

erages in an effort to improve population diets and reduce obesity. However, evidence is needed to inform such recommendations. We aimed to synthesise the current literature on the extent and influence of food and beverage price promotions on consumer purchasing behaviour.

Design: Eight scientific publication databases (covering health, business and marketing) as well as grey literature were systematically searched in May 2018 using search terms related to “food and beverages” and “price promotion” to identify studies published between 2000 and 2018. Articles were included if they looked at the availability or extent of price promotions on food and beverages. Article inclusion screening and data extraction were conducted by two independent authors. The quality of included studies was assessed using the Newcastle-Ottawa quality scale.

Results: Of the 11 included studies, six examined the availability of price promotions, four the extent of price promoted purchases, and one examined both availability of price promotions and the extent of price promoted purchases. All but one article concluded that price promotions were more prevalent on, or resulted in greater purchase quantity of food and beverages of low nutritional quality. Of the seven studies that reported on socioeconomic position in some way, five reported that there was no significant difference in price promotion purchasing and availability across socioeconomic groups. Two studies reported that those of a higher socioeconomic position were more likely to purchase food and beverages when price promoted.

Conclusions: Price promotions are used extensively as a marketing tool to increase consumer purchasing. This review supports recommendations calling on governments to restrict price promotions on unhealthy foods and beverages. Future empirical studies are required to evaluate the consumer response to such a policy.

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The impact of interventions including a dietary component in overweight and obese children and adolescents with chronic diseases: a systematic review and meta-analysis



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Children and adolescents with chronic diseases have high rates of overweight and obesity which often exceeds those observed in typically developing populations. Interventions including a dietary component play an important role in weight management. The aim of this systematic literature review is to therefore determine which interventions that include a dietary component are effective at treating overweight and obesity in children and adolescents with chronic diseases.

Six databases were searched and two independent reviewers assessed articles against the eligibility criteria. Key eligibility criteria included studies that included overweight or obese children or adolescents (≤ 18 years) with a chronic disease and that implemented a weight management intervention including a dietary component. Interventions could be diet-only or be multicomponent delivered alongside physical activity, behavioural therapy or drugs. Primary outcomes were body mass index (BMI) as absolute (kg/m^2) or z-score values and weight.

The literature search identified 9872 references from which 19 studies were included. Nine studies were randomised controlled trials (RCTs) and ten were before and after comparisons. A high risk of bias was detected across studies. Participant diagnosis included

polycystic ovarian syndrome (PCOS), asthma, survivors of cancers, intellectual and developmental disabilities, Prader-Willi syndrome and chronic migraine. A meta-analysis comparing pre- and post-intervention values demonstrated a small but significant impact of dietary (diet-only or multicomponent) interventions on BMI (SMD -0.39 [95% CI $-0.59, -0.18$]).

Interventions including a dietary component may have a small effect on BMI for overweight or obese children and adolescents with chronic diseases. However, more evidence is required to confirm this effect as this review was limited by the variability of study designs and a high risk of bias. It remains unclear which combination of diet and other lifestyle and drug components are most effective at treating overweight and obesity in youth with chronic diseases.

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Investigating business outcomes of healthy community food retail strategies: a systematic scoping review



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Purpose: To identify the types of business outcomes of healthy food and beverage retail strategies that have been reported on to date. The overarching aim of this work is to understand how business outcomes may affect the implementation and sustainability of healthy food retail strategies.

Methods: A systematic scoping review was undertaken to map this emerging research space. Peer-reviewed and grey literature were searched from medical, business and psychology databases. Titles were screened and cross-checked. Key inclusion criteria included qualitative or quantitative real-world food or beverage retail strategies designed to improve the healthiness of the non-alcoholic food and beverage environment within stores through changes to the consumer nutrition environment (e.g. changes to product, price, promotion or placement), and reporting store or chain-level outcomes on factors affecting commercial viability, retailer or customer perspectives, or societal outcomes. Exclusion criteria included hypothetical interventions and descriptive studies. We conducted a narrative synthesis to map the range of business outcomes reported for healthy food retail strategies.

