Summary Results Brief

Cost and affordability of healthy, sustainable and equitable diets in the Torres Strait Islands

Why is understanding diet costs important, especially in the Torres Strait Islands?

Poor diet is a leading cause of preventable disease and premature death. Aboriginal and Torres Strait Islander people are at greater risk of diet-related diseases such as diabetes, heart disease, some cancers and kidney disease than other Australians.[1] Many factors affect dietary intake in the Torres Strait Islands, including low incomes, high transport costs, housing issues, and availability, acceptability and accessibility of healthy food and drinks.[1]

Before this study, it was also known that food and drinks in remote Aboriginal and Torres Strait Islander communities were more expensive than in urban areas in Queensland.[1,2] However, the cost of food had been monitored previously using a single basket of 'healthier' food items, that was neither consistent with current dietary guidelines [2,3] nor accurately reflected current diets.[4,5] Therefore there was little information available about differences between the costs and affordability of current (unhealthy) and healthy (recommended) diets.[4] This information is needed to inform policy actions to help improve the affordability of healthy, equitable and sustainable diets in the Torres Strait Islands.[5]

What did this project do?

This project used a new approach – the *Healthy Diets ASAP* (Australian Standardised Affordability and Pricing) protocol.[4,5] We applied the *Healthy Diets ASAP* methods to calculate the cost, relative cost and affordability of current (unhealthy) diets and healthy (recommended) diets, for a family of two adults and two children in the Torres Strait Islands.

The healthy diet contains healthy food and drinks recommended by the Australian Dietary Guidelines.[3] The current diet includes many 'discretionary' items, which are defined as food and drinks that are not a necessary part of a healthy diet and are high in added sugars, saturated fat, salt and/or alcohol.[4] The recommended diet is healthier, more equitable and environmentally sustainable, but similar in energy content, to the current diet.[4]

Food prices were collected in stores in five island communities by a trained nutritionist from October 2019 to February 2020. Household income data was calculated based on the *Healthy Diet ASAP* protocol.[4] When healthy diets cost more than 25% of household income, families suffer 'food stress',[6] and healthy diets are not affordable when they cost more than 30% of household income.[4] Results were compared with available data from other places in Queensland.

What did we find?

Diet cost

Detailed data are included in Table 1 in the Appendix. For a family of four in the Torres Strait Islands, on average the current (unhealthy) diet cost $1033.25 per fortnight (Figure 1). A healthy diet would cost $868.21 a fortnight, which is a saving of 17% ($165). The cost of current and healthy diets varies throughout the Torres Strait Islands (Figure 1).

