients* **12**, 2995.