June 2020

SUMMARY OF QUALITATIVE FINDINGS ON NUTRITION LABEL DESIGNS FOR BEVERAGES

SUMMARY

CAVEAT: QUALITATIVE STUDY

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INTRODUCTION

1. Diabetes, among the non-communicable diseases, poses a major challenge to Singapore. In 2017, Singapore had the highest prevalence of people living with diabetes among high-income countries[1]. If nothing is done, the number of Singaporeans living with diabetes is projected to reach one million by 2050[2]. To address this rising trend, Singapore declared a "War on Diabetes" in 2016 to rally the entire nation to tackle diabetes.

2. A key risk factor of diabetes in Singapore is high intake of sugar, particularly from beverages. For this reason, the Ministry of Health (MOH) and Health Promotion Board (HPB) conducted a public consultation from December 2018 to January 2019 on possible measures to help Singaporeans reduce their sugar intake from pre-packaged beverages. After careful consideration of the feedback received and the available local and overseas evidence, the Singapore Government announced in October 2019 that it will be introducing two measures: mandatory nutrition labels, and advertising prohibitions on certain beverages. Both measures are intended to operate alongside other promotional and educational efforts by the Government to encourage Singaporeans to adopt a healthier lifestyle, including a healthier diet with less sugar.

3. The objectives of the nutrition label, as announced by the MOH and HPB, are to help consumers identify less healthy beverages[3] with higher amounts of nutrients of concern such as sugar and make more informed, healthier choices, as well as to encourage manufacturers to reformulate beverage products. This nutrition label would be applied to the Front-of-Pack (FOP) surfaces of beverages, among other settings. Under the labelling measure, beverages will be assigned a summary grade based on a set of nutrition thresholds including sugar content.

4. As part of the implementation of the nutrition label, the HPB commissioned Consulting Group – Asia Insight Pte Ltd to carry out a qualitative study to better understand public perceptions towards various possible design options for a FOP nutrition label for beverages. The aims of the study were to determine which label design(s) best captures consumers' attention and is most easily understood by consumers.

5. The research study consists of 6 key areas of investigation:
   - Determining the most appropriate **name for the label**, given its stated objectives above
   - Identifying the **type of scale** for the nutrient thresholds that would be the easiest for consumers to understand
   - Establishing which **colour scheme** would best capture consumers' attention and be the easiest to understand

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[1] International Diabetes Federation (2017) *IDF Diabetes Atlas, 8th edn.* Brussels, Belgium: International Diabetes Federation.
[2] Based on a 2014 study by Saw Swee Hock School of Public Health, National University of Singapore.
[3] In this summary, "less healthy" products/beverages refer to products/beverages with higher amounts of nutrients of concern like sugar. Conversely, "healthier" products/beverages refer to products/beverages with lower amounts of nutrients of concern like sugar.

- Identifying which **shape** and **design** would best capture consumers' attention and be the easiest to understand
- Finding the most understandable way of declaring **sugar information** relating to a beverage as part of the FOP nutrition label
- Determining the **minimum label size** necessary to ensure that the label can be read and understood by consumers

6. Qualitative research in the form of Focus Group Discussions (FGDs) was conducted to answer the above research questions. Qualitative research was selected for this study to develop an in-depth understanding of the perceptions and attitudes towards the various design options of the labels, and what consumers associated each feature with. 12 FGDs were conducted among 114 Singapore Citizens or Permanent Residents who regularly purchase pre-packaged sugar-sweetened beverages (SSBs)[4], across different genders, age groups[5], ethnic composition, and educational levels.

[4] i.e. purchased at least once within the past 4 weeks from the date of screening for recruitment, either for oneself or for others.
[5] Above 18 years old

SUMMARY OF FINDINGS

Name of label

7. Four options for the name of the label were tested: “Nutri-Grade”, “Nutri-Mark”, “Health Grade”, and “Health Mark”.

8. **The majority of participants preferred the name “Health Grade”, followed by “Nutri-Grade”.** Participants who preferred “Health” over “Nutri” in the name felt the term “Health” was easier to understand. They could also relate “Health” to references such as the Health Promotion Board and Healthier Choice Symbol. In contrast, the participants who preferred “Nutri” over “Health” felt that the term “Nutri” was more specific in reflecting that the label takes into consideration the nutrients in a drink, and could be more precise than “Health”, which was a broader term covering physical activity, healthcare and medical issues. Some participants also felt the term “Health” in the name of the label could lead to some consumers considering that any product with the label was healthy (i.e. even poorly graded products).