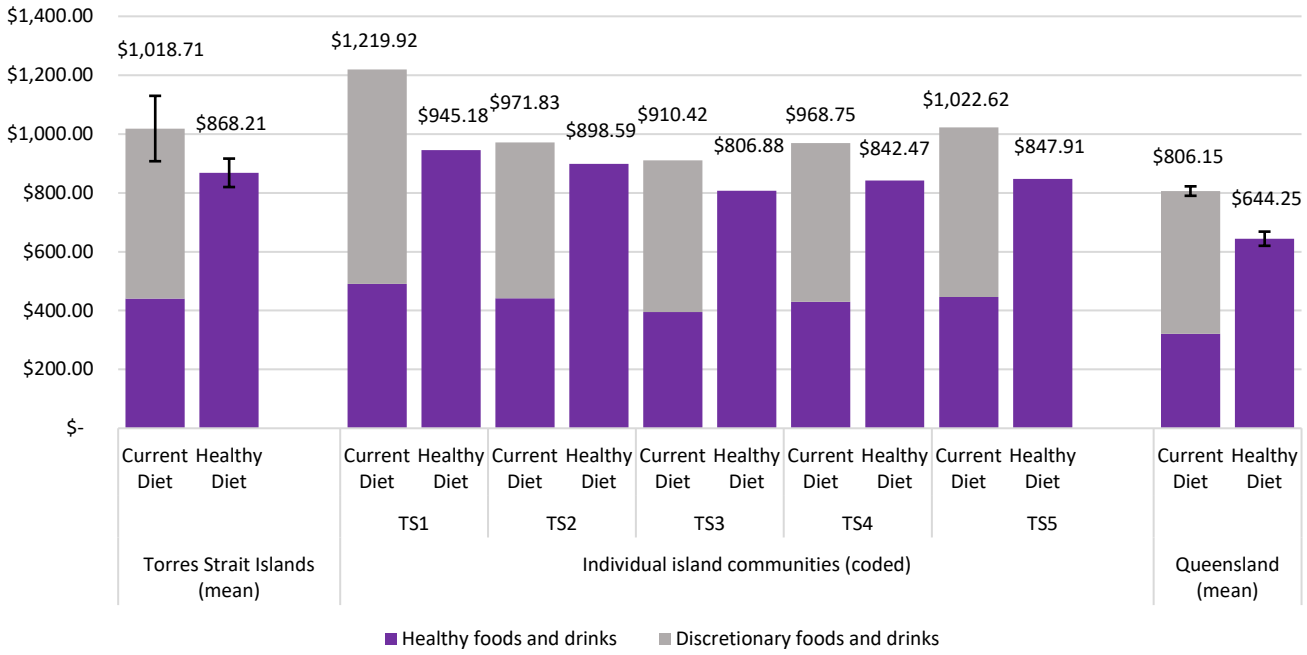

Figure 1 The costs of current and healthy diets in the Torres Strait Islands and Queensland more broadly, for the reference household per fortnight. (Error bars indicate the standard error.)

The current (unhealthy) diet for the family was more expensive in the Torres Strait Islands than most other areas of Queensland; on average costing 26% ($212.56) more per fortnight, and 32% ($246.50) more per fortnight than in Brisbane. The current diet also cost 26% ($209.27) more per fortnight than in similar socioeconomic areas of the state.

A healthy diet would be much more expensive in the Torres Strait Islands than in other areas of Queensland; per fortnight it would cost families 35% ($223.95) more than average, 40% ($249.17/fortnight) more than in Brisbane, 32% ($210) more than in similar socioeconomic areas, and 7% ($55.03) more than in other very remote areas of the state.

Food stress and affordability

Detailed data are included in Table 2 in the Appendix. The median household income per fortnight in the Torres Strait was $2,722. This is 10% ($289) less than the Queensland average, and 15% ($466) less than the median household income in urban areas. The low indicative working household income in the Torres Strait was $2,434 per fortnight, and the income of households on welfare only was $1,801 per fortnight.

To purchase a healthy diet, Torres Strait Islander families on median household income would spend 32% of their income, those on low indicative income would spend 36%, and those on welfare income only would spend 48%. Therefore, healthy diets are not affordable for most families in the Torres Strait Islands.

For families with median income, indicative low income, and welfare income only, the healthy diet would be 9%, 9% and 11% less affordable respectively in the Torres Strait Islands than other places in Queensland (Figure 2).

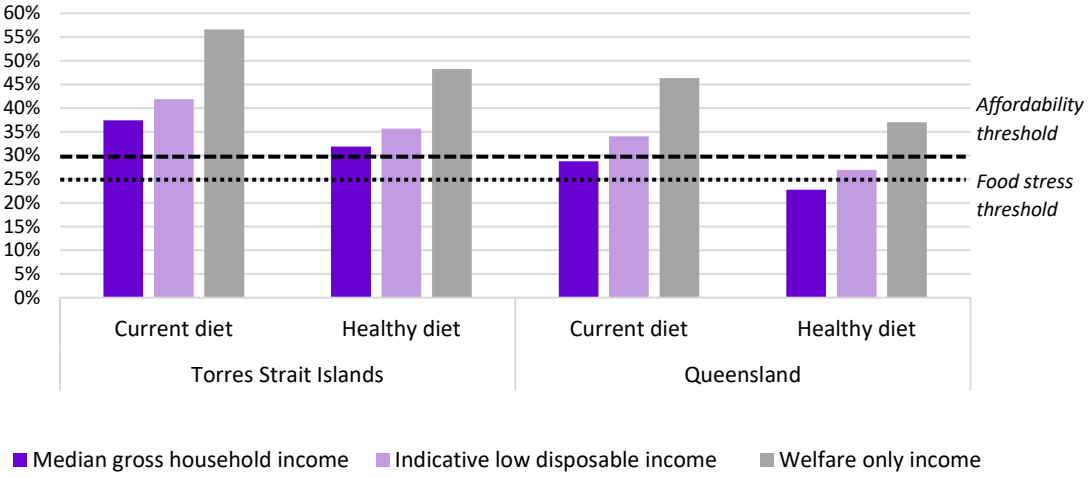

Figure 2 The affordability of current and healthy diets in households in the Torres Strait Islands and Queensland more broadly.

