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# Labelling for Good: A Descriptive Study of Nutritional Label Format and Design to Help Consumers Make Better-Informed Choices

1st Pouline Koh Chai Lin, 2nd Zainurul A.A. Rahman (Ph.D)

<sup>1st</sup> author: KDU University College, Selangor, Malaysia, <u>clkoh@kdu.edu.my</u>
<sup>2nd</sup> author: School of the Arts, Universiti Sains Malaysia, Penang, Malaysia,
<u>zainurulrahman@usm.my</u>

### **ABSTRACT**

Nutritional labels are commonly used on food packaging in Malaysia, but currently the standard format of nutritional label design in Malaysia are not defined to help better inform the consumers. The lack of format determinants used by manufacturers was barely discussed. A very small number of studies were done in the area of information design in Malaysia on the consistencies in the format of nutritional label. This paper aims to explore the aesthetic value and design attention as the prime commodities of a nutritional label to meaningfully convey about what is consumed to keep the consumers better informed. This paper will look at the nutritional label format and design on packaged food available in the Malaysian hypermarkets, and provide discussion of the new insights for better visual representation through information design. It will draw on the descriptive studies of nutritional label format and design that encompasses the existing format used on imported and local packaged food, which can be found in Malaysian hypermarkets. The findings will be supported and addressed with qualitative approach to provide rich information.

**Key Words:** Nutritional Labels, food packaging design, information design, design for social change, Malaysia design.

# 1. Introduction

Strolling down the hypermarket aisles in Malaysia, consumers are awash in a sea of product information. Boxes, bags and cans made of cardboard, plastic or metal (with paper label wrap) are stained with rainbow of colours intended to grab the attention of the consumers. There is however an extended zone of nutrition information that almost leaps out at the consumers due to its contrast with that colourful information on food packages. This extended zone mostly austere in its white-on-black table format and science vocabulary summarizes the ingredients, nutrition facts or strategies to incorporate the product into a daily balanced diet. It is here that the consumers discover the conspicuously and inconspicuous information panel which is known as Nutrition Facts or Nutritional Label. It is a description intends to inform the consumers of the nutrient content of a food (MOH, 2007)

and assists them in making knowledgeable decisions about the food they purchase. Hence, nutritional label is seen as a diet-related health tools, consequently an important aspect of consumers' food purchase decision.

Although nutritional labels are highly applied across packaged food in Malaysia, it was found in the recent survey conducted in Malaysia that only 36% of Malaysian consumers look for, read and understood nutritional information in nutritional label in the buying process (2012). In some areas of Malaysia, there are 19.3% of consumers who do not read nutrition labels, as they are not aware of the nutrition facts label that appears at the back or side of the packaging (Feunekes, G.I., Gortemaker, I.A., Willems, A.A., Lion R. and Kommer, M.V.D., 2008). As such, the current standard format is not defined to help better inform consumers. The lack of format determinants used by manufacturers was also barely discussed. This has often left consumers unaware of what is consumed and notably contradicts with the 11<sup>th</sup> Malaysian Plan to achieving one of the six strategic thrusts by improving the well being of the nation where people value health as an everyday practice.

Furthermore, there has been little in-depth design project with the goal of finding a well-informed nutritional label for the Malaysian market. Various forms of labels are instead independently used, revised and improved through various qualitative and quantitative studies using testing materials with different levels of graphic quality. Some early studies even suggested that numerical formats were superior to diagrammatic displays, while other studies have proven the opposite (Synovate, 2005b). Consequently, design and the presentation of information on nutritional label could draw a significant change towards making a more conducive environment of well-informed choices. In particular, more emphasis of design to be put onto nutrition label can help consumers assess the contribution of food to the overall healthy eating practice.

# 2. Problem Statements

Nutrition facts label serves as an easy tool for making quick, informed food choices that contribute to healthy diet (MOH; FDA, 2013). Most empirical research suggests that provision and use of information on nutrition facts label can significantly change dietary patterns, and may allow consumers to switch consumption away from 'unhealthy' products towards 'healthy' products more easily (Zarkin & Anderson, 1992). Hence, better diet and healthier life can be performed with the guidance of nutrition facts label (FDA, 1998). Regardless of the benefits to utilize nutrition facts label, there has been little in-depth research of finding well designed nutrition facts label for Malaysian pre-packaged products, the lack of common format use for the design of nutrition facts label was still an open brief.