9. The term “Grade” garnered a stronger liking among participants than “Mark”, mainly because participants could identify with the term, which is also used in other contexts such as examination grades. In addition, “Grade” implied a range rather than an absolute figure as implied by “Mark”, which made the former seem more aligned with the proposed label, which is based on a grading scale.

Type of scale

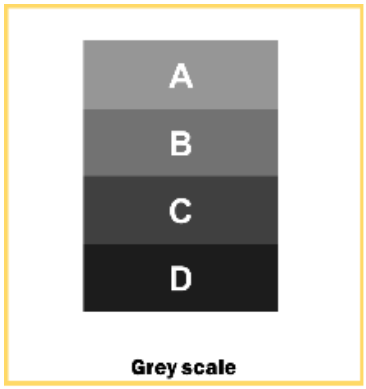
10. Three options for the type of scale were tested: A/B/C/D, 1/2/3/4 and 4/3/2/1.

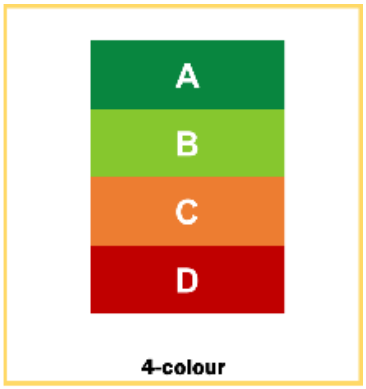
11. **All groups of participants unanimously preferred A/B/C/D, as opposed to 1/2/3/4 or 4/3/2/1.** They felt that it was the most intuitive, with parallels to other commonly used scales in their daily lives. Examples cited for this included examination grades, Singapore Food Agency’s Grading System for Eating Establishments and banks’ credit ratings, where A consistently represented the best grade and D, the worst. In contrast, 1/2/3/4 and 4/3/2/1 seemed less appealing, mainly due to the potential confusion that could arise as to whether 1 or 4 represented the best grade. For example, 1 could represent the best grade in scenarios like sports ranking (1st prize goes to the best athlete) and pain scale (1 indicated the mildest pain); whereas the biggest number could represent the best grade in other scenarios such as the National Environment Agency’s Energy Label (more ticks meant the device was more energy-efficient), and hotel star ratings.

12. A small minority of participants initially preferred a numerical scale, as it was unique (i.e. not commonly used) and inclusive (i.e. can be understood by all regardless of spoken language). However, after discussion with the rest of their groups they acknowledged that A/B/C/D would be more appropriate for the label as it was less likely to mislead consumers.

Colour

13. Two options for the colour scheme of the label were tested: grey scale and 4-colour (see images below).



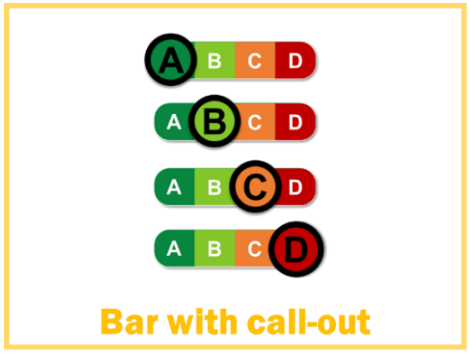


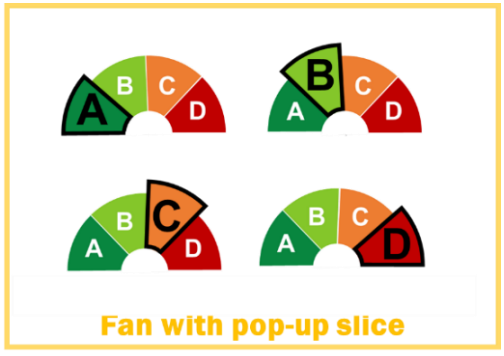
14. When asked about which option caught their attention more, almost all participants selected the 4-colour option, as the colours were brighter, more vibrant and thus more striking (eye-catching). In contrast, the grey scale was largely perceived as dull and boring**.**

