INFLUENCE OF HEALTHY EATING CONCERNS ON MENU CHOICE DECISIONS AMONGST CUSTOMERS IN STAR-RATED HOTELS IN NAKURU COUNTY, KENYA

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## DECLARATION

## Declaration by the candidate

This thesis is my original work and has not been presented to any other institution of higher learning or University. No part of this thesis may be reproduced without the prior consent of the author and the /or University of Eldoret.

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## Declaration by the supervisors

This thesis has been submitted for examination with our approval as supervisors.
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## DEDICATION

I dedicate this work to Almighty God, my husband and two amazing children, Jeremy and Jerome, for their encouragement and support, as well as to my beloved parents and siblings for their love, patience, and kindness. And to my lovely friends for their unending encouragement and guidance, which has helped me through the entire course of this work.


#### Abstract

Menus occupy a significant position in the hotel business as they purpose to navigate customers to achieve satisfaction and exceed expectations in their food choices. Meals consumed out-of-home have been associated with enhanced intake of large food portions that are high in calories and low in nutritional value, exposing customers to an increased risk of weight gain and/or obesity. The main objective of this study was to assess the influence of healthy eating concerns on menu choice decisions amongst customers in star-rated hotels in Nakuru County, Kenya. The study was guided by the following specific objectives: to establish the influence of dietary patterns, food portions, nutritional knowledge, and food consumption habits on menu choice decisions among customers in star-rated hotels in Nakuru County in Kenya. The study was informed by the Food Choice Process Model and Theory of Planned Behaviour. An exploratory research design was used in the study with a target population of 785 from 19 star-rated hotels in Nakuru County, Kenya. The study used stratified and simple random sampling techniques to establish a sample size of 265 star-rated hotel customers. Data was collected using a closed-ended questionnaire and analyzed using the Statistical Package for Social Sciences (SPSS) version 26.0, with hypotheses tested at a $\mathrm{p}<0.05$. Descriptive statistics were employed to characterize the data, and inferential statistics of multiple regression were utilized to demonstrate the relationship between independent and dependent variables. The study findings show that the four dimensions of healthy eating concerns, including dietary patterns, food portions, nutrition knowledge and food consumption habits, explained $49.4 \%$ of the variation in customer menu choice decisions. The study findings revealed that dietary patterns ( $\beta_{1}=0.265, p=0.001$ ) had a positive and significant effect on consumer menu choice decisions. It was also found that food portions ( $\beta_{2}=0.276, p=0.000$ ) significantly and positively influenced consumer menu choice decisions. Furthermore, consumer menu choice decisions were positively and significantly influenced by nutritional knowledge ( $\beta_{3}=0.157, p=0.037$ ). Finally, it was established that food consumption habits ( $\beta_{4}=0.188, p=0.007$ ) had a positive and significant effect on consumer menu choice decisions. The study concluded that dietary patterns in menu choice decisions are motivated by lifestyle factors, while personal and economic factors determine the food portions. Customers' understanding of menu information depends on their knowledge to choose and consume foods that meet their nutritional needs. In contrast, seasonal availability and demand for fresh foods on menus influence the consumption habits of consumers. The study recommends that hotels should provide diverse nutritious food items on menus to promote healthy eating habits in customers.


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## LIST OF ABBREVIATIONS

| FAO | - | Food and Agriculture Organization |
| :--- | :--- | :--- |
| GNR | - | Global Nutrition Report |
| IFAD | - | International Funds for Agricultural Development |
| KNBS | - | Kenya National Bureau of Statistics |
| MoH | - | Ministry of Health |
| NACOSTI | - | National Commission for Science, Technology and Innovation |
| NCDs | - | Non-Communicable Diseases |
| SPSS | - | Statistical Package for Social Sciences |
| TPB | - | Theory of Planned Behaviour |
| TRA | - | Theory of Reasoned Action/Tourism Regulatory Authority |
| UNICEF | - | United Nations International Children's Emergency Fund |
| WFP | - | World Food Program |
| WHO | - | World Health Organization |

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## CHAPTER ONE

## INTRODUCTION

### 1.1 Overview

This chapter presents the background of the research problem, objectives, hypotheses, significance, scope, assumptions and limitations of the study.

### 1.2 Background Information

Menus occupy a significant position in the hotel business as they purpose to navigate customers to achieve satisfaction and exceed expectations in their food choices (Davis, Lockwood, Pantelidis, \& Alcott, 2013). Similarly, menus foster a competitive advantage in providing quality products and services at reasonable prices to customers through skilled or experienced competent personnel (Jawabreh, Al Jaffal, Abdelrazaq, \& Mahmoud, 2018). Eateries make available an out-of-home environment that promotes the consumption of diverse meals and snacks (Vadiveloo, Malik, Spiegelman, Willett, \& Mattei, 2017). In addition, they have a dynamic responsibility to build return patronage for customers since food is essential for a repeat experience (Jin, Line, \& Lee, 2017). Conversely, meals consumed out-of-home have been associated with an increased intake of large food portions (Cohen \& Story, 2014) that are high in calories and have low nutritional value (Ahn, et al., 2015). Such a diet exposes customers to an increased risk of weight gain and/or obesity (Mohammadbeigi, et al., 2018).

Appropriate intake of dietary nutrients effectively influences customer health (Bian, et al., 2013). In 2020 alone, the Global Nutrition Report (GNR, 2020) indicated that nearly 13.1 percent or 677.6 million of the world's populace were obese. The majority of them reside in urban settlements where foods of choice are convenient such as those prepared
with high fats and sugar (Chen, Yeh, Pai, \& Chen, 2018) due to lack of time for home preparation (Monsivais, Aggarwal, \& Drewnowski, 2014). Nevertheless, the main barrier to healthy eating in restaurants is the inconsequential quality of menu items, which can even vary between similar foods served in different restaurants (White, Lillico, Vanderlee, \& Hammond, 2016). Today, customers are more particular about their meals (Jin, Line, \& Lee, 2017), resulting in a shift towards diets believed to improve health, prevent diseases and enhance the quality of life (Ali \& Rahut, 2019).