Results: 11,682 titles were screened for inclusion with 107 included for review. We identified a number of significant themes: objective and subjective measures of commercial viability including overall item sales, revenue and patronage; and customer satisfaction with strategy were the most frequently examined business outcomes. Few studies examined retailer perspectives, such as

attitude towards being able to positively influence consumer food choice.

Conclusions: Examination of business outcomes to date has been largely limited to objective commercial viability outcomes. A better understanding of the effect of healthy food retail strategies on retailer perspectives, and their interrelationship with commercial viability and customer perspectives, may assist in identifying strategies considered to be feasible and sustainable by retailers. These considerations are likely to be critical to encourage wide-scale food environment changes required to promote healthier population food and beverage purchases.

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Childhood obesity prevention really is a whole-of-community systems approach – a partnership with industry case study

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Background: Due to the concerns over the perceived taste of the tap water at the local health service, cordial was regularly added to improve the taste for patients, staff and visitors.

Aim: To present a case study focusing on a crucial partnership created between the local health service (Portland District Health, PDH), the local water corporation (Wannon Water) and the Global Obesity Centre (GLOBE), Deakin University, to tackle the issue of improving water access and perceived water taste in a regional Victorian town.

Methods: Wannon Water attended a leader's workshop with GLOBE to explore and model the relationship between Portland drinking water and consumption of sugary drinks. The taste of Portland drinking water had been identified as a key influence on water and sugary drink consumption. Concurrently, the community was implementing a whole-of-community systems approach to tackle childhood obesity in the community.

Results: Wannon Water is investing a significant amount of money to install a newly upgraded reverse osmosis plant and two public drinking fountains at PDH in August 2018 to improve the perceived taste of water for everyone who drinks tap water at the health service. GLOBE are working with Wannon Water and PDH to evaluate this "Great Tasting Water" initiative. This project will examine water and sugary drink consumption by staff members; and sales data of beverages from the on-site café, and cordial. This data will be collected pre- and 6 months post- installation of the new water filtration system.

Conclusion: Through a realisation of a common agenda and common goal of improving health of the community; the creation and maintenance of a strong partnership between key leading organisations in the community was created to improve health behaviours such as consumption of water; and reduce consumption of sugary drinks.

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Assessing the preliminary effectiveness of an m-health intervention to support parents to pack healthy school lunchboxes

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Background and significance: In countries such as Australia and New Zealand, most foods consumed by children at school are brought from home in lunchboxes [1]. The inclusion of energy dense foods in children's lunchboxes is common [2] and a driver to increased risk of overweight and obesity [1]. Scalable interventions that improve the nutritional quality of foods packed in lunchboxes are urgently required. This study assesses the effectiveness of an m-health intervention, 'SWAP IT', targeting parents to improve the nutritional quality of foods packed in children's lunchboxes.

Methods/design: A pilot RCT was conducted with twelve primary schools ($n = 1769$ students, mean age = 8.0yrs) that utilised a school communication app in New South Wales, Australia. Six schools were allocated to receive a multi-component intervention comprising four strategies: (1) information to parents (sent via the app); (2) school nutrition guidelines; (3) curriculum lessons and (4) resources. Outcome measures were taken at baseline and immediately post intervention (6 months) and included mean total energy (KJ) packed in lunchboxes, mean energy from everyday foods and percentage of lunchbox energy from everyday foods assessed via observation.

Findings: A non-significant reduction favouring the intervention group in the mean total energy of foods packed within lunchboxes was observed between groups (-118.39 kJ, $CI = -307.08, 70.30, p = 0.22$). A statistically significant increase was observed between groups for mean energy from everyday foods (79.21 kJ, $CI = -1.99, 156.43, p = 0.04$) and percentage energy from everyday foods increased in the intervention group (4.57% , $CI = -0.52, 9.66, p = 0.08$).

Conclusion: SWAP IT shows promise in reducing the energy content and improving the nutritional composition of school lunchboxes. A fully powered trial is warranted to determine the efficacy of the intervention on energy packed within the lunchbox and the impact on total daily dietary intake and child weight status.

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