15. **When asked about which option would be more appropriate to reflect a spectrum of most healthy to least healthy products, participants across all groups unanimously chose the 4-colour over the grey-scale option**. The colours in the 4-colour option resonated well with participants and could further achieve the label's intended purpose of encouraging consumption of the 'healthier' Grade A and discouraging consumption of the 'less healthy' Grade D. For example, a red Grade D was associated with words such as "danger", "stop", and a green Grade A was associated with "go", "safe", and "healthy". Many participants associated the colours with traffic lights. On the other hand, the grey-scale option was perceived to be not as appropriate to convey a spectrum of most to least healthy products. This was because, while participants agreed that black (the darkest shade in the grey-scale option) was able to convey that a grade D drink was unhealthy, the lighter grey Grade A did not appear to be healthy as it was associated with negative ideas such as dullness, age and lifelessness.

Shape

16. Two options for the shape of the label were tested: a bar with call-out for the beverage's grade (bar), and a fan with a pop-up slice for the beverage's grade (fan) (see images below).



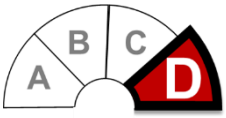
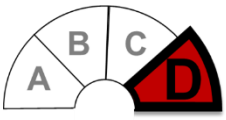


17. There were mixed views about whether the bar or fan was more noticeable. The bar struck the participants as a shape they could identify with easily and participants felt it was simpler and clearer. On the other hand, the fan stood out for being unique as it was not commonly used or seen in labelling schemes or everyday life.

18. Nevertheless, **it was the bar that fared better in terms of being easier to understand (even among participants who felt that the fan was more noticeable).** Key reasons included the simpler layout and linear alignment of grades, which participants found easier to read and understand due to their natural tendency to read from left to right. In contrast, the fan was perceived to be more difficult to understand and less intuitive, as many were not accustomed to reading things in a curved manner. Some participants also expressed that this might cause confusion among consumers who drive vehicles, as they may be more accustomed to the right-most position being the best scenario (e.g. full petrol tank), whereas in the label it would be reversed.

Design

19. Four options for the label design were tested across two matrices: full-colour or outline, and white or black font colour (see images below). Whether the participants saw the bar or fan options depended on their preferences in the previous section of the study on the shape of the label.

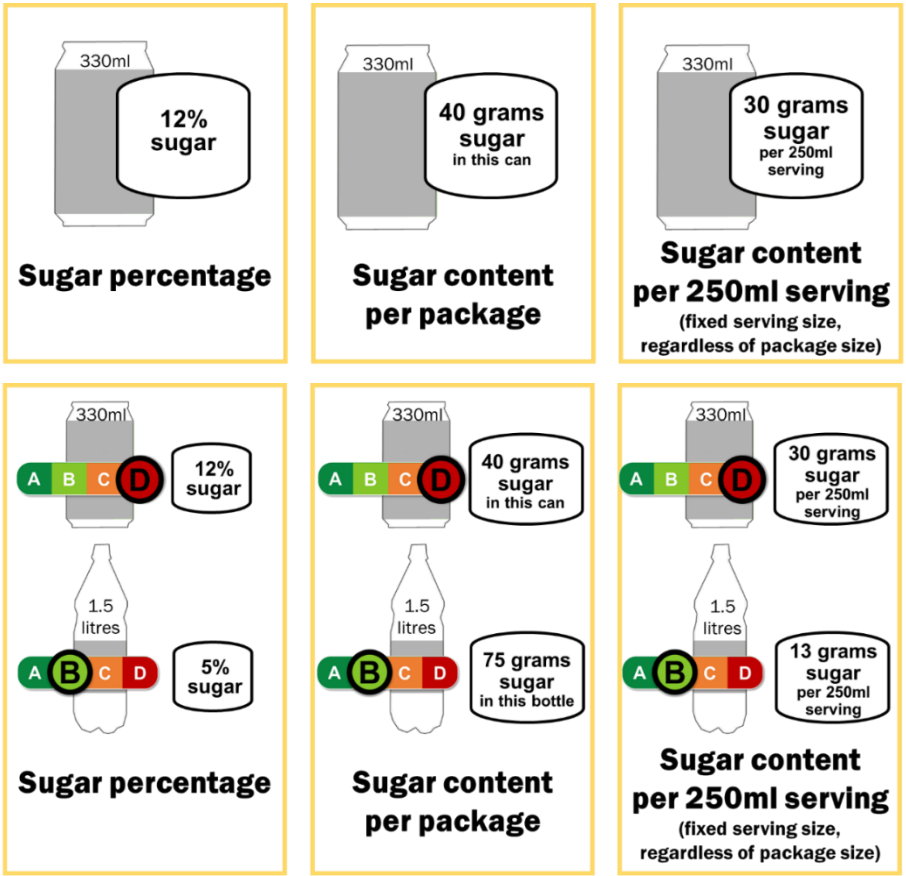
	Bar		**Fan**	
	Full colour	**Outline**	**Full colour**	**Outline**
White font				
Black font				