The main purpose of this paper is to explore a preliminary groundwork in context, using information design to look further into the link between the existing nutrition label format and

design in Malaysia hypermarkets; and furthermore to establish Malaysian ways of doing as a common phenomenon. The key regulations of nutrition labelling format in Malaysia is followed to show the deficiency of aesthetic value and design attention, which are the prime commodities of its function to meaningfully convey about what is consumed to keep the consumers better informed.

# 3. Literature Reviews

Despite the booming economy in Malaysia, being the third largest economy in Southeast Asia and ranked 12th out of 135 economies in the World Bank report (2013), Malaysia is however stuck in a middle-income trap. 40% of Malaysian workforce earning between RM2,300 – RM7,000 are the ones who form this group (Lee, 2013) They are mostly the taxpayers and a vast majority of them drive consumer spending for the domestic economy. With a large population comes under the middle-income category, it is a common phenomenon among Malaysians' purchasing behaviours to be often price-conscious (Munusamy and Hoo, 2008).

While the government had run couples of good cause campaigns to remind consumers to spend wisely with their daily expenses, the middle-income social status has attracted many Hypermarkets to set foot into Malaysia which mainly sell products at affordable prices. This trend can be seen vastly in the urban areas when a report found 56% of Malaysians engaged in grocery shopping as one of the three common activities on a weekly basis (October, 2013) and an extensive 37% amount of their money is spent in hypermarkets (Ng, 2011).

Perrigot and Cliquet (2006) make a point that hypermarket means "everything under the same roof", which broadcast category or products linked to discount price policy or self-service and networking techniques. With the rising of living costs along the years, Malaysian consumers are giving more attention to paying appropriate prices rather than going for the best brands all the time where hypermarkets act as an under one roof platform to compare a wide selection of products. This has made hypermarket became a dominant format in the city as 45% to 60% as the main outlets for grocery shopping (Malaysia Exporter guide Annual, 2010).

Major hypermarkets in Malaysia whom also sell homegrown brands such as Aeon Big – Top Valu; Giant – Giant; Cold Storage – First Choice, Tesco – Tesco; Mydin and Kedai Rakyat 1 Malaysia – KR1M, a mini market format. Some of these hypermarkets work very closely with SME (Small Medium Enterprises) entrepreneurs to buy their products and promote them under the homegrown brands. While the consumers are given vast amount of choices among the homegrown brands, these hypermarkets too are facing strong

competition in sales. Hence, to urge consumers make quicker purchase decision, attention are put more on the promotions of the product and the sales rather than the nutritional label.

Over the years, regulators, advertisers, public health advocates, doctors, scientists and food manufacturers have together created an "information infrastructure" that attempts to give information consistency and meaning. Only in Malaysia the nutrition labeling is mandatory for under specific conditions such as specific dietary food, enriched or fortified food or when the products make a nutrition or health claim (MOH, 2012). Although numerous of amendments have been made to the regulations in requests of the food industry and consumer needs, there is no standardize nutritional label format applied across all products in Malaysian hypermarkets. Situation like this can be found such as, the retailers could apply Guided Daily Amount (GDA) system on their label but other manufacturers could start other front-of-package (FoP) formats (ILSI, 2010).

In Malaysia, there are generally 2 types of nutrition label formats that can be seen on pre-packaged food products sold in retailed outlets. First, the traditional nutrition facts labels which are generally applied onto the Malaysian pre-packaged food products. They are mostly presented in monochrome design with either little attention focused on the information or overload with multilingual information. Both numerical format and diagrammatic format are also commonly used. The second type of nutrition labels consist of both back-of-pack (BOP) and front-of-pack (FOP) – a voluntarily regulation exists in Malaysia (EUFIC, 2015). They are also designed and applied independently according to brands.

Malaysia has also put forward labelling requirements gleaned from the Malaysian Food Regulation 1985. The requirements include:

- i. State the name and address of the manufacturers with the type size no smaller than 4 points;
- ii. All particulars appear on the label shall not be smaller than 10pt;
- iii. For small packages, the letter must not be smaller than 2pt;
- iv. Only non-serif typeface is allowed;
- v. Lettering on the label shall be so prominent in height, visual emphasis and positioned to be conspicuous by comparison with any other matter appearing on label;
- vi. All letters should appear in colour that contrast strongly with its background so as to be that the nutrition information is clearly legible.

