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SURVEY

Sugar-sweetened beverages in Pacific Island countries and territories: problems and solutions?

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ABSTRACT

Non-communicable diseases are a major problem in the Pacific Islands, with poor diets an important contributing factor. Available data suggests high levels of intake of sugar-sweetened beverages (SSBs) across the region, and particularly in adolescents. Due to concerns about the risks to health of high intakes, efforts have been made across the region to reduce the intake of SSBs.

French Polynesia, Nauru, Cook Islands, Tonga and Fiji have implemented sales or excise taxes on SSBs to increase the price to the consumer. Many countries in the region have adopted school food policies which intend to limit or ban access to SSBs in schools. Guam also adopted legislation to ensure that healthier foods and beverages were available in all vending machines in schools. Efforts to control advertising and sponsorship of SSBs have been limited to-date in the region, although some school food policies do restrict advertising and sponsorship in schools, school grounds and school vehicles. Efforts around education and awareness raising have shown mixed success in terms of changing behaviour. Greater attention is needed to evaluate the impact of these measures to ensure that actions are effective, and to increase the evidence regionally of the most effective approaches to tackle SSBs.

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Introduction

Pacific Island countries and territories (PICTs) experience some of the highest rates of non-communicable diseases (NCDs) in the world [1] and are the main cause of death across the region [2]. Rates are increasing and placing considerable strain on health systems and productivity,[1] and affecting life expectancies[3]. NCDs have been declared a crisis by government leaders and Ministers of Health have stressed that efforts must be "translated into multisectoral action, capacity-building and investment in NCD prevention and control at the country level." [4,5]

Extensive dietary changes have been occurring in PICTs, with declining reliance on traditional foods and increased reliance on imported and processed foods [6], and these changes mirror the increasing prevalence of NCDs. While other aspects of lifestyle are undoubtedly important contributors to the epidemic of NCDs in the region, diet is likely to be a key factor contributing to the problem, consistent with evidence globally on the impact of diets on the burden of disease [7]. Changes in diet are not only linked with growing problems of obesity, diabetes and related diseases, but also with food security issues [8], micronutrient deficiency and dental caries. Dental caries is a growing problem across the region, especially among children [9] and is associated with poor dietary behaviours, poor dental hygiene and insufficient dental checks [10].

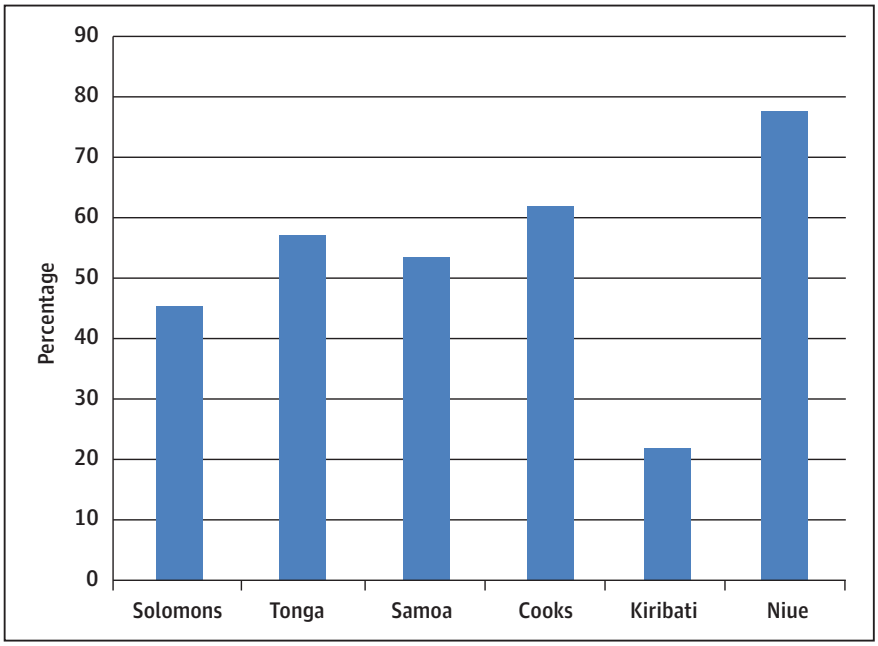
One dietary issue receiving increasing interest both globally and in the region, is the consumption of sugar-sweetened beverages (SSBs). These include carbonated drinks, concentrates and syrups, juice drinks and sweetened milk drinks. Globally, intake levels have been rising [11], and concerns about links with diabetes [12], obesity [13] and other health issues [14] have also been increasing. In this paper data on intakes and availability of these products is briefly reviewed followed by a discussion of approaches employed in the Pacific Islands to limit the consumption of these products. As with all aspects of diet, the inclusion of moderate amounts of SSBs is unlikely to be harmful to health; concern is centred on the levels of consumption, particularly in some population sub-groups [14].

