



Front-of-pack nutrition labels improve understanding but don't improve healthy food choices; Starlight Trial just published

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Health Star Rating and Traffic Light nutrition labels have a minor impact on New Zealand consumer healthy food choices, according to [a randomised trial](#) just published from our HRC-funded DIET Programme based at the University of Auckland. This is important evidence for policy. We had expected that these simple, visual front of package labels would have more effect on healthy food purchasing choices, but the contrary findings are

why randomised trials are important. In this blog we discuss our findings, strengths and weaknesses of the study, and implications of the results.

The study involved 1357 New Zealand shoppers split into three groups of about 450 each and randomly allocated to one of three labels: Traffic Light labels, Health Star Rating labels, or Nutrition Information Panels. Participants used their smartphones to scan food products in supermarkets to 'see' the allocated nutrition labels.

Figure 1: The three labels study participants were randomised to: traffic light labels, health star rating and nutrition information

Each serve (125 g) contains

| | | | | |
|------------------|--------------|------------------|------------------|---------------|
| Energy 476 kJ | Fat 3.6 g | Sat Fat 2.4 g | Sugars 12.8 g | Salt 0.1 g |
| 5.0 % | 5.0 % | 10.0 % | 14.0 % | 2.0 % |

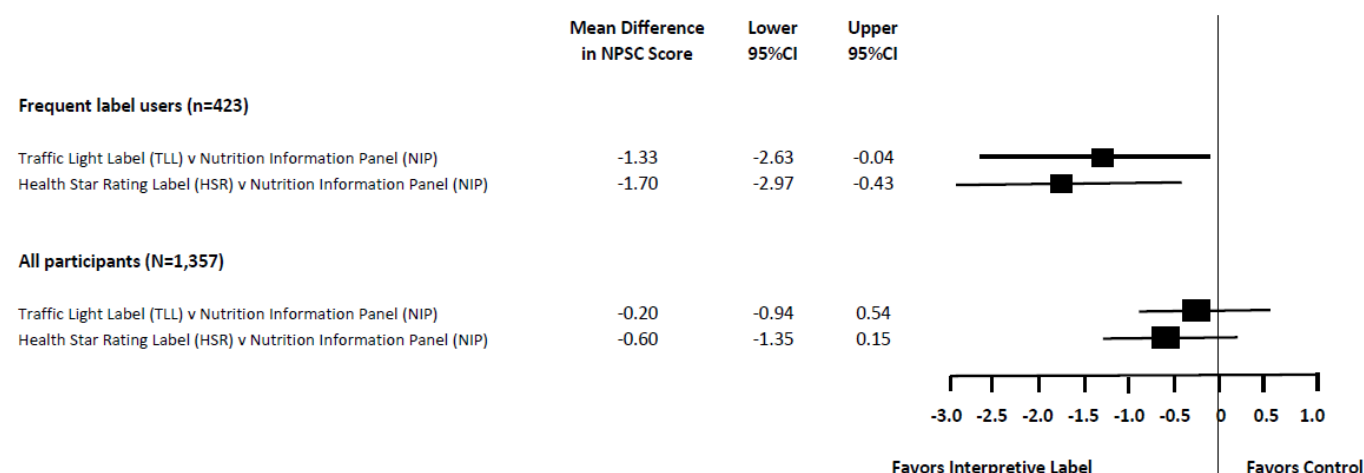
of an adult's daily intake



| NUTRITION INFORMATION | | |
|------------------------------------|------------------------------|-----------------------------|
| Serving per package: not available | | |
| Serving size: 200 mL | | |
| | Ave. Quantity Per Serving | Ave. Quantity Per 100 mL |
| Energy | 360 kJ (86 kcal) | 180 kJ (43 kcal) |
| Protein | 0.0 g | 0.0 g |
| Fat - total | 0.0 g | 0.0 g |
| - saturated | 0.0 g | 0.0 g |
| Carbohydrate | 21.2 g | 10.6 g |
| - sugars | 21.2 g | 10.6 g |
| Sodium | 20 mg | 10 mg |

The study concluded that labels which interpret healthiness such as Traffic Light labels (TLL) and Health Star Rating (HSR) labels, had little impact on food purchases among study participants, compared with the traditional Nutrition Information Panel label, although they appear useful for a subgroup of people who use labels a lot.

Figure 2: Forest plot of Starlight trial results. Top panel is for the frequent users of smart phones (to frequently view labels) and shows significant improvements in healthiness of food. But the bottom panel, for all participants (i.e. as per planned analysis) shows no significant effect of either TLL or HSR (i.e. the error bars cross the vertical line at '0' effect)



Why these results?

We highlight three potential reasons for these findings. First, there may be genuinely no effect of FOPL or HSR on consumer choice. Second, the study sample was largely made up of people who were already very health conscious – with little room to improve. Third, whilst we think our study design was innovative in randomising study participants to use smartphones to ‘mimic’ front of package labels, it was not actually a randomisation of actual labels on supermarket shelves – that was simply impossible in the real world.

However, a ‘positive’ finding of the study was that those using the interpretive labels found them significantly more useful and easier to understand than those using the Nutrition Information Panels. Moreover, within the people randomised to the HSR or TFL labels, those study participants more frequently using their smartphone to see what label a food item got had significantly healthier food purchases than frequent users of current Nutrition Information Panels. This is both encouraging and interesting, but it is also a post-hoc analysis – so it is less reliable than the main study results.

Our study did not, and could not, assess how the food industry reformulates food in response to front-of-pack labelling. We strongly suspect – and there is parallel evidence ([here](#) and [here](#)) – that this will be the major mode of impact of HSR or TLL. That is, whilst our research suggests the current HSR will have only a minor impact on the food consumption of New Zealanders – the (big) impact is likely to be by food industry reformulation of packaged foods to have ‘better’ HSR scores.

What next?

There is a need for robust independent evaluation of food industry uptake and reformulation practices in response to the HSR system being rolled out in Australia and New Zealand. In the meantime, policy-makers should explore other routes to improving the nutritional environment in NZ to reduce the burden of and chronic diseases.

Examples include:

- Banning junk food advertising directed at children.
- [Completing the phase-out of sugary drinks in NZ schools and extending to hospitals.](#)
- [Taxing sugar-sweetened beverages is about to start in the UK](#) (with the funds used for promoting sport in schools).
- Considering options for reducing the dietary salt intake of NZ (we have modelled 32 different interventions – nearly all of which are cost-saving (1-3)).

References

1. Nghiem, N., et al., Health and economic impacts of eight different dietary salt reduction interventions. PLoS One, 2015. 10(4): p. e0123915.
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