Despite most empirical research suggests that provision and use of information on nutrition facts label can significantly change dietary patterns, and may allow consumers to switch consumption away from 'unhealthy' products towards 'healthy' products more easily, however, more information might not necessary help consumers to make better-informed choices. Generally, consumers would prefer the largest amount of information offered, but often the preferred amount of information leads to poorer performance (Levy, Fein and Schucker, 1996). As a result, when people are presented with more information than they can process, this can easily lead to confusion, misunderstanding and uncertainty (FSA, 2010). Moreover, the ability to purchase with better-informed information is reduced when consumers are given an overflow of information (Drichoutis et al., 2006; Kelly et al., 2009; Nørgaard & Brunso, 2009).

The existing nutritional label in Malaysia also reveals an unclear use of hierarchy and inconsistent nutrient list. For example, some pre-packaged food products show more nutrients than the others, some only present a minimum of 4 nutrients – energy, fats, sugar and calories; they are presented with a lack of hierarchy prominence placed on elements while other information are relatively deemphasized. Scammon (1983) suggested that, when the amount of information is increased, respondents somehow divided up time among the information items present. As more items are added, less time was available for processing each item. Belser (1994) stresses that a well-planned hierarchy helps guide viewers through information hence establishing the audience from the start and focusing the vital information around what is important for that audience is key for nutrition facts label. While more knowledge makes everything simpler, there is a need to find the balance desired between too much information and too little, and most importantly a planned layout with hierarchy to emphasize and draw attention to specific part of the nutritional label.

Ideally, information on nutrition facts label should be presented in a manner such as FoP – a simplified version of nutrients list that is easily accessible at the first glance to as many consumers as possible to support informed choice so that consumers can choose to consume what is nutritious to them. Having said that, of all the nutritional labelling scheme applied on the home brands products, FoP was found only on the Aeon Big and Tesco's products; this scheme is however has not endorsed by the Ministry of Health yet (ILSI, 2010). With that said, the use of simplifying tools such as the per cent Daily Value (DV) to apply on the FoP may help translate consumer enthusiasm for the new label into improved food selection (Guthrie, Derby and Levy, 1999). On the same note, the Health of Choice Symbol (HCS) is yet to be established in Malaysia, but a couple of common HCS can still be found on the front label such as the Halal Logo, Buatan Malaysia (Made in Malaysia) logo and MeSti (Food Safety is the Responsibility of Food Industry) logo.

Notwithstanding several studies on improving nutritional labels are done over the years to seek a better way to educate consumers to understand the scientific terms or, finding out the sufficiency of data presented or to examine how consumers comprehend the meaning of the information, but the core function of nutritional label is simply unclear anymore. As much

as the labelling requirement help to inform at some level, the aesthetic of nutrition facts label has its fair share to affect the function and purpose formulating a well-informed decision on a daily buying process. Thus, this paper aims to examine the design of nutritional label and the value aesthetic presentation of information design, which are the prime commodities for a nutritional label to meaningfully convey about what is consumed to keep the consumers better informed. After all, healthful decision is not a single iterative task, but a process that requires the help of both content and aesthetic.

# 4. Methodology

This research looks at the nutritional label format and design on packaged food available in Malaysia hypermarkets. It draws on the descriptive studies of nutritional label format and design that encompasses the existing format used on imported and local pre-packaged food. Samples of existing nutritional labels are collected and examined (Image 5) which eventually provide new insights for better visual representation through information design.

