Introduction

Childhood obesity is increasing at an alarming rate, in Africa childhood obesity has nearly doubled in the last 25 years. The World Health Organization has called for governments to improve children's food environment by implementing policies such as regulating the marketing of unhealthy foods to children. Nutrient profiling (NP) models support such regulation by defining unhealthy foods, numerous models are however available. The aim of this study was to compare five NP models proposed for child-directed food marketing regulations by determining (a) how many and (b) what kind of foods the models would allow to market to children.

Method

A representative food list was compiled by including all foods advertised on South African free-to-air television channels in 2014 and foods commonly consumed by South African children. The food list consisted of 197 individual foods. The nutritional information of the foods was sourced from food packaging, company websites and a food composition table. Each individual food was classified by the five NP models.

Results

The percentage of foods that would be allowed to market to children according to the different NP models ranged from 6% to 45%. Majority of the pairwise comparisons between the NP models yielded kappa statistics greater than 0.4, indicating that there was moderate agreement between the models.

Conclusion

The NP models varied considerably with regards to the amount and type of foods allowed to market to children, emphasizing the importance of thorough testing and evaluation of a proposed NP model before implementing it into policy.