20. **The majority of participants expressed that the full-colour option was more noticeable than the outline option**. The key reason cited by participants was that the colours were attractive and made the label easily noticeable from a distance. There was also greater contrast between the grades, which could help consumers to identify the grade without relying on the letters. In comparison, the minority of participants who preferred the outline option stated that the label would stand out more when carried on already-colourful drink packets.

21. **Almost all participants felt that the white font was more noticeable than the black font (for the alphabet of the product's particular grade).** The main reason was the white font was perceived to have greater contrast with the red Grade D, than the black font, which made the "D" letter more visible and easier to read from afar. There were some comments from a minority that the white font may be less visible on lighter colours (e.g. light green, orange).

Sugar declaration as part of the FOP nutrition label

22. Participants felt that a simple label on the front of product packaging, such as the Healthier Choice Symbol, was a good complement to the back-of-pack Nutrition Information Panel by highlighting key nutrients such as sugar. Therefore, three options for declaring sugar information as part of the FOP nutrition label were tested. These were: "sugar percentage" (reflects the concentration of sugar in a beverage of any given volume), "sugar content per package" (reflects the absolute sugar content in a package) or "sugar content per 250ml serving" (reflects absolute sugar content in 250ml of beverage). Participants were shown two visual illustrations showing how the three options could appear on FOP labels: first across products of the same pack size, and second alongside the grade across two types of products of different grade, sugar concentration and pack size.[6]



[6] The second illustration was based on the premise that the grades would be based on the concentration of the relevant nutrients in the beverage, having regard to the applicable nutrient thresholds in the grading system, similar to the practice in other countries.

23. **The number of participants who preferred the "sugar percentage" and "sugar content per package" options was similar.**

24. Participants who preferred the "sugar percentage" option felt it was more straightforward and allowed quick comparisons across products of different pack sizes. Among this group, most had limited knowledge of the recommended daily allowance for sugar, and thus could not appreciate information on the total sugar content of products. A small number of participants related "sugar percentage" to the percentage of recommended daily allowance or the sugar percentage options offered by bubble tea stores where consumers had to choose the sugar level between 0 and 100%.

25. Participants who preferred the "sugar content per package" option felt it allowed them to know the exact amount of sugar in the entire package (e.g. bottle, can) without having to do calculations. These were mainly participants who had knowledge of the recommended daily allowance of sugar intake per day and wanted to track their intake levels against recommendations. Some participants felt that such labelling may not be meaningful in certain circumstances, especially for larger packs that are not frequently consumed within a single sitting. Such labelling could also be potentially confusing as larger packs could receive a better grade but have a higher sugar content per package compared to another drink with a smaller pack size (see second visual illustration above).

26. The "sugar content per 250ml serving" option was the least popular among the participants, as it was seen as more troublesome and required calculation to know the exact sugar level in the package. Participants also displayed misunderstandings of what "sugar content per 250ml serving" referred to. One interpretation was that only the first 250ml of beverage contained sugar while the remaining volume did not.

27. **For sugar declarations set out in terms of absolute sugar content, participants generally preferred teaspoons as the unit of measurement, over grams.** Participants felt it was easier to visualise sugar in terms of teaspoons given its prevalent use in daily lives (e.g. adding sugar to their homemade hot coffee or tea). In contrast, those who preferred grams preferred to have information on the precise amount of sugar in a drink and felt that teaspoons were less precise (e.g. could be heaped or flat). Regardless of preference, most participants understood that "g" referred to grams and "tsp" was teaspoon when asked.

