



Can Food Labels Improve the Food Systems in the World?

Jonathan Nsamba and Elezebeth Mathews

SPECIAL EDITION

Abstract

Food systems across the world have changed from wholesome foods to fast and ultrarefined foods. This nutrition transition has contributed immensely to the rapidly increasing Non-Communicable Diseases (NCDs) such as diabetes and obesity across the globe. There is a growing need to support consumers in making healthier food choices through information, education and communication, and by targeting the market environment through food labelling. Food labels include ingredients, amounts, allergens, name of manufacturer, country of origin, date of manufacture and expiry. This article aims to raise awareness of the effectiveness of food labelling to improve the food system and, in return, combat the rising NCDs.

Nutrition labelling has shown positive results in shaping consumer food choices and improving the quality of food production by food manufacturers. Unfortunately, there is a tendency for food companies to market false information about food, marketing an item to consumers as a healthy food option, when in fact, it is not.

Despite increasing calls for mandatory food labelling as a policy strategy to halt the rising prevalence of NCDs, governments require clear evidence supporting the effectiveness of food labelling in improving food choices to make informed decisions. Mandatory labelling would require a strong commitment from all stakeholders, including the food industry, governments, consumer organisations and the trade industry.

Keywords

Food systems, Food Labelling, Food Choices, Non-Communicable Diseases

Introduction

Changing patterns in the food systems of many countries have resulted in a 'nutrition transition'. As a result, countries have witnessed a shift in the type, quality and nature of diets consumed. While some pockets of the world are still grappling with undernutrition, many regions now show a double burden characterised by under and over nutrition disease states. Overconsumption of unhealthy diets, especially ultra-processed foods, is one of the risk factors for NCDs.

Non-Communicable Diseases (NCDs) encompass many diseases, but this article is centred around cardiovascular diseases, hypertension and diabetes. While there are many different risk factors for the development of NCDs, poor dietary intake encompassing overconsumption of trans fatty acids and cholesterol generate a more significant non-communicable disease (NCD) burden than tobacco, alcohol and physical inactivity combined (Hyseni et al. 2017).

Due to the negative consequences of NCDs, prevention and control have become public health priorities (Thavorncharoensap 2017). In 2004, the World Health Assembly emphasised the increased significance of population-based strategies to combat NCDs, which led to a global strategy on diet, physical activity and health (World Health Organisation 2004). Governments around the world are searching for cost-effective strategies that prevent NCDs. Behavioural interventions have been advanced to create an enabling environment for individuals to make informed and healthy food choices. These include food labelling, the taxation of unhealthy foods such as sugar tax, nutrition and health education, food bans and the regulation of production and marketing practices to influence food consumption decisions.

Food labelling is one of the strategies to enable consumers to make informed food choices (Viola et al. 2016). Despite increasing calls for mandatory food labelling as a policy strategy to halt the rising prevalence of NCDs, there is a general lack of clear evidence for the effectiveness of food labelling as a strategy for improving food choices among consumers.

Food labelling

The 2014 second international conference on nutrition (Amoroso 2016) called on world governments to change food environments and systems to increase consumer information sharing. Nutrition labelling standards are contained in the Codex Alimentarius, developed by the Joint FAO/WHO Food Standards Programme. A food label is a panel on the food



package that provides nutrition information to consumers (Food and Agriculture Organisation 2016) at the point of sale. It is a low-cost population-wide strategy that creates a supportive environment for consumers to make healthier food choices (Dodson et al. 2012; Viola et al. 2016).

Different countries have either voluntary or mandatory food labelling policies. The USA has had mandatory labelling since 1990 (Berning and Sprott 2011). In comparison, the European



Union passed a mandatory law in 2011 and Chile and Mexico passed similar laws in 2012 (Organisation of Economic Cooperation and Development 2014). Other countries with compulsory labelling are Canada, Argentina, Japan, Taiwan and Nigeria. Other African countries, such as Morocco, Botswana, Malawi, and Egypt (Food and Agriculture Organisation 2016) have voluntary labelling where food manufacturers choose which information to provide to consumers.

Global attention has shifted to mandatory labelling (European Food Information Council 2016). Consumers today have become more health conscious and thus prefer to have nutrition information provided to them at the point of purchase (van der Merwe et al. 2013). The question at hand is whether food labelling can lead to better food choices in a rather unhealthy and unsustainable food system in many countries.

