CHAPTER I

INTRODUCTION

1.1 Background

Sweetness plays a role in human nutrition to adjust people’s feeding behavior towards foods that provide energy and essential nutrients. Sweet taste in foods usually comes from sugar which provides strong and pleasant sensation when it interacts with chemoreceptors in the tongue. This interaction leads to response that transmit high hedonic value toward sugar consumed and resulted in hedonic and physiological features (Anderson, 1995).

Because of its high hedonic value, people tend to crave more sugar and thus the consumption of processed foods and beverages high in sugar has increased by 127% over the past four decades (Kearney, 2010). These kinds of foods and beverages are high in calories, low in nutrients and may lead to high risks of overweight, obesity, insulin resistance, diabetes, and coronary heart disease. Increased consumption of nutrient-poor foods with high levels of sugar and reduced physical activity have led to risen obesity rates in developing countries (Puska et al., 2003). This can be caused by the improving economies in the developing countries which eases access to processed foods, decreases physical activities, and increases consumption of western diets (Hoffman, 2000).

In developed and developing countries, office workers can be vulnerable to health risks from sedentary lifestyle and food consumption. Office workers are defined as people working in an office environment which involve activities such as computer use, participation in meetings, presentations, reading, and
telephoning (Sitthipornvorakul, et al, 2014). Their activities in the office are considered sedentary behavior due to energy expenditure lower than or equal to 1.5 Metabolic Equivalent of Task (MET), while in sitting or reclining position. This behavior as well as consumption of foods high in fats and sugar may lead to health risk such as overweight and obesity, high cholesterol, high blood pressure, coronary heart disease, arthritis, diabetes mellitus, depression and migraine headache (Chenoweth, 2013).

Therefore, this observational study is conducted to observe and analyze the sensitivity towards sweet taste, preference towards sweet taste and daily sugar intake of office workers in Jakarta. Sugar intake will also be assessed to see the average consumption of these subjects.

1.2 Research problem

People tend to be unaware of the daily sugar intake, thus assessing the amount of daily sugar intake is important to estimate the overconsumption or underconsumption of total sugar. It was stated that daily sugar intake may be affected by sensitivity and preference towards sweet taste. Higher recognition threshold may lead to higher preference toward sweeter taste and higher intake of sugar. Studies also estimated that higher preference toward sweeter taste may lead to higher sugar intake. Thus, sensitivity and preference need to be examined to determine the effect towards daily sugar intake.
1.3 Objectives

1.3.1 General Objective

The general objective of this study is to observe and analyze the recognition threshold, preference towards sweet taste and daily sugar intake of office workers in Jakarta.

1.3.2 Specific Objectives

1. To assess the total daily sugar intake of office workers in Jakarta, including the main sources of sugar.
2. To study the difference of preference towards sweet taste in each recognition threshold group.
3. To study the difference of daily sugar intake in each recognition threshold group.
4. To study the difference of daily sugar intake in each preferred sugar concentration group.