



Undergraduate

INTRODUCTION

- The first 1000 days of life is critical since the foundations of infant's and toddlers' health, growth and neurodevelopment are laid during this time.[1]
- Unhealthy commercial complementary (CC) foods introduced as foods for infants and young children (FIYC) made during this period could be detrimental to a child's growth and future health status.[1]
- FIYC are extensively available and accessible for Malaysian children due to their availability and convenience.
- Western countries reported excessive sugar and sodium levels, inappropriate label messages and claims in FIYC. Such findings raise concerns about the poor nutritional quality, marketing and promotion approaches.[3,5,6]

OBJECTIVE

- To evaluate the nutrient profiles and marketing strategies of CC-FIYC (cereals, soft-wet spoonable foods and meals with chunky pieces) using WHO NPPM model.

METHODS AND MATERIALS

Design: cross-sectional survey
Setting: Kuala Lumpur, Malaysia
Sample size: 150 products sampled from different supermarkets, hypermarkets, pharmacies, organic and baby shops and retail stores between September to October 2021.

ACKNOWLEDGMENTS

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Data collection

Inclusion:

Foods marketed for infants and toddlers 4 to 36 months of age:

- Dry powdered and instant cereal/ starchy foods (n=88)
- Soft-wet spoonable, ready-to-eat foods (n=60)
- Meals with chunky pieces (n=2)

Exclusion:

- Duplicated samples
- Milk substitutes
- Supplements
- Snacks and beverages

Data extraction

- Evaluate food labels based on nutrient thresholds and marketing strategies criteria using WHO NPPM calculator
- Results were recorded into the spreadsheet

Data entry

Record food label data into pre-designed Excel spreadsheet

Data analysis

- Automatically generated results from the calculator are presented as:
- number (n) and percentage (%) of food products passing the criteria

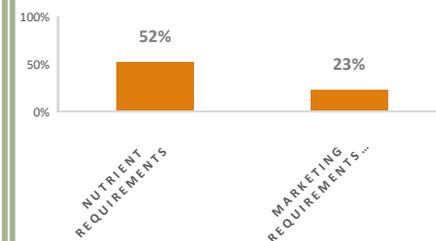


CC-FIYC PASSING WHO NPPM MARKETING STRATEGIES (%)



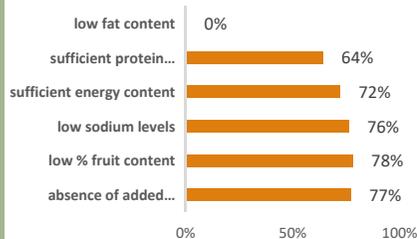
- Fruit puree were sold in squeezable pouches and were promoted for infants aged 4 months
- Cereals and dairy-based foods contain fruit but the amount was not declared
- Dairy-based foods, fruit and vegetable puree contain water but the amount was not declared
- Majority of cereals had unsubstantiated health claims
- Almost all foods had nutrition content, nutrient function and marketing claims

OVERALL COMPLIANCE OF CC-FIYC TO NUTRIENT THRESHOLDS AND MARKETING STRATEGIES (%)



RESULTS

CC-FIYC PASSING WHO NPPM NUTRIENT THRESHOLDS (%)



- Cereals, dairy-based foods, vegetable puree and meals with chunky pieces had the highest proportion of products that exceeded sugar thresholds
- All foods exceeded sodium thresholds except for fruit puree
- Fruit purees had the lowest energy density
- Dairy-based foods had the lowest protein content
- All cereals, purees and meals with chunky pieces were within the recommended fat thresholds

DISCUSSION

- The poor compliance to WHO NPPM of CC-FIYC sold in KL is concordant with findings from western countries.[3,6]
 - This research builds on the findings of a single Malaysian study that showed infants and young children are exposed to high sugar and sodium diets at an early age.[2]
 - The poor nutritional quality indicates energy-density and lack of nutrient-density.
 - Marketing that encourages early introduction of FIYC before 6 months undermines breastfeeding and causes weight gain and further non-communicable diseases.[6]
 - Current food labels are misleading parents and caregivers and could lead to an inappropriate food selection.
- Strength**
 First study in Malaysia to evaluate FIYC against WHO NPPM to enable cross country comparison with global findings.
- Limitation**
 Difficulty in categorizing Malaysian FIYC into WHO NPPM food categories .

CONCLUSION

Overall the compliance to WHO NPPM among CC-FIYC sold in KL is poor. Therefore, there is an urgent need to engage all stakeholder (manufacturers, nutritionists and consumers) towards strategies to improve the nutritional quality of CC-FIYC.

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