Hotels, on the other hand, have made efforts to display their food preparation and cooking methods on the menu, such as prepared from scratch, steamed, smoked, roasted, and deep-fried (Din, Zahari, \& Shariff, 2012). In addition, hotels also provide fruits and vegetables in salads and sandwiches (Chen, et al., 2018). However, these activities have created an environment for customers to select foods based on cuisine (Beltran \& Romero, 2019). Similarly, regulatory authorities in countries such as Malaysia (Din, et al., 2012) and Thailand (Suvittawat, Maneenuam, \& Bunliang, 2019) have enacted laws for the disclosure of calorie information in menus (Wisdom, Loewenstein, Wansink, \& Downs, 2013). On the contrary, this has merely led to the consumption of energy-balanced diets (Turkistani \& Saaty, 2020). Provenance has resulted in trends to introduce health-focused options such as grilled, not roasted (Nemec, 2020), prepared in oil, not fat, low in cholesterol (Rodgers, 2010), organic or seasonal and farm fresh food products including whole fruits, vegetables and cereals in the menu (Suvittawat, et al., 2019).

Despite customers' nutritional awareness, research on Kenyan hotels and restaurants has mostly concentrated on selection criteria and elements that affect customers'
decisions to dine out. For instance, Wasike, Fwaya, and Kigaru (2017) evaluated the factors influencing customer needs for healthy eating products in selected restaurants in Nairobi city and concluded that lifestyle, family culture and medical prescriptions affect customer choices of diners. In another study, Onyango and Wasike (2018) assessed the healthy eating products and customer outcomes in restaurants within Nairobi City. They revealed that convenience of location, availability of healthy eating products and meeting friends affect the choice of restaurant. Likewise, Bor, Kieti, and Rotich (2018) examined hotel choice attributes and demographic characteristics of tourists in the North Rift Region and established that accessibility and physical attractiveness of hotels impact a repeat experience by customers. Therefore, a significant research paucity to comprehend the health attributes influencing menu choice decisions exists among Kenyan hotels and restaurants. This study investigated the influence of healthy eating concerns on menu choice decisions amongst customers in star-rated hotels in Nakuru County, Kenya.

### 1.3 Problem Statement

Globally, non-communicable diseases (NCDs) are on the rise (WHO, 2022) owing to enhanced consumption of diets high in saturated fats, salt and sugar that have become widely available (Chen, et al., 2018). Besides, hotels have been implicated to offer large food portions that are high in calories, saturated fats and low in nutritional quality (Ahn, et al., 2015). Today, customers desire to incorporate health-related values in their food choices. However, hotels have failed to address the customers' health concerns in menu development to translate into a selection of healthy items (Jawabreh, Al Jaffal, Abdelrazaq, \& Mahmoud, 2018). Thus, it exposes customers to the risk of weight gain and/or obesity, leading to the increased menace of premature deaths, including non-
insulin-dependent diabetes mellitus, hypertension and coronary heart disease (Petrie, Guzik, \& Touyz, 2018). Despite the importance of menus to uphold the value of customers as they purpose to provide direction in making food decisions, little has been done on the influence of healthy eating concerns on menu choice decisions among hotel customers, especially in Kenya. Therefore, this study sought to determine the influence of healthy eating concerns on menu choice decisions amongst customers in the hotel industry.

### 1.4 Objectives of the Study

### 1.4.1 Main Objective

To assess the influence of healthy eating concerns on menu choice decisions amongst customers in star-rated hotels in Nakuru County, Kenya.

### 1.4.2 Specific Objectives

1. To establish the influence of dietary patterns on menu choice decisions among customers in star-rated hotels in Nakuru County, Kenya.
2. To assess the effect of food portions on menu choice decisions among customers in star-rated hotels in Nakuru County, Kenya.
3. To examine the effect of nutritional knowledge on menu choice decisions among customers in star-rated hotels in Nakuru County, Kenya.
4. To determine the influence of food consumption habits on menu choice decisions among customers in star-rated hotels in Nakuru County, Kenya.

### 1.5 Hypotheses of the Study

$\mathrm{H}_{01} \quad$ There is no significant relationship between dietary patterns and menu choice decisions among customers in star-rated hotels in Nakuru County, Kenya.
$\mathrm{H}_{02}$ There is no significant relationship between food portions and menu choice decisions among customers in star-rated hotels in Nakuru County, Kenya.
$\mathrm{H}_{03}$ There is no significant relationship between nutritional knowledge and menu choice decisions among customers in star-rated hotels in Nakuru County, Kenya.
$\mathrm{H}_{04} \quad$ There is no significant relationship between food consumption habits and menu choice decisions among customers in star-rated hotels in Nakuru County, Kenya.

### 1.6 Significance of the Study

This study is expected to inform hotels of the importance of incorporating customers' healthy eating concerns as a strategy for effective menu planning and development. In addition, the study will provide insight to hotel owners and managers to rethink stratagems to increase customer satisfaction with their food choices. This study also intends to empower customers to make healthy menu choice decisions by taking time to assess the nutritional composition of meals on the menu. The results of this study will add to the existing body of literature on customers' healthy eating concerns, as space for auxiliary information is limited on menus. The study will inform scholars in the hospitality sector on areas to conduct further research investigation to enhance customer health. Likewise, the findings of this study are expected to inform the National and County governments in Kenya to formulate legislation for the hotel sector that
focuses on the healthy eating concerns of customers. Consequently, the study will provide documentation on customer decisions on food choices in Kenya.

### 1.7 Scope of the Study

This study evaluated the influence of healthy eating concerns on menu choice decisions amongst customers in star-rated hotels. The study was conducted among star-rated hotels, and the target population was 785 customers with a sample size of 265 customers. This study used a multi-stage sampling technique that consisted of purposive, stratified, and simple random sampling procedures. Similarly, this study used a quantitative approach by administering questionnaires to collect primary data from respondents. The data was analyzed using descriptive and inferential statistical techniques. Customer healthy eating concerns were determined based on dietary patterns, food portions, nutritional knowledge, and food consumption habits in menu choice decisions. The unit of analysis was the customers who visited the star-rated hotel in Nakuru County.

### 1.8 Limitations of the Study

The researcher encountered challenges while trying to obtain relevant information for the research. The study involved collecting information from customers in star-rated hotels, which come with limited access to the respondents, as most hotels were rigid about allowing access to their customers. The researcher assured them that the information was purely for academic purposes.

### 1.9 Operational Definition of Terms

bettering, maintaining and enhancing health (Lesica, 2017). In this study, healthy eating concerns refer to dietary patterns, food portions, nutrition knowledge, and consumption habits that include a variety of nutritious foods and beverages.