Why does this matter?

The life expectancy of Aboriginal and Torres Strait Islander people is 10 years less than other Australians.[1] The current Torres Strait Islander diet increases risk of obesity and diet-related diseases such as type 2 diabetes, cardiovascular disease, some cancers and renal disease, and contributes to a high number of premature deaths.[1] More than 40% of the daily energy intake of Aboriginal and Torres Strait Islander people comes from unhealthy, 'discretionary' food and drinks, compared to 35% in the non-Indigenous population in Australia.[1]

This research provides more information to support urgent policy actions to help shift the diet of the Torres Strait Islander people towards the relevant recommendations of the Australian Dietary Guidelines[3] which are:

- Enjoy traditional foods whenever possible, and
- Choose store foods which are most like traditional foods.

How can we improve affordability of healthy diets in the Torres Strait Islands?

These results show that more needs to be done in the Torres Strait Islands to both increase household incomes and reduce the high cost of healthy foods and drinks, to help improve nutrition and health outcomes.

In 2020, with the increased income of welfare dependent families due to the coronavirus economic support package including JobSeeker, purchasing a healthy diet became 29% more affordable in Queensland than previously.[7] In addition to provision of subsidies to families, funding of community stores as essential services and subsidising freight of healthy foods can increase the affordability of healthy diets.[8]

Community-led, multi-strategy programs involving both supply (availability, affordability, accessibility and acceptability) of healthy food and drinks, and demand side measures, such as advertising, promotion and food-literacy programs building on traditional knowledge, can improve nutrition in Indigenous communities[8] and should be implemented as a priority in the Torres Strait Islands.

Acknowledgements

Collection of food prices was funded by Queensland Health. Analysis was supported by the NHMRC Centre of Research Excellence in Food Retail Environments for Health (RE-FRESH) (APP1152968). Funding was provided also from the Australian Government's Medical Research Future Fund (MRFF). MRFF funding has been provided through The Australian Prevention Partnership Centre under the MRFF Boosting Preventive Health Research Program. Further information on the MRFF is available at www.health.gov.au/mrff

Suggested citation: Summons S, Lewis M, Patay D, Nona F, Herron L, Ferguson M, Canuto C, Lee A. Cost and affordability of healthy, sustainable and equitable diets in the Torres Strait Islands. School of Public Health, Faculty of Medicine, University of Queensland, 2020.

Further information about this study is available from Professor Amanda Lee: Amanda.Lee@uq.edu.au

References

1. Lee A, Ride K. Review of nutrition among Aboriginal and Torres Strait Islander people. *Australian Indigenous Health Bulletin*. 2018;18(1).

2. Queensland Health. *The 2014 Healthy Food Access Basket (HFAB) Survey*. Queensland Government; 2015. https://www.health.qld.gov.au/research-reports/reports/public-health/food-nutrition/access/overview

3. National Health and Medical Research Council (NHMRC). *Australian Dietary Guidelines. Providing the Scientific Evidence for Healthier Australian Diets*.; 2013.

