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Exploring the efficacy of a parent targeted m-health service delivery model for improving discretionary food and sugar sweetened beverage consumption behaviours in infants aged 12–14 months

J.K. Jackson[1,2,3], A.L. Brown[1,2,3,4], N. Hudson[1,2,3], R. Liackman[1,2,3], J. Pinfold[2], C. Lecathelinais[2,3] and R. Sutherland[1,2,3,4]

[1]*School of Medicine and Public Health, The University of Newcastle, Callaghan, New South Wales, Australia*
[2]*Population Health, Hunter New England Local Health District, New Lambton, New South Wales, Australia*
[3]*Hunter Medical Research Institute, The University of Newcastle, New Lambton, New South Wales, Australia*
[4]*National Center for Implementation Science, The University of Newcastle, Callaghan, New South Wales, Australia*

New South Wales (NSW) Health is committed to enhancing child health and development during the first 2000 days (conception to 5 years)[(1)]. However, in Australia current child health behaviours indicate the need for further improvements. For example, discretionary foods (contributing high amounts of saturated fat, energy, added sodium and sugar) account for approximately 30% of total energy intakes in 2–3 years olds including the consumption of sugar sweetened beverages (SSB)[(2)]. There remains a need to provide all parents raising children with direct and sustained support from birth to maximise health behaviours during this important life stage. Healthy Beginnings for HNEKids (HB4HNEKids) is an innovative text messaging program designed to be integrated into the usual care provided by Child and Family Health Nursing (CFHN) services. The messages were co-designed with key stakeholders to provide age-and-stage relevant preventive health information to parents/carers during the first 2000 days. HB4HNEKids has been piloted within five diverse CFHN services within the Hunter New England (HNE) local health district of NSW, reaching over 6000 families since its launch. However, the efficacy of the program on child health behaviours has not yet been explored. The aim of this study is to explore if families that received the HB4HNEKids program report reduced frequency of child discretionary food intake and a lower prevalence of SSB exposure, compared to families who did not receive the program. A cross-sectional survey of mothers 12–14 months post-partum was conducted between August 2023 and July 2024 including participants that received HB4HNEKids and a concurrent non-randomised comparison group, located in HNE. Mothers were asked to report on the frequency of child discretionary food intake per week, and whether their child had ever received SSB (including sweetened water, cordial, fruit drink, and soft-drinks). We conducted linear regression and logistic regression analyses to explore differences between the intervention and comparison participants. A total of 283 participants completed the survey, including 104 (37%) participants that had received the HB4HNEKids program. In infants aged 12–14 months, the frequency of discretionary food intake was approximately 1 serve per week and was unchanged based on if the family had received the HB4HNEKids program or not. Despite a 6-point prevalence difference in SSB exposure reported between groups (HB4HNEKids: 19.42% vs Comparison: 26.26%), this difference was not statistically significant (OR: 0.68 (95% CI: 0.37, 1.23), p = 0.2). Australian infant feeding guidelines suggest that the consumption of nutrient poor discretionary foods and sugar sweetened beverages should be avoided or limited[(3)]. The HB4HNEKids program demonstrates some promise for improving infant feeding behaviours, however a larger effectiveness trial is required to ensure the evaluation is adequately powered.

References

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