Consumption habits: These are conscious, collective, and repetitive behaviours that Dietary patterns: The quantities, proportions, variety, or combination of different Food choice: This is the process by which people think about, buy, prepare, food establishment mainly based on customer demands and intended to achieve organizational goals (Ozdemir \& Caliskan, 2015). In this study, the menu refers to a list of foods available to be served to customers in star-rated hotels in Nakuru County. Food portion: Food portion is the actual food placed on customers' plates to reflect their own choices or choices made by a restaurant or food producer (Benton, 2015). In this study, food portion refers to the amount of food that customers choose or are offered to eat in one sitting in a hotel.
foods, drinks, and nutrients in diets, as well as the frequency with which they are consumed regularly (Schulze, Fung, Lichtenstein, \& Forouhi, 2018). In this study, dietary pattern refers to the frequency with which different foods are consumed by hotel customers regularly.

Healthy eating concerns: These are eating habits and behaviours that contribute to lead people to choose, consume and use specific foods or diets in response to social and cultural influences (Medina, Urbano, Espinosa, \& Lopez, 2020). Consumption habits in this study refer to the processes that customers use to select and consume foods or beverages to meet their needs and the effects these processes have on customers' health status.

Menu: This is a list of foods and beverages available or offered by a

Nutrition Knowledge: Is the degree to which customers comprehend nutritional information and the ability to make sound nutrition decisions (Spronk, Kullen, Burdon, \& O’Connor, 2014). In this study, the concept refers to the processes for developing healthy eating habits that allow the body to meet its dietary needs.

Star-rated hotel: Establishments with defined conditions for guest facilities distinct by a criterion (Koutoulas \& Vagena, 2023). In this study, star-rated hotels are hotels that have been categorized according to internationally accepted criteria on amenities and standards. store, distribute, and consume foods and beverages (Szalonka, et al., 2021). In this study, food choice refers to how customers select food and beverages for consumption..

## CHAPTER TWO

## LITERATURE REVIEW

### 2.1 Introduction

This chapter reviews the literature on existing studies and their relation to variables identified by the study objectives. It gives an overview of the influence of healthy eating concerns on menu choice decisions.

### 2.2 Customer Menu Choice Decisions

Customer menu choice decision is a highly variable and complex process influenced by several socio-cultural, psychological, biological and economic factors (Marty, de Lauzon-Guillain, Labesse, \& Nicklaus, 2021). For instance, a study by Szalonka, et al. (2021) assessing food choices and their impact on health and the environment established that low consumption of meat or gluten-containing products and high intake of fruits, vegetables, and fish plays a remarkable role in healthy functioning of individuals. However, customer acceptability of the menu is directly proportional to the level of interaction with the food (Maina, 2018), expectations and requirements of the body (Mosca, van de Velde, Bult, van Boekel, \& Stieger, 2015). In that respect, Ahn et al. (2015) assert that food beliefs and attitudes formed during childhood due to social and cultural interactions impact children's eating habits as parents and caregivers have an undeniable influence from birth. In general, customers who are unfamiliar with a type of food may experience fear and avoidance (Boccia, Covino, \& Sarnacchiaro, 2018) when making food choice decisions.

Okoro, Musonda and Agumba (2017) evaluated the influence of nutrition determinants on construction workers' food choices and concluded that customer menu choice
decisions are significantly affected by sociodemographic variables of age, gender, social belonging, friends and family traditions. This notion is also supported by Konttinen et al. (2021), who stated that females, older subjects, those with more education and those from higher social classes are more likely to value healthy eating. Furthermore, age strongly influences customer health status, as consumption habits within respective age groups influence menu choice decisions (Szalonka, et al., 2021). Therefore, the acceptability or rejection of foods on a menu is considered multidimensional because it varies and changes across individuals in different groups, time periods and contexts (Maina, 2018). Food choice is directly proportional to interaction with the customer at any given time. Thus, customer menu choice decisions are a prerequisite for changing consumption habits and shaping healthy behaviours (Szalonka, et al., 2021).

Food cost and customer income are important motivators that influence customers' willingness to pay for menu items (Suvittawat et al., 2019; Moura, Melo, Silva, Paz, Paiva, Carvalho, 2020). Customers of higher socioeconomic status are motivated by ideological facts that help them gain and maintain social identity (Okoro et al., 2017). In contrast, those of lower socioeconomic status are motivated by prices, familiarity and convenience (Kaya, 2016). Hence, price is an important factor in menu selection, especially for low-income customers. For example, in upscale restaurants, customers are willing to pay a higher price for food quality, whereas in fast-food restaurants, service quality, particularly speed of service, is the most important influence that customers are willing to pay for (Bujisic, Hutchinson, \& Parsa, 2014). Besides, in fine dining restaurants, price is least considered because customer relations are the most important (Chiciudean, et al., 2019). Similarly, a statistically significant relationship
exists between income and customer menu choice decisions. For instance, Jawabreh et al. (2018), posit that precise eye movement on restaurant menus focusing on one item at first sight sets the standard that influences customers' psyche.

### 2.3 Healthy Eating Concerns

Consuming healthy foods plays a significant role in an individual's body, as espoused by Hippocrates' philosophy, "Let your food be your medicine...pg. 7" (Szalonka, et al., 2021). However, consumer eating habits around the world have evolved over time. Diets have shifted toward increased consumption of ultra-processed foods that are high in fat and low in nutrients (Ahn, et al., 2015). Such unhealthy dietary patterns are linked to an increased risk of obesity (Mohammadbeigi, et al., 2018) and other ailments, including diabetes, hypertension, and heart disease (Mkuu, Epnere, \& Chowdhury, 2018). Thus, promoting healthy eating for customers is vital and urgent.

### 2.3.1 Influence of Dietary Patterns on Menu Choice Decisions

Food selection, preparation and utilization are known to influence customer dietary patterns (Kabir, Miah, \& Islam, 2018). These factors have a long-term impact on health outcomes since eating habits such as consumption of nutrient-deficient foods, skipping meals and failing to eat on time negatively influence health (El Ansari, Suominen, \& Samara, 2015). Likewise, eating a healthy diet is important for maintaining physical and mental well-being (Hilger, Loerbroks, \& Diehl, 2017). Therefore, dietary patterns represented by consumers in menu choice decisions are influenced by lifestyle factors such as technological improvements, biological needs of the body, and values attached to foods (Parappurathu, Kumar, Bantilan, \& Joshi, 2015). Consistently, consumption
of diverse foods, significant meal frequency and positive behaviour during meals are all characteristics of good eating behaviours (Demirci, Demirci, \& Demirci, 2018).