Effectiveness of food labelling

Evidence from studies (Kelly et al. 2009; Thavorncharoensap 2017) exploring the effectiveness of food labels indicate that consumers can identify healthier food choices with the help of food labels. Food labelling also empowers consumers and fulfils the rights of a consumer to information. Consumers can read and interpret nutrition information on the label to make healthier choices about food (Cowburn and Stockley 2005). Food labels also create a need for food companies to reformulate their foods to enhance their suitability on the market (Hawkes 2010).

There are lessons to be learnt from a review by Campos et al. (2011), which suggests that providing nutrition information to consumers aids in identifying healthier food choices and changing food behaviours, especially at the point of sale. The weight of the evidence shows that food labels can effectively influence food choices; however, some reports challenge the effectiveness of food labelling as it is assumed to be insufficient on its own to cause behaviour change (Mandle et al. 2015).

In many regions of the world, especially in less developed countries, many consumers have reported difficulties interpreting food labels (Cowburn and Stockley 2005). Although many consumers can read the labels, they may have trouble comprehending the significance of health and nutrition information. Other studies also show that many consumers make food choices that are heavily dependent on price (Azman and Sahak 2014), advertisement and the quality of the packaging in contrast to the food composition of an item. Another downside of using food labels is the tendency for food companies to market false information about a food item, placing it at the forefront of consumers as a 'healthy' food option (Hawkes 2010).

Lessons learnt from various studies show that consumers do not spend adequate time looking at food labels in grocery stores (Wahab 2018), get confused by labels (Cowburn and Stockley 2005) and misinterpret them (Viola et al. 2016) due to low literacy levels in many countries. This, therefore, requires commitment from different players within governments to strengthen mass nutrition education to their citizenry.

Evidence has indicated that food labelling falls short as a single strategy to influence food choices among consumers. Therefore, food labelling should also be implemented alongside other interventions such as sugar taxes, school-based nutrition programs and mass nutrition education. The synergy from all these interventions will be part of the long-term solutions to reduce the rising NCDs in the world.

Most foods carrying food labels are processed and thus marketed in grocery stores or supermarkets; therefore, there are financial implications of accessing this kind of food. Given that in many parts of the world, there are rural and poor populations who do not have access to food with labels, it compromises the effectiveness of the food label strategy, meaning food labelling is more suitable for high- and middle-income countries where the majority of their population are in urban centres and can afford such food items.

These challenges need to be carefully thought of if countries are to implement mandatory food labelling. Implementing a food labelling mandate requires negotiations and collaborations between various actors such as the government, Ministries of Health, Ministries of Agriculture, the food industry and trade and consumer associations. This collaboration will strengthen the consensus required for the overall success.

There is a need for a robust quality control system to prevent food manufacturers from putting false health and nutrition claims on food labels which can be detrimental to consumers' health. Additionally, food companies can use the traffic light system – whereby protein, carbohydrate, fats, salt and sugar are indicated by either green, amber or red colours depending on their content – placed at the front of the pack since these are easily more comprehended by consumers when compared to detailed nutrition composition

labels. For instance, some countries, like Malawi (BioAnalyt 2020; Williams et al. 2021), are facing public health dilemas – sugar is fortified with Vitamin A and is marketed as healthy food, yet sugar is one of the risk factor foods for NCDs. The presence of a robust control system will ensure that each label correctly details the nutrient content of the food product. Lastly, since food labels can be perceived differently by consumers, food manufacturers should use metric measurement units that are less confusing and easily understood by consumers than ounces, pounds, servings and cups.

Conclusion

Rolling mandatory labelling will make purchase environments more supportive of consumers' food choices, thus improving the food system. However, this will require a robust framework of action and quality control, and the implementation of a combination of strategies. Through food labelling, improvements in food choices should be integrated into other population-level strategies such as taxation, the built environment and school health/nutrition programs. A social-ecological perspective that incorporates all societal level interventions is needed to improve the food system in the world as we strive towards averting the rising incidences of NCDs and achievement of agenda 2030.

References

Amoroso, L. 2016. 'The Second International Conference on Nutrition: Implications for Hidden Hunger'. *World Review of Nutrition and Dietics* 115: 142–152. https://doi.org/10.1159/000442100

Berning, J.P. and D.E. Sprott. 2011. 'Examining the Effectiveness of Nutrition Information in a Simulated Shopping Environment'. *Journal of Food Distribution Research*. 42: 1–17.