Sugar-sweetened beverage consumption and availability in the Pacific Islands

Data on intake levels of sugar-sweetened beverages in the region is limited, with few nutrition surveys having been undertaken and NCD surveys in the region omitting to collect SSB consumption data. Data on imports is available from some countries, and in those that do not manufacture locally this is a reasonable proxy for intake and has shown high SSB intake levels [15]. Trend data from Fiji 16 indicates that consumption has doubled in the ten years to 2007.

Data on intake of 13-15 year olds from the Global school-based Student Health Survey[17], suggests that frequency of consumption is generally high (figure 1). In one survey in Fiji in a similar age group, they found that around 90% reported consuming SSBs at least four days out of the last five school days, and 70% consumed greater than two glasses on the last school day [18]. In American Samoa boys aged 15-17 years old were found to consume more than 12 servings a week of SSBs [19].

Figure One: Percentage of 13-15 year olds who usually drank soft drinks one or more times daily



Source: CDC Global School-based student health survey [20]

There are many drivers of behaviour [21] including affordability, availability and preference. In a study conducted in Fiji [22, 23, 22, 23, 21, 22], drivers of high consumption of SSBs were assessed to be cost, heavy marketing, high availability in schools and other locations and limited access to safe water in some places [22, 23]. Pacific Island countries and territories have become part of the global marketplace, and are now importing from all parts of the world. Additionally the food industry in the region is growing and a number of countries now have their own beverage manufacturing companies, comprised of both multinationals and locally owned companies. In a survey conducted in five Pacific Island Countries (Fiji, Guam, Nauru, New Caledonia, Samoa) [24], data was collected on processed foods available at major stores in the urban capitals as part of a global collaborative project [25]. Almost 400 different types of SSBs were found, originating from over 20 countries. Just under half however, were manufactured within the region (in Fiji and New Caledonia), and products included concentrates, juice drinks, carbonated drinks and sweetened milks. Consumers are therefore exposed to a considerable variety of SSB options, and the range available is suggestive of high levels of consumption.

Elsewhere studies have found that advertising and promotions of SSBs are high [26], and that advertising does affect preference and behaviour, especially in children and adolescents [27]. In studies conducted on advertising and promotion of foods and drinks in four Pacific Island countries (American Samoa, Fiji, Samoa and Tonga), the advertising of SSBs in Fiji was found to be high [28-30], although less of an issue in the other countries. The Fiji study also found that children were likely to ask for products that they had seen advertised and to want to try them [29, 30].

Efforts to control the consumption of SSBs

Given the scale of the NCD epidemic in the region, and the priority placed on tackling the problem by regional leaders, it is not surprising that many PICTs have been at the forefront of policy-based approaches to improving diets [31]. These have included approaches to alter pricing, access and promotional activities for SSBs [31].

The approach used to alter pricing of SSBs has focused on increased excise (applicable to local and imported products) or import tax, and the number of countries in the region who have chosen to use these continues to grow. Efforts to reduce consumption have not been the sole motive for these taxes, with increased revenue to government also a driver, and in the case of French Polynesia specifically to raise funds for health promotion work [32]. French Polynesia introduced local and import taxes on all sugar-sweetened drinks, confectionaries and ice-cream in 2002. The levels of tax are relatively low and not intended to change behaviour [31]. In 2007, Nauru introduced a large (30%) tax on all high sugary foods and drinks, in part to reduce consumption due to concerns re NCDs, but also to raise revenue. While this should be sufficient to influence behaviour, its impact has not been evaluated, however, it has been suggested that the range of sugar-free beverage options has increased there [33]. The tax in Nauru was also combined with a levy being removed on bottled water [32].