The World Health Organization (WHO) and Food and Agriculture Organization (FAO) (1996) defined dietary diversity as the consumption of diets from various food groups and a proxy for measuring nutrient adequacy based on the customers' socioeconomic and demographic variability. Parappurathu et al. (2015) investigated food consumption patterns and dietary diversity of eastern Indians. They concluded that diversity is an indirect measure of diet quality and the extent to which nutritional needs are met. Likewise, Bernardo, Proenca, Calvo, Fiates, and Hartwell (2015) agree that dietary diversity reflects the potential for healthier choices and efficient ways to estimate nutrient adequacy in the diet. Familiarity with diverse cuisines may influence the choice of foods in restaurant or hotel menus (Guzek \& Glabska, 2022), which is essential for avoiding diseases and leading a healthy lifestyle (WHO, 2018a). Thus, insufficient dietary diversity is a global challenge that stems from a lack of access to nutrient-rich, healthy food (Micha, et al., 2020)

On the other hand, meal frequency is the number of meals consumed by an individual customer in a day (Wagris, Seid, Kahssay, \& Ahmed, 2019). According to Paoli, Tinsley, Bianco and Moro (2016), following a regular meal pattern that includes intake of high-energy proportions for breakfast early in the day, reducing meal frequency, and fasting regularly may provide physiological benefits such as reduced inflammation, improved cardiac rhythm, increased stress resistance, and gut microbiota modulation. Similar findings were reported by Kahleova, Lloren, Mashchak, Hill and Fraser (2017), who established that eating less frequently, reducing snacking, eating breakfast and
eating the most substantial meal first thing in the morning may be an effective way to avoid long-term weight gain. Thus, customers' choice of three meals a day may promote healthy habits that reduce the risk of becoming overweight (Fulkerson, Larson, Horning, \& Neumark-Sztainer, 2014),

The environment in which food is consumed directly impacts dietary patterns. For example, dining with friends may limit customers who prefer to clear their plates and order desserts (Wansink \& van Ittersum, 2013). Thus, an eating environment in a given context will likely influence dietary behaviour (Lacaille, Dauner, Krambeer, \& Pedersen, 2011). Wansink and van Ittersum (2013) describe the eating environment as factors related to eating but independent of food, such as the atmosphere where food is consumed, the effort required to obtain food, and/or social interactions and distractions that may occur while eating. Equally, friends and family members can have an impact on eating habits. For instance, an environment that encourages unplanned snacking, increased meal frequency, and physical inactivity has a negative effect on the maintenance of a lean body mass (Sogari, Velez-Argumedo, Gomez, \& Mora, 2018). Dietary patterns are formed over a lifetime, and changing them necessitates a behavioural change that must be maintained indefinitely, beyond any short-term intervention.

### 2.3.2 Influence of Food Portions on Menu Choice Decisions

Food portion is the actual food placed on customers' plates to reflect their own choices or choices made by a restaurant or food producer (Benton, 2015). Primarily, it is the responsibility of customers to determine the amount of food they can consume based on personal factors of age, gender and appetite levels (Talati, et al., 2018). However,
customers are likely to serve enormous amounts of food or eat opportunistically when large portions are made available, especially on a self-service consistent with dietary guidelines (Hetherington \& Blundell-Birtill, 2018). In the current eating environment, large portions of energy-dense foods are widely available despite epidemiological evidence that increasing portions exacerbate obesity (Young \& Nestle, 2012), which is a significant public health concern. Serving large portions encourages overeating, whereas reducing the sizes of energy-dense foods and drinks with added sugar promotes healthy eating (Berg \& Forslund, 2015). A simple, intuitive observation is that people eat more food when served larger portions (Zuraikat, Smethers, \& Rolls, 2019).

Portion control is an essential strategy to promote meal planning and correct the misconception about inappropriate portioning when serving foods (Collins, et al., 2015). The approach uses utensils and other tableware as potential tools to monitor food portions (Vargas-Alvarez, Navas-Carretero, Palla, Martinez, \& Almiron-Roig, 2021). Precisely, the portion control strategies allow for downsizing portions to establish norms of consuming a better proportion of nutrient-rich and low-energy-density foods. A study by Jia, et al. (2022), evaluated the use of portion control plates and concluded that they promote healthy dietary behaviours and nutritional knowledge that improve customers' health. Thus, the use of portion control plates may be essential in managing self-selected food portions (Hughes, et al., 2017).

Plate size is another concept that has been introduced to regulate the amount of food served in self-service by customers. This initiative eliminates the use of large plates that reliably inspire customers to serve large food portions (Wansink \& van Ittersum, 2013). This concept portrays a pie chart with appropriate plate proportions that should be
covered by food from various groups (Jia, et al., 2022) and is being employed as a practical nutrition assessment tool in dietary guidelines for weight control (Montagnese, et al., 2017). Correspondingly, customers who use the plate size concept in their food choices have increasingly lower total energy intake (Jessica, Joanne, Amy, \& Cuy, 2016). Earlier, Schwartz, Riis, Elbel, and Ariely (2012) assessed the strategies to control the portion of calories consumed in fast-food restaurants and recommended that the well-being of customers could be improved by extending options for them to accept rightsized food. Thus, tableware, including forks, spoons, dishes, and bowls, could impact the amount of food consumed. However, customers' familiarity with large tableware makes it difficult to use the strategy to regulate food sizes. Therefore, smaller plates should be made available for controlling food sizes (Hughes, et al., 2017).

### 2.3.3 Influence of Nutritional Knowledge on Menu Choice Decisions

Diet-sensitive non-communicable diseases (NCDs) are on the rise and continue to spread, even in developing countries, where they contribute to the major public health burden of disease and mortality (WHO, 2018b). In 2021 alone, nearly $39 \%$ of all reported deaths in Kenya were related to NCD (MoH, 2021). Being overweight and/or obese linked with enhanced deposition of body fat (Aktar, Qureshi, \& Ferdous, 2017) is a major risk factor for increased incidences of diabetes, hypertension, and heart disease, as well as decreased longevity (Mkuu, Epnere, \& Chowdhury, 2018). Primarily, obesity is caused by changes in dietary habits and reduced daily activity, which has serious financial consequences in countries where most of the populace is obese (Rossner, 2014). The hotel industry is blamed for exposing customers to unhealthy dietary behaviours (Tal, Grinstein, \& Kleijnen, 2023), such as consuming
junk foods associated with increased body weight (Mitchell, 2021). Thus, eateries influence customers' dietary habits and eating patterns (Paquet, 2019).