4. Lee AJ, Kane S, Lewis M, et al. Healthy diets ASAP – Australian Standardised Affordability and Pricing methods protocol. *Nutrition Journal*. 2018;17(1). doi:10.1186/s12937-018-0396-0

5. Lee A, Lewis M. Testing the Price of Healthy and Current Diets in Remote Aboriginal Communities to Improve Food Security: Development of the Aboriginal and Torres Strait Islander Healthy Diets ASAP (Australian Standardised Affordability and Pricing) Methods. *International Journal of Environmental Research and Public Health*. 2018;15(12):2912. doi:10.3390/ijerph15122912

6. Landrigan TJ, Kerr DA, Dhaliwal SS, Pollard CM. Protocol for the Development of a Food Stress Index to Identify Households Most at Risk of Food Insecurity in Western Australia. *International journal of environmental research and public health*. 2018;16(1):79. doi:10.3390/ijerph16010079

7. Lewis M, Lee AJ. Affording health during the COVID-19 pandemic and associated economic downturn. *Australian and New Zealand Journal of Public Health*. Published online October 12, 2020. doi:10.1111/1753-6405.13045

8. Lee A, Ride K. Review of programs and services to improve Aboriginal and Torres Strait Islander nutrition and food security. *Australian Indigenous Health Bulletin.* 2018;18(4):24.

Photo credit: Garry Killian at freepik.com

Appendix

Table 1 Detailed diet cost in the Torres Strait Islands and in Queensland more broadly (for a reference household per fortnight)

Food/food groups	TORRES STRAIT ISLANDS				QUEENSLAND			
	HEALTHY DIET		CURRENT DIET		HEALTHY DIET		CURRENT DIET	
	Mean cost ±SD($)	Prop of total cost (%)	Mean cost ±SD($)	Prop of total cost (%)	Mean cost ±SD($)	Prop of total cost (%)	Mean cost ±SD($)	Prop of total cost (%)
Water, bottled	12.68±4.71	1.49%	12.68±4.71	1.27%	18.14±3.96	2.82%	18.14±3.96	2.25%
Fruit	115.96±20.95	13.28%	84.83±20.67	8.22%	79.66±12.64	12.37%	56.05±6.13	6.95%
Vegetables (& legumes)	151.29±15.23	17.39%	61.09±4.96	6.02%	111.82±8.12	17.36%	43.73±3.79	5.42%
Grain (cereal) foods	172.11±16.88	19.78%	67.64±3.79	6.68%	112.8±12.43	17.51%	45.52±5.6	5.65%
Meats, poultry, fish, eggs, nuts, seeds & alternatives	257.67±15.91	29.77%	130.02±12.03	12.88%	194.82±24.42	30.24%	100.35±10.62	12.45%
Milk, yoghurt, cheese & alternatives	145.19±7.5	16.74%	72.84±4.17	7.20%	118.31±18.57	18.36%	50.49±7.23	6.26%
Unsaturated oils and spreads	13.31±0.95	1.54%	1.71±0.17	0.17%	8.69±1.41	1.35%	1.28±0.17	0.16%
Artificially sweetened beverages	-	-	10.19±0.68	1.01%	-	-	5.99±1.22	0.74%
Sugar sweetened beverages	-	-	52.37±3.92	5.18%	-	-	31.96±5.91	3.96%
Takeaway foods	-	-	211.33±15.31	20.84%	-	-	160.37±33.18	19.89%
Alcoholic beverages	-	-	-	-	-	-	96.56±6.63	0.11978147
All other discretionary choices	-	-	314.01±65.98	30.54%	-	-	195.71±41.5	24.28%
TOTAL	**868.21±48.34**	100.00%	**1018.71±106.7**	100.00%	**644.25±66.28**	100.00%	**806.15±99.34**	100.00%
Healthy foods and drinks	-	-	441±30.76	43.44%	-	-	321.55±29.16	39.89%
Discretionary foods and drinks	-	-	577.71±78.2	56.56%	-	-	484.6±71.93	60.11%

Table 2 Detailed diet affordability in the Torres Strait Islands and in Queensland more broadly (for a reference household)

Location	TORRES STRAIT ISLANDS			QUEENSLAND		
	Income per fortnight ($)	Healthy diet affordability (% of income)	Current diet affordability (% of income)	Income per fortnight ($)	Healthy diet affordability (% of income)	Current diet affordability (% of income)
Median gross household income	$2,722.42	**32%**	**37%**	$3,011.55	**21%**	**27%**
Indicative low disposable household income	$2,434.12	**36%**	**42%**	$2,358.33	**27%**	**34%**
Welfare only household income	$1,800.72	**48%**	**57%**	$1,739.68	**46%**	**37%**