Fiji has introduced and then removed different taxes on SSBs and their ingredients since 2006; recent efforts to increase excise duties on higher-sugar SSBs have not been successful [31]. In 2013, both the Cook Islands [34] and Tonga [35] introduced new duties on SSBs for health reasons, with Tonga using an excise duty of 1 Pa'anga per litre and the Cooks announcing their import duty would increase annually "to maintain the real value of the levy" [34]. Evaluation of the larger taxes will be important to assess how effective this approach is in the region and is being planned.

Concern about SSB consumption has focused particularly on consumption in children, and efforts to limit intake have therefore included special emphasis on schools. School canteen or food guidelines are in use in a number of countries in the region, although enforcement of these has been challenging. Fiji recently released its revised canteen guidelines [36], which indicate that SSBs are part of a 'restricted group' that should be available no more once a week in a school canteen. The previous guidelines which prevented the sale of SSBs were not followed by most schools [37], and extensive calls had been made for their revision and for greater enforcement. A review in the American Pacific (including American Samoa, Commonwealth of the Northern Mariana Islands, Guam, Republic of the Marshall Islands, Federated States of Micronesia and Palau) [38] found that with the exception of Micronesia and Marshalls, all had a school food policy in place. In an assessment in some of these sites in 2007/8 it was found that none of the schools in Palau and Guam had SSBs available for sale, while around 40% of schools in American Samoa did. A number of other countries in the region (including the Cook Islands, Samoa and Tonga) also have school food policies in place, although information on compliance is not publically available.

In 2011, Guam adopted a regulation to ensure the availability of healthier food and beverages in all vending machines in government facilities including schools [39]. This required 50% of the contents of the vending machines to meet specifications for healthy products (this allowed pure fruit juice, water, diet beverages and milk). It also required labels to be affixed to machines indicating the energy and sugar content of each beverage. In an associated measure the Department of Public Health and Social Services implemented a policy that all beverages in vending machines in their buildings would need to meet the healthy criteria.

Efforts to control the advertising of SSBs has been limited in the region, although some of the school food policies in place in the region do include restrictions on advertising of SSBs (and selected other products) in schools, at school events and on dedicated school transport [38]. In the assessment of schools in some of the American Pacific [38], only 20-29% of secondary schools in Palau and the Northern Mariana islands did implement restrictions on advertising, and around half of secondary schools in Guam and American Samoa did.

In Fiji, efforts and calls for regulation of the promotion of unhealthy food and beverages to children [40] have not yet been successful, despite evidence on the extent of the problem [28], [29]. Following efforts by the Ministry of Health and their partners, the key SSB manufacturers in Fiji have signed a memorandum of understanding (unpublished) to increase their range of reduced and no sugar beverages and not to specifically target children under the age of 12 years in their advertising for their SSBs. While the scope of the advertising restriction is quite narrow (allowing advertising to continue during most television programmes, and in events where less than 50% of the audience is under 12 years) it does commit them to not advertise in primary schools.

Additional to these policy-based approaches, have been extensive health education and health promotion initiatives across the region. Unfortunately most of these have not been evaluated, so impact is unknown. In the OPIC study (Obesity Prevention in Communities)[41] in Fiji and Tonga, interventions implemented through secondary schools and associated communities to lower SSB consumption (along with other changes to diet) were largely unsuccessful [42, 43]. A store-based intervention in the Marshall Islands was able to demonstrate reduced purchasing of SSB, along with other positive changes in the diet. [44] At baseline 85.3% of the sample indicated they bought SSBs 1-2 times a week or more, and at follow-up 74.1%, with the largest change seen in those defined as have low education status. The intervention included shelf labels, in-store cooking demonstrations and taste tests, supported by mass media campaigns.

Conclusions

Pacific Island countries and territories are in the grip of a NCD crisis, and efforts to promote healthier diets and lifestyle are critical. Consumption of SSBs, especially among children, appears to be high across the region and this is undoubtedly contributing to the high energy intake that is a key driver of the obesity problem. With high availability, advertising and access to SSBs, high consumption is not surprising. While efforts to reduce intake levels are laudable, greater attention is needed to evaluate the impact of these measures to ensure that dietary improvements are occurring. A pool of locally relevant evidence will be critical to supporting countries in the region with their pursuit of effective interventions.

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