Size of label

28. Four options for the minimum label size were tested, with the smallest label size calculated based on the minimum size required for the Nutri-Score label in France. Participants were shown label mock-ups on either cans or bottles, from an arm's length distance.

29. **Across all demographic profiles, participants were able to see and read the grades on the smallest-sized labels, when viewing from an arm's length distance** A handful of participants had difficulty reading the sugar values for certain numbers with curves (e.g. 5, 6, 8). This was especially so when label mock-ups were applied on cans, as opposed to bottles,

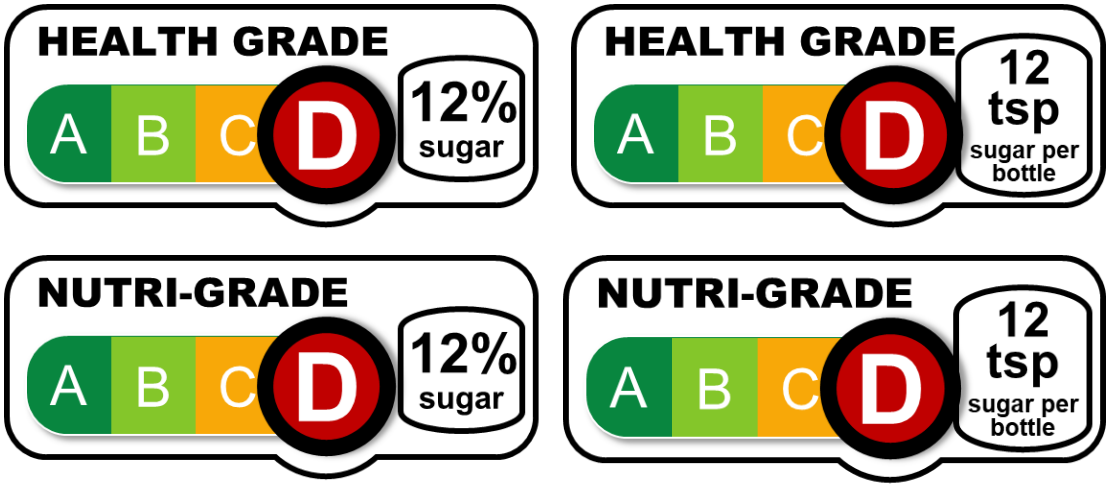
as the label was smaller in terms of absolute dimensions, even though it occupied the same proportion of the FOP area as the labels on bottles.

Conclusion

30. In summary, this qualitative study suggests that consumers of SSBs in Singapore tend to prefer a FOP nutrition label that:

a) Is called “Health Grade”, followed by “Nutri Grade”;
b) Grades beverages from A to D;
c) Is colour-coded with 4 colours from green to red;
d) Has a linear bar-shape;
e) Is in full-colour, with white font;
f) Declares sugar, either in terms of sugar percentage or teaspoons per package; and
g) Has a minimum size, similar to that used for the Nutri-Score label in France.

31. This could look roughly like one of the following:



32. These findings indicate that a label with the above features would be easily noticed and understood among local consumers. According to the World Cancer Research Fund, a label that is easy to access, understand and use, such as that proposed above, could contribute towards helping consumers identify the less healthy beverage options and make more informed purchasing and consumption decisions[7].

33. The findings from this study reflect the views and preferences of the participants with respect to their preferred label design, under controlled focus group settings. The study does not set out to study the impact of such a label on actual purchasing and consumption patterns, which may be influenced by other factors such as price, taste, and convenience.

34. To ensure the successful implementation of the label, participants also suggested that public education would be key. For example, regardless of the option selected for the sugar

[7] World Cancer Research Fund International (2019) *Building momentum: lessons on implementing a robust front-of-pack food label.* Available at wcrf.org/frontofpack

declaration, there may be some groups of consumers who have more difficulty understanding the information. Public education campaigns could help to mitigate these issues, and could further encourage consumers to read the labels to help them make more informed, healthier choices. In addition, participants added in their concluding remarks that they would like the Government to share the grading criteria underlying the label with the public, including the nutrients taken into consideration and the nutrient thresholds for each grade. Some participants also said that the Government should increase educational efforts on the recommended daily intake of sugar.