Consumers' nutritional knowledge is critical for developing healthy eating habits that allow the body to meet its dietary needs (Ali, et al., 2020) and maintain the required weight (Eze, et al., 2017). Therefore, understanding the relationship between nutrition and health is important to promote the intake of foods that prevent or control dietrelated illnesses (Kolodinsky, Harvey-Berino, Berlin, Johnson, \& Reynolds, 2007) and enhance appropriate intentions and action on menu choice decisions (Sharma, et al., 2010). Customers are willing to pay more for products perceived to be healthy (Jo, Lusk, Muller, \& Ruffieux, 2016) based on the premise that food quality is formed by perception (Baiardi, Puglisi, \& Scabrosetti, 2016). Hence, satisfaction from the eatingout experience depends on customers' levels of awareness. For example, customers' menu choices could embrace their lifestyle or follow a food pyramid (Choi \& Zhao, 2010). Similarly, customer unawareness or unfamiliarity with some foods may result in a version of certain diets (Boccia, Covino, \& Sarnacchiaro, 2018).

According to Ha and Caine-Bish (2011), nutrition education improves customer knowledge in menu choice decisions. It is also associated with increased knowledge of healthy eating habits (Melesse \& Berg, 2021). Furthermore, the link between nutritional knowledge and behaviour change supports the use of nutrition education as a tool in food choice interventions. Katenga-Kaunda, et al. (2020) investigated the dietary intake and processes of behaviour change in a nutrition education intervention and reported that nutrition education is a behaviour modifier. However, Chen, Perez-Cueto, Giboreau, Mavridis and Hartwell (2020) proposed that knowledge alone is insufficient
to influence behaviour as it could be mediated by other factors, including the availability of foods to reinforce a change. Therefore, it is possible to conclude that customers with low income are more likely to have poor nutrition education based on the methods of acquiring knowledge (Bartkiene, et al., 2019)

### 2.3.4 Influence of Food Consumption Habits on Menu Choice Decisions

Customers' food intake behaviours are heavily influenced by their eating environment. For example, the availability and accessibility of healthy foods, the frequency of consuming family meals, and parenting practices have an impact on consumption habits (Faught, Vander Ploeg, Chu, Storey, \& Veugelers, 2016). Equally, urbanization has separated a large part of the world populace from direct agricultural production, leading to changes in consumption habits (Hawkes, Harris, \& Gillespie, 2017). Previously, Horst, Brunner and Siegrist (2011), noted that a significant number of urban households consume fewer foods prepared at home due to lack of time, skills and cooking knowledge. Thus, the convenience of fast foods is an appealing factor in enhancing their consumption (Zagorsky \& Smith, 2017). In addition, customers are attracted to the taste of foods that are often high in fats, sugar and salt (Rudelt, French, \& Harnack, 2013).

Food consumption habits have evolved with customer concerns for healthy menus to protect them from diseases (Ali \& Rahut, 2019). This is due to the realization that diets high in saturated fats and sodium and low nutritional value expose individuals to an increased risk of weight gain and/or obesity (Mohammadbeigi, et al., 2018). Lifestyle changes and attention to healthier diets among customers are shaping the hospitality industry. Notably, there has been a heightened demand for natural products and the
reemergence of traditional or indigenous foods in hotel menus (Gakobo \& Jere, 2016). Traditional foods are thought to be fresh and nutritious (Sharma, Moon, \& Strohbehn, 2014). Thus, they have received global attention with increased levels of awareness among customers on their potential to contribute to better health and sustainable diets (FAO, 2013). Trafialek, Czarniecka-Skubina, Kulaitiene and Vaitkeviciene (2020), emphasize that the origin of foods, visual attraction and freshness impact on consumption habits of customers in food outlets.

Customer preference is the most vital predictor of hotel or restaurant menu choice decisions (Glabska, Skolmowska, \& Guzek, 2021). Preferences are developed from expectations, experiences, attitudes and beliefs that influence the choice of foods throughout life since the selection of sweetness and aversion to bitter or sour tastes are present in humans from the early stages of life (Szalonka, et al., 2021). Therefore, taste is the most important motivator for food preference, with healthy foods coming in second because it is not always a viable option for those with limited budgets due to their socioeconomic factors (Menghini, Singh, \& Thyagarajan, 2020). In contrast, new food products may gain customer acceptance through repeated exposure (Caton, et al., 2013). Moreover, customers' biological differences in basic tastes and food liking result from learning experiences acquired during childhood and throughout their lifespan (Monterrosa, Frongillo, Drewnowski, de Pee, \& Vandevijvere, 2020). Equally, parents shape the environment in which their children encounter meals by providing and encouraging or restricting and rewarding with food (Vaughn, et al., 2016).

### 2.4 Theoretical Framework

To better understand the influence of healthy eating concerns on menu choice decisions, the researcher used the Food Choice Process Model and Theory of Planned Behaviour to comprehend how people make food choices.

### 2.4.1 The Food Choice Process Model

The most widely accepted theory to predict customer choices in the menu is the Food Choice Process Model developed by Furst, Connors, Bisogni, Sobal, and Falk (1996), as cited in Gorton and Barjolle (2013). This model incorporates the life course, influences, and personal systems into a comprehensive framework for identifying and highlighting potential elements influencing food choices (Chen \& Antonelli, 2020). The model asserts that choice is constructed by thoughts, feelings, and individual actions as people progress through a life course, resulting in a set of influences. Influences are ideals or beliefs that set expectations and standards to provide reference points for judging and evaluating food choices. This model also includes tangible and intangible resources, social frameworks, and a food context that considers the physical environment and supply. These factors shape personal systems reflecting on what is salient to individuals based on needs and preferences, as well as conscious and unconscious negotiations that may ensue in food-related decision-making situations. The model guided this study to achieve its objective by employing the elements of affordability, acceptability, and sensory appeal to establish customer menu choice decisions. As a result, the model concepts permitted decisions regarding the constructs of the dependent variable in developing the conceptual framework to address the study problem. Thus, customer menu choice decisions could be influenced by everyday
options that include affordability, acceptability (Guine, et al., 2020) and sensory appeal (Moura, et al., 2020).