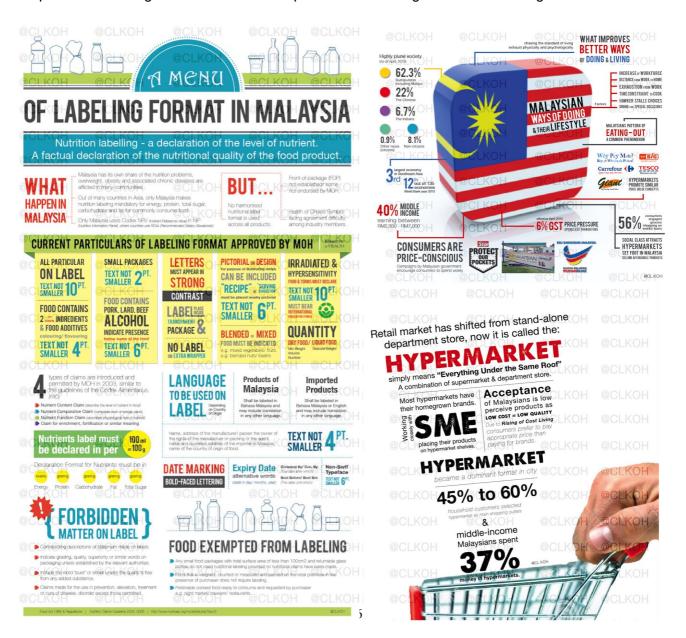


Figure 1: Infographics about this research

### Aeon Big Homebrand - Top Valu



- 1. Monotone table format is applied at the back of all packages.
- 2. Halal logo is applied consistently across all packages.
- 3. Only Top Valu products have an extra nutritional display at the front package - a tick (contains), dash (does not contain), triangle (may contain).

Image 1: Top Valu Nutritional Label

# Tesco Homebrand – Tesco



- 1. Extra effort shown on their nutritional labels compare to other homebrands.
- 2. Applied Verbal Banding, Colour Coded GDA and Integrated Labeling Format at the front packages across all homebrand products.
- 3. This approach made their products more health conscious and easier to compare with other brands

Image 2: Tesco Nutritional Label

### Cold Storage & Giant Homebrand - First Choice, Giant











- 1. First Choice is a more expensive range; Giant offers value saving range
- 2. Both applied monotone format at the back of the packages.
- 3. No extra information appeared at the front of the package.
- 4. Longer list of nutrition facts compare to other homebrands

Kedai Rakyat 1 Malaysia Homebrand - KR1M



- 1. Mostly monotone format is used on all their products
- 2. Colour Coded GDA can be found on only 1 label Sweetene
- Minimal information can be found on its nutritional label, mainly energy, fats, sugar, carbohydrate and protein.
- 3. All product have 2 main endorsements Buatan Malaysia (products of Malaysia) and Halal logo.

Image 4: KR1M Nutritional Label



Image 3: First Choice & Giant Nutritional Label

Image 5: Other Nutritional Label in Malaysian Hypermarkets

# 5. Conclusions

Choosing and buying food may never be easy; it is a process, a process that is informed by design. Leborg (2006) suggested that design is ubiquitous, and nutrition facts label is one of many places where people experience design. That said, this paper sets out to look at the nutritional label format and design on nutritional label in Malaysia hypermarkets. It builds on descriptive studies through collecting samples of existing nutritional labels on the home brand in hypermarkets as well as imported brands.

The main finding shows that there is inconsistency of nutritional label format applied across the products. For example, Tesco and Top Valu offer a summary nutritional display on the front package (Image 1 & 2), while the other home brands only display common nutritional labels at the back of the package. The nutrition list indicated on the nutritional label also shows a discrepancy on each home brand, some with 5 major scientific terms (Image 4) while the others offer more information to consumers (Image 3). Other composition such as the design and presentation of information is lack of hierarchy prominence and less standardising while other information are relatively deemphasized.

The analysis is not without caveats, nevertheless. We recognised that a larger sample and greater variation in the data along age would strengthen such descriptive studies. Having said that, the current finding provides enough variations in the data to allow the examination of this paper. As such, the finding suggests if design of information can be taken seriously to apply onto the existing nutritional label, it would maximize benefits of its function and helps to enhance the presentation of information, ultimately serve to better-informed consumers. In spite of the basic and institutional design application of the nutrition facts label might stand for something simpler, but in actual facts, it is part of a complex system. It isn't so black and white even if it is presented that way.

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### 7. References

Anderson, D.W., & Zarkin, G.A. (1992). Consumer and Producer Responses to Nutritional Label Changes. American Journal of Agriculture Economics. 74:1202-1207.a

Anon (2012). *A Label to Note*. The Star. Retrieved from <a href="http://thestar.com.my/health/story.asp?file=/2012/2/5/health/10667069&sec=health">http://thestar.com.my/health/story.asp?file=/2012/2/5/health/10667069&sec=health</a>.