BioAnalyt. 2020. 'Fortified Sugar to Improve Vitamin A Status and iCheck Fluoro'.. URL https://www.bioanalyt.com/wp-content/uploads/2020/05/Application-Paper_iCheck_Sugar-and-Sugar-Preblends_EN_May-2020.pdf (accessed on 31 August 2021).

Campos, S., J. Doxey and D. Hammond. 2011. 'Nutrition Labels on Pre-Packaged Foods: A Systematic Review'. *Public Health Nutrition* 14: 1496–1506. https://doi.org/10.1017/S1368980010003290

Cowburn, G. and L. Stockley. 2005. 'Consumer Understanding and Use of Nutrition Labelling: A Systematic Review'. *Public Health Nutrition* 8: 21–28. https://doi.org/10.1079/phn2005666

Dodson, E.A., A.A Eyler, S. Chalifour and C.G. Wintrode. 2012. 'A Review of Obesity-Themed Policy Briefs'. *American Journal of Preventative Medicine* 43: S143-148. https://doi.org/10.1016/j.amepre.2012.05.021

European Food Information Council, 2016. 'Global Update on Nutrition Labelling'. http://www.eufic.org/images/uploads/files/ExecutiveSummary.pdf .

Food and Agriculture Organisation of the United Nations, 2016. 'Influencing Food Environments for Healthy Diets'. http://www.fao.org/policy-support/tools-and-publications/resources-details/en/c/459821/.

Hawkes, C. 2010. '4 - Government and Voluntary Policies on Nutrition Labelling: A Global Overview', in: *Innovations in Food Labelling*, edited by J. Albert. Cambridge: Woodhead Publishing.

Hyseni, L., M. Atkinson, H. Bromley, L. Orton, F. Lloyd-Williams, R. McGill and S. Capewell. 2017. 'The Effects of Policy Actions to Improve Population Dietary Patterns and Prevent Diet-Related Non-Communicable Diseases: Scoping Review. *European Journal of Clinical Nutrition* 71: 694–711. https://doi.org/10.1038/ejcn.2016.234

Kelly, B., C. Hughes, K. Chapman, J.C-Y. Louie, H, Dixon, J. Crawford, L. King, M. Daube and T. Slevin. 2009. 'Consumer Testing of the Acceptability and Effectiveness of Front-of-Pack Food Labelling Systems for the Australian Grocery Market'. *Health Promotion International* 24: 120–129. https://doi.org/10.1093/heapro/dap012



Mandle, J., A. Tugendhaft, J. Michalow and K. Hofman. 2015. 'Nutrition Labelling: A Review of Research on Consumer and Industry Response in the Global South. *Global Health Action* 8: 25912. https://doi.org/10.3402/gha.v8.25912

Organisation of Economic Cooperation and Development. 2014. 'Obesity Update'. https://www.oecd.org/health/Obesity-Update-2014.pdf.

Thavorncharoensap, M. 2017. 'Effectiveness of Obesity Prevention and Control'. SSRN Electron. J. https://doi.org/10.2139/ssrn.3016129

van der Merwe, D., M. Bosman, S. Ellis, H. de Beer and A. Mielmann. 2013. 'Consumers' Knowledge of Food Label Information: An Exploratory Investigation in Potchefstroom, South Africa. *Public Health Nutrition* 16: 403–408. https://doi.org/10.1017/S136898001200287X

Viola, G.C.V., F. Bianchi, E. Croce and E. Ceretti. 2016. 'Are Food Labels Effective as a Means of Health Prevention?'. *J. Public Health Research* 5: 768. https://doi.org/10.4081/jphr.2016.768

Wahab, R.A. 2018. 'Food Label Use and Awareness of Nutritional Information Among Consumers in Bahrain: An Exploratory Study'. *KnE Life Sciences* 4: 26. https://doi.org/10.18502/kls.y4i6.3088

Williams, A.M., S.A. Tanumihardjo, E.C. Rhodes, C. Mapango, B. Kazembe, F. Phiri, D.D. Kang'ombe, J. Sheftel, V. Orchardson, K. Tripp and P.S. Suchdev. 2021. 'Vitamin A Deficiency has Declined in Malawi, but With Evidence of Elevated Vitamin A in Children. *American Journal of Clinical Nutrition* 113: 854–864. https://doi.org/10.1093/ajcn/nqab004

World Health Organisation. 2004. 'Global Strategy on Diet, Physical Activity and Health'. https://www.who.int/publications-detail-redirect/9241592222.