### 2.4.2 Theory of Planned Behaviour (TPB)

Icek Ajzen's Theory of Planned Behavior (TPB) is an important theoretical framework that includes beliefs and attitudes to determine human behaviour (Ajzen, 1991). TPB is based on individuals' intention to perform a particular behaviour (Ajzen, 2002), which is determined by an attitude towards a conceived thought, subjective norms, and perceived behavioural control (Ajzen, 1991). McDermott, et al. (2015) assert that the TPB variables strongly correlate with the intention and behaviour to make healthy food choices. The theory depicts psychological factors that influence individuals' behaviour and has been useful in understanding customers' intentions toward consuming healthy foods. For instance, increased consumption of fruits, vegetables, and whole grain cereals is driven by food consumption habits (Alam, Ahmad, Ho, Omar, \& Lin, 2020), dietary patterns (McDermott, et al., 2015), food portions (Branscum \& Sharma, 2014), and nutritional knowledge (Ali, Al Naabi, Al-Hakamani, Al-Fahdi, \& Waly, 2020). These factors are thought to significantly influence the menu choice decisions to meet the body's nutritional requirements and maintain a healthy weight (Eze, et al., 2017). As a result, TPB guided the formulation of specific objectives of the study, which include assessing the influence of dietary patterns, food portions, nutritional knowledge, and food consumption habits, all of which are appropriate to predict customers' intentions to eat healthy foods (McDermott, et al., 2015; Guillaumie, Godin, \& Vezina-Im, 2010).

### 2.5 Conceptual Framework

The independent variables are composed of dimensions about customers' healthy eating concerns. These include dietary patterns (meal frequency, food variety and eating environment), food portions (serving size, portion control and plate size), nutritional knowledge (perception, awareness and nutrition education) and food consumption habits (fresh foods, fast foods and indigenous diets). Menu choice decisions are the dependent variable measured in terms of affordability (value for money, economic status, income), acceptability (socio-demographics) and sensory appeal. The research determined the extent to which the independent variables influence customer menu choice decisions in star-rated hotels, as shown in Figure 2.1 below.

Independent Variables
Dependent Variable

## Dietary Patterns

- Meal frequency
- Food variety
- Eating environment


## Food Portions

- Serving size
- Portion control
- Plate size

Nutrition knowledge

- Customers' perception
- Customers’ awareness level
- Nutrition education


## Food consumption habits

- Fresh foods
- Fast foods
- Indigenous diets

Figure 2.1 Conceptual Framework
Source: Modified from McDermott, et al.(2015) and Ajzen (2015) Model

## Summary of Literature Review

Table 2.1 Summary of Specific Research Gaps

| Researcher(s) | Focus of Study | Methodology | Finding(s) | Filling of Gaps |
| :---: | :---: | :---: | :---: | :---: |
| Ahn, et al. (2015) | The effect of providing nutritional information about fast-food restaurant menus on parents' meal choices for their children | The study involved an online survey using a menu board comprising five items with 242 parents of children aged 212. Participants were recruited from consumer panels of a research company in South Korea. | The results suggested that enhanced empowerment of parents using nutrition information could be a strategy to promote healthier parental food choices for children at fastfood restaurants. | This study used an explanatory research design to assess healthy eating concerns on menu choice decisions. <br> Respondents were customers who visited or stayed in a starrated hotel in Nakuru County, Kenya. |
| Glabska, et al. (2021) | Food <br> Preferences and Food Choice Determinants in a Polish Adolescents' COVID-19 Experience (PLACE-19) Study | The study was conducted in Poland with two cohorts of students in secondary schools aged 15-20 years. A two-stage stratified random sampling procedure was used to assess food preference using a Food Preference Questionnaire. | The results confirmed an association between food preference and choice among adolescents. | This study was conducted in the Kenyan context using an explanatory research design with customers dining in starrated hotels. |
| Moura, et al. (2020) | An approach on food choice determinants: a study in the restaurants of a public market in Northeastern Brazil | This study involved a crosssectional, exploratory, descriptive design with a total population of 198 diners in a public market from the capital of Northeastern Brazil. The respondents were interviewed using a pre-tested questionnaire. | The study reported that sensory appeal, price and health were the main determinants of food choices. | This study adopted an exploratory research design with a questionnaire as the data collection tool but focused on customers visiting starrated hotels in the Kenyan context. |


| Okoro, et al. (2017) | Influence of Nutrition Determinants on Construction Workers' Food Choices | Respondents were purposively <br> sampled, and an <br> extensive <br> literature review <br> was conducted to <br> identify food <br> choice <br> measurements. A <br> 5-point Likert- <br> scale <br> questionnaire <br> comprising two <br> sections was <br> administered to <br> site construction <br> workers in <br> Gauteng Province of South Africa. | Findings revealed that the consumption of foods was influenced by nutritional knowledge and resources. | The present study involved customers dining in starrated hotels in the Kenyan context. |
| :---: | :---: | :---: | :---: | :---: |
| Szalonka, et <br> al. (2021) | Food Choices and Their Impact on Health and Environment | The study involved a tree method with a sample population of 428 Polish residents aged 1565 and aged 65 and over. <br> Respondents were controlled based on places of residence, age and gender. The study was not conducted in the context of the hospitality industry. | The findings showed that health is significantly influenced by consuming appropriate products and paying attention to the information on food labels. | The present study utilized an explanatory design among star-rated hotel customers in Kenya. The study was also not controlled by the place of residence, age or gender of customers. |

Despite the variation in the quality of menu items served within or across different restaurants, research on healthy eating concerns in Kenya has primarily focused on hotel selection criteria and elements that influence customers' decisions to dine out (Wasike et al., 2017; Onyango \& Wasike, 2018; Bor et al., 2018). Similarly, regulatory authorities in countries such as Malaysia (Din et al., 2012) and Thailand (Suvittawat et al., 2019) have implemented rules requiring calorie information to be disclosed on menus (Wisdom et al., 2013). However, the social norms, regulations, and culture that
influence consumer menu choice decisions vary by nation, necessitating the current study to be conducted in the Kenyan context. Prior research has also revealed a paucity of evidence on customers' healthy eating concerns related to dietary patterns, food portions, nutrition knowledge, and food consumption habits as effective tools in food choice intervention.

## CHAPTER THREE

## METHODOLOGY

### 3.1 Introduction

This section describes the research design, study area, target population, sample and sampling procedure, data collection procedures, pilot study, validity and reliability of research instruments, data analysis and ethical considerations.