Barmossy, G., Scammon, D. L., & Johnson, M. (1983). A Preliminary Investigation of the Readability and Validity of an Aesthetic Judgement Test. Advance in Consumer Research, 10, 685 – 690.

Economy Rankings (2013, June). The World Bank. Retrieved from <a href="http://www.doingbusiness.org/rankings">http://www.doingbusiness.org/rankings</a>

Feunekes, G.I., Gortemaker, I.A., Willems, A.A., Lion R. and Kommer, M.V.D. (2008). Front-of-pack nutrition labelling: Testing effectiveness of different nutrition labelling formats front-of-pack in four European countries. *Appetite*. **50**(1), 57–70.

Food Standards Agency. (2010). Public attitudes towards, and use of, general food labelling. Social Science Research, Unit Oxford Evidentia, Unit Report 4.

Guthrie, J. F., Derby, B. M., and Levy, A. S. (1999). What people know and do not know about nutrition. In E. Frazao (Ed.), America's eating habits: Changes and consequences (pp. 243-280): US Department of Agriculture, Economic Research Service, Agriculture Information Bulletin No. (AIB750).

Kelly, B., Hughes, C., Chapman, K., Louie, C., Dixon, H., Crawford, J., King, L., Daube, M., & Slevin, T. (2009). Consumer testing of the acceptability and effectiveness of front-of-pack labeling systems for the Australian grocery market. Health Promotion International, 24, (2), 120-129.

Leborg, C. (2006). Visual Grammar. English ed. Princeton Architectural Press. New York.

Lee, Esther (2013, September). Highlight: Middle-class Pain, The Edge. Retrieved from <a href="http://www.theedgemalaysia.com/first/253659-highlight-middle-class-pain.html">http://www.theedgemalaysia.com/first/253659-highlight-middle-class-pain.html</a>

Levy, A. S., Fein, S. B., and Schucker, R. E. (1996). Performance characteristics of seven nutrition label formats. *Journal of Public Policy & Marketing*, 15(1), 1-15.

Malaysians Are Second Most Avid Weekly Readers of Newspapers Across Asia Pacific: GFK (2013, October). Retrieved from <a href="http://www.gfk.com/news-and-events/press-room/press-releases/pages/malaysians-are-second-most-avid-weekly-readers-of-newspaper-across-asia-pacific.aspx">http://www.gfk.com/news-and-events/press-room/press-releases/pages/malaysians-are-second-most-avid-weekly-readers-of-newspaper-across-asia-pacific.aspx</a>

Malaysia Exporter Guide Annual. (2010, December). Retrieved from <a href="http://gain.fas.usda.gov/Recent%20GAIN%20Publications/Exporter%20Guide\_Kuala%20Lumpur\_Malaysia\_12-30-2010.pdf">http://gain.fas.usda.gov/Recent%20GAIN%20Publications/Exporter%20Guide\_Kuala%20Lumpur\_Malaysia\_12-30-2010.pdf</a>

Ministry of Health Malaysia, 2007

Munusamy, J., W.C. Hoo, (2008). Relationship between marketing mix strategy and consumer motive: an empirical study in major Tesco stores. *Unitar e-journal*, 4(2): 41-56.

Ng, Raina (2011, July). Malaysian Shoppers Most Price-Sensitive in Southeast Asia. The Edge. Retrieved from <a href="http://www.theedgemalaysia.com/media-a-advertising/189661-malaysian-shoppers-most-price-sensitive-in-southeast-asia.html">http://www.theedgemalaysia.com/media-a-advertising/189661-malaysian-shoppers-most-price-sensitive-in-southeast-asia.html</a>

Perrigot, R. & Clique, G. (2006). Hypermarket Format: Any future or a Real Need to Be Changed?, 5<sup>th</sup> International Marketing Trends Congress, Venice

Seminar and Workshop on Nutrition Labeling, claims and Communication Strategies for the Consumer Meeting Summary, (2010, September). International Life Science Institute, Southeast Asia Region, Singapore.

Synovate (2005b). *Quantitative Evaluation of Alternative Food Signposting Concepts:* Report of Findings. COI on behalf of the Food Standards Agency.