

CHAPTER 1: INTRODUCTION

1.1. Background

Non-communicable diseases (NCDs) (e.g., cardiovascular disease, cancer, and type 2 diabetes mellitus) are the world's leading cause of death, accounting for 71% (41 million) of annual global deaths (WHO, 2018). One of its risk factors is excessive body weight; overweight and obesity. According to WHO, more than 1.9 billion adults (above 18 years old) were overweight in 2016. The trend is increasing and adding more strain to the global burden of disease, including Indonesia. In Indonesia, 13.6% and 21.8% adults are overweight and obese, respectively (Riskesdas, 2018). Obesity is a multifaceted issue resulting from many extrinsic and intrinsic determinants, such as, individual behaviour (e.g., poor dietary habits and lack of physical activity), genetic, food and physical environment (rural and urban), socioeconomic status (education, income, etc), as well as policy pertaining to food and agricultural practices, including food marketing (CDC, 2020).

Obesity has appeared as an emerging health problem as it contributes to a huge economic burden due to NCDs treatment. It was estimated that 14.4 trillion IDR was allocated to treat NCDs (BPJS Kesehatan, 2017). Nevertheless, obesity itself is preventable. Among mentioned obesity causes, studies have identified individual behaviour and food environment as the two key contributors to obesity (Lee *et al.*, 2000; Verstraeten *et al.*, 2016). Therefore, WHO has proposed some actions to prevent obesity pertaining to those two key factors; (1) Reducing consumption of total calories, saturated fats, salt and sugar; (2) Promoting active lifestyle; (3) Restricting promotional marketing and imposing taxes on unhealthy foods; (4) Improving consumer awareness through education and communication; (5) Enforcing food labelling.

In recent years, food labelling has been one of the main strategies to reduce obesity prevalence, as it shows to be useful and effective to inform nutritional quality, aid to identify and choose healthier food products, and drive product's reformulation (Grunert & Wills, 2007; Vyth *et al.*, 2010). Furthermore, front-of-pack (FOP) labelling is perceived as simpler, easier to understand

nutrient profile yet cost-effective intervention to improve consumer food choices at purchase points (Cecchini & Warin, 2016). There are two main types of FOP labelling system; nutrient-specific and summary indicator. Each system has several different format, for example monochrome guideline dietary amount for nutrient-specific system and healthier choice logo for summary indicator system (Jones *et al.*, 2019).

In Indonesia, food labelling is regulated by BPOM and as a matter of fact, BPOM Regulation Number 22/2019 states that packaged food products are voluntarily to display FOP labelling; GDA (guidelines daily amount in monochrome) and/or healthier logo choice, especially for ready-to-drink beverages and pasta/noodle products. Although being relatively late compared to other ASEAN countries in implementing FOP labelling (Thailand and Malaysia in 2011 and 2012, respectively), this gesture proves Indonesia's commitment to improve its nutritional status and prevent rising obesity in the near future. Moreover, the government also puts extra attention in regulating ready-to-drink beverages and in this case, it refers to sugar-sweetened beverages (SSB) due to its high sugar content.

SSB are defined as non-alcoholic beverages with added sugars (high fructose corn syrup, honey *etc.*) and include coffee, tea, energy drink, juices, milk, and carbonated drinks. According to Fanda (2020), Indonesia ranked third in ASEAN with the highest SSB consumption; averaging 20.23 L/person/year. Several studies stated that the majority of SSB consumers are adolescent and young adults (Abdullah *et al.*, 2015; Billich *et al.*, 2018). Overconsumption of SSB has been linked to poor oral health and development of metabolic disease, such as obesity (Kosova *et al.*, 2013; Malik *et al.*, 2010). Thus, applying front-of-pack labelling on SSB may be profoundly beneficial for helping consumers to choose better/healthier beverages and prevent excessive weight gain in the long term. However, there is no one-size-fits-all solution for obesity, hence applying front-of-pack labelling has to be supported by other efforts as well.

For any interventions to be successful, its presence and effect must take place. Nevertheless, BPOM in 2015 found that only 25.3% consumers checked nutrition information and only 33% university students in Jakarta had a good understanding of food labelling. Additionally, the voluntary

implementation of FOP labelling may also influence the awareness level as not all food products have such labelling. To date, there are only a few Indonesian studies pertaining to the awareness towards front-of-pack labelling as it is relatively new in Indonesia. Studying awareness can help the government as well as industry to overview the effect of the ongoing policy/strategy. Six years have passed since BPOM conducted the survey and although several studies have been done on food labelling awareness, none is specifically addressed on SSB in Indonesia. Moreover, evaluation on young adults (university students) is considered pivotal as it is a transition period whereby they are capable of making decisions by their own, including dietary intake; SSB consumption (Nelson *et al.*, 2008). Thus, assessing awareness of front-of-pack labelling on SSB among university students is pertinent.

1.2. Objective

The objectives of this study are as follows:

1. To determine the awareness through knowledge, attitude and practice (KAP) towards sugar-sweetened beverages (SSB) and FOP labelling among Indonesian university students.
2. To identify the associated factors of SSB and FOP labelling awareness among Indonesian university students.
3. To assess the availability and characteristics of SSB with FOP labelling in various modern markets.

1.3. Benefits of Study

The findings of the study would provide great benefits as follows:

1. Provide an overview of the current awareness state of Indonesian university students on SSB as well as FOP labelling. It might introduce and/or leverage the existence of front-of-pack labelling in other food products.
2. Provide the information regarding SSB with FOP labelling availability in the market. This could highlight the support from food industry towards food regulatory policy.

3. Prompt other food labelling studies and present it as a supplementary literature for future research in academia and regulatory bodies.