### 3.2 Research Design

A research design details the procedures used to obtain the information required to solve a research problem (Robson \& McCartan, 2016). It outlines the plans that effectively and efficiently facilitate data collection, measurement, and analysis to conduct the research operations efficiently (Kothari \& Garg, 2014). This study adopted an explanatory research design, which was ideal for determining the degree to which variables are related and making predictions on the occurrence of social or physical phenomena (Elahi \& Dehdashti, 2011). This design aimed to explain rather than merely describe the study phenomena to generalize findings (Gratton \& Jones, 2010). The study design helped to discuss whether phenomenon Y (customer menu choice decisions) is affected by variable X (healthy eating concerns).

### 3.3 Study Area

The research was conducted in Nakuru County of Rift Valley region, Kenya. The area was selected because it has the potential for star-rated hotels with standard food quality management systems, including bulk purchase and long-term food storage, due to centralized procurement in chain hotels. This region is also an excellent destination for local and international tourists (Zocchi \& Fontefrancesco, 2020). The area is bordered
to the north by Baringo County, to the east by Laikipia and Nyandarua Counties, to the south by Kajiado County and west by Narok, Bomet and Kericho Counties. The County has a land area of $7464.4 \mathrm{~km}^{2}$ and a population of 570,674 people as per the Kenya National Bureau of Statistics (KNBS) survey of 2019 (KNBS, 2020).

### 3.4 Target Population

The target population is an aggregation of all members of a real or hypothetical set of people, events or objects to which the findings may be generalized (Pandey \& Pandey, 2015). The target population was 785 customers (Table 3.1). The sample population was calculated according to the procedures of Kwenga, Fwaya, and Barasa (2022) using the Central Bank of Kenya (CBK) statistics on hotel occupancy rate as of March 2022 of 43.8 percent (CBK, 2022) of the 19 star-rated hotels in Nakuru County, Kenya. This study focused on customers because they were aware of their levels of engagement with hotel service providers and could provide feedback on the relationship between the study variables for generalization purposes.

Table 3.1 Target Population

| S/No | Star <br> Rating | Strata | The target <br> population was <br> calculated based on <br> the occupancy rate <br> of 43.8\% (Nh) |
| :---: | :---: | :--- | :---: |
| 1 | $* * * * *$ | Enashipai Resort and Spa | 94 |
| 2 | $* * * * *$ | Lake Elementaita Serena Camp | 22 |
| 3 | $* * * *$ | Sentrim Elementaita Lodge | 73 |
| 4 | $* * * *$ | Lake Naivasha Sopa Resort | 72 |
| 5 | $* * * *$ | Lake Naivasha Sawela Lodge | 66 |
| 6 | $* * * *$ | Sarova Lion Game Lodge | 59 |
| 7 | $* * * *$ | Lake Nakuru Sopa Lodge | 60 |
| 8 | $* * * *$ | Naivasha Kongoni Lodge | 13 |
| 9 | $* * * *$ | Sunbird Lodge | 14 |
| 10 | $* * *$ | Lake Naivasha Simba Lodge | 61 |
| 11 | $* * *$ | Waterbuck | 61 |
| 12 | $* * *$ | Lake Nakuru Flamingo Lodge | 40 |
| 13 | $* * *$ | Hillcourt Resort \& Spa | 22 |
| 14 | $* * *$ | The Ole Ken Hotel | 24 |
| 15 | $* * *$ | Hotel City Max | 25 |
| 16 | $* *$ | Chester Hotel | 16 |
| 17 | $* * *$ | Kabarak University Guest House | 14 |
| 18 | $* *$ | Agricultural Resource Centre (ARC) Hotel | 42 |
| 19 | $* * *$ | Loldia House | 8 |
|  |  | $\mathbf{7 8 5}$ |  |

Source: Tourism Regulatory Authority (TRA, 2021). From the list, there were no one-star-rated hotels in Nakuru County as of the classification of 2021.

### 3.5 Sample Size and Sampling Procedure

The number of items chosen from the universe to constitute a sample is referred to as sample size (Kothari \& Garg, 2014). The sampling procedure is selecting units from a population of interest, such as people or organizations, to generalize the study results (Cameron \& Miller, 2015).

### 3.5.1 Sampling Frame

A sampling frame, according to Martinez-Mesa, Gonzalez-Chica, Duquia, Bonamigo, and Bastos (2016), is a group of individuals who can be chosen from an accessible population based on the sampling procedure. Therefore, the sampling frame for this study was customers from 19 star-rated hotels in Nakuru County, Kenya.

### 3.5.2 Sample Size

The sample size is the number of respondents determined by the scope (Collis \& Hussey, 2009) and items in the sampling frame to be included in the investigation. This study targeted a total population of 785 customers. Yamane's (1967) formula, as applied by Kent and Myers (2008), was used to select a sample size of 265 customers, as shown below:

$$
\mathrm{n}=\frac{\mathrm{N}}{1+\mathrm{Ne}^{2}}
$$

Where:

$$
\begin{aligned}
& \mathrm{n}=\text { Sample size } \\
& \mathrm{N}=\text { Population size } \\
& \mathrm{e}=\text { the error of Sampling }
\end{aligned}
$$

The study allowed a sampling error of 0.05 . Thus, the sample size will be:

$$
\begin{aligned}
& \mathrm{n}=\frac{785}{1+785 \times 0.05^{2}} \\
& =\mathbf{2 6 5} \text { Respondents }
\end{aligned}
$$

The sample population was distributed proportionally using Neyman's allocation formula (Singh \& Micah, 2013). The goal of the method was to maximize precision given a fixed sample size. With Neyman's allocation, the best sample size for strata h would be:

$$
\mathrm{n}_{\mathrm{h}}=\left(\frac{\mathrm{N}_{\mathrm{h}}}{\mathrm{~N}}\right) \mathrm{n}
$$

Where,
$\mathrm{n}_{\mathrm{h}}$ - The sample size for strata h
n - Total sample size,
$\mathrm{N}_{\mathrm{h}}$-The population size for strata h
N - The total population
As a result, the respondents were chosen through a simple random sampling procedure, and their distributions were recorded in Table 3.2.

Table 3.2 Sample Size

| Ratings | Strata | Target population <br> $\left(\mathbf{N}_{\mathbf{h}}\right)$ | Sample size <br> $\left(\mathbf{n}_{\mathbf{h}}\right)$ | \% |
| :---: | :--- | :---: | :---: | :---: |
| $* * * * *$ | Enashipai Resort and Spa | 32 | 12.08 |  |
| $* * * * *$ | Lake Elementaita Serena Camp | 22 | 7 | 2.64 |
| $* * * *$ | Sentrim Elementaita Lodge | 73 | 25 | 9.43 |
| $* * * *$ | Lake Naivasha Sopa Resort | 72 | 24 | 9.06 |
| $* * * *$ | Lake Naivasha Sawela Lodge | 66 | 22 | 8.30 |
| $* * * *$ | Sarova Lion Game Lodge | 59 | 20 | 7.55 |
| **** | Lake Nakuru Sopa Lodge | 60 | 20 | 7.55 |
| **** | Naivasha Kongoni Lodge | 13 | 4 | 1.51 |
| $* * * *$ | Sunbird Lodge | 14 | 5 | 1.89 |
| $* * *$ | Lake Naivasha Simba Lodge | 61 | 21 | 7.92 |
| $* * *$ | Waterbuck | 61 | 21 | 7.92 |
| $* * *$ | Lake Nakuru Flamingo Lodge | 40 | 13 | 4.91 |
| $* * *$ | Hillcourt Resort \& Spa | 72 | 2.64 |  |
| $* * *$ | The Ole Ken Hotel | 24 | 8 | 3.02 |
| $* *$ | Hotel City Max | 25 | 8 | 3.02 |
| $* *$ | Chester Hotel | 16 | 5 | 1.89 |
| $* *$ | Kabarak University Guest House | 14 | 5 | 1.89 |
| $* *$ | Agricultural Resource Centre | 42 | 14 | 5.28 |
| $* *$ | Loldia House | 8 | 3 | 1.13 |
|  | Total | $\mathbf{7 8 5}$ | $\mathbf{2 6 5}$ | $\mathbf{1 0 0}$ |

Source: Tourism Regulatory Authority, 2021

### 3.5.3 Sampling Procedure

Sampling is a method of selecting observation units from a population of interest, such as people or organizations, to objectively generalize results for the population they were drawn from (Cameron \& Miller, 2015). Assessing a sample population is efficient, costeffective and provides quicker results with greater precision (Hair, Wolfinbarger, Money, Samouel, \& Page, 2015). This study used a multi-stage sampling technique, a type of probability sampling. First, the study area was determined using purposive sampling based on the researcher's knowledge or experience of the group. A stratified random sampling method that divides the population into strata or subgroups was then utilized to select the star-rated hotels, from which the researcher selected a per-stratum sample from within each stratum (Nguyen, Shih, Srivastava, Tirthapura, \& Xu, 2019). Each star-rated hotel was represented based on the number of customers. Lastly, the respondents were chosen using simple random procedures, in which a sample of " n " was drawn from the " N " number of sampling units, with each unit having an equal chance of being chosen (Abdelfatah, Mazloum, \& Singh, 2013). Simple random sampling was also useful as it permitted the study to apply descriptive and inferential statistics (Saunders, et al., 2018).

### 3.6 Data Collection Procedures

This study used a quantitative approach by administering questionnaires to collect primary data from respondents. A questionnaire is a pre-formulated written set of questions to which the interviewees record their responses in a pre-determined order to provide the researcher with data that can be analyzed, interpreted and suitable where standardized data is required (Roopa \& Rani, 2012). The questionnaire had closedended questions, and items used a 5-point Likert scale, where 1 represented strongly
disagree and 5 strongly agree to measure perceptions, attitudes, values and behaviours. Closed-ended questions enhanced comparison and ease of processing and showed relationships among variables. The questionnaire was administered to the customers with the assistance of the hotel management and staff. The researcher employed the lottery method, where ballot papers containing a yes or no were placed in a bag and the customers were requested to pick a ballot paper. If one picked yes, they were given a questionnaire to answer. The customers were allowed to fill out the questionnaire on their own time in restaurants or rooms.

### 3.7 Pilot Study

A pilot study uses a smaller sample compared to the planned sample size as a strategy to test the research tool, detect weaknesses in the research design, and provide proxy data for selecting a probability sample (Fink, 2015). The procedures of pre-testing the research tool were similar to those followed in the data collection. In this study, a pilot test on the questionnaire was conducted to ensure the validity of the study design. A pilot study was carried out in selected star-rated hotels in Uasin Gishu County due to their similar characteristics to the study area. The sample population of a pilot test should be smaller, about $1 \%$ to $10 \%$ of the sample size (Kothari \& Garg, 2014). In this study, 27 respondents participated in the piloting of the research instrument, which is $10 \%$ of 265 respondents. Subsequently, grammatical errors were corrected, and the final questionnaire was disseminated to the respondents.

### 3.8 Validity and Reliability of the Study

### 3.8.1 Validity of the Study

Validity is the extent to which research findings accurately reflect the phenomenon under investigation (Collis \& Hussey, 2009). Face validity is the researcher's subjective assessment of the presentation of the measuring instrument, whether it appears to be relevant, reasonable, unambiguous, or clear (Taherdoost, 2016). In this study, face validity was ascertained by the research instrument covering the concepts in the study. The researcher also considered each item in the research instrument and discussed it with supervisors and other research experts to ascertain the appropriateness and applicability of the content, clarity, and adequacy. Criterion validity is the extent to which a measure is related to an outcome (Taherdoost, 2016). In this study, criterion validity was attained by correlating the results of dependent variables as explained by independent variables. Content validity is the extent to which a measuring instrument adequately covers the topic under study (Kothari \& Garg, 2014). Content validity was achieved by relating the research results to theoretical approaches and literature review.

### 3.8.2 Reliability of the Study

Reliability is the measure of the degree to which a research instrument yields consistent results or data on repeated trials (Orodho, Abobo, \& Osero, 2014). The Cronbach alpha test was used to measure the internal consistency. In respect to pilot results, Cronbach alpha for standardized items for each of the variables was as follows: dietary patterns had an $\alpha$ of .752, food portion an $\alpha$ of .859 , nutritional knowledge an $\alpha$ of .835 , food consumption an $\alpha$ of .791 and consumer food choice an $\alpha$ of .932 as presented in table 3.2. Therefore, it implied that the instrument was reliable as all variables met the threshold of a minimum $\alpha$ of 0.70 .

Table 3.2: Reliability

| Variable | No of items | Cronbach's Alpha standardized items |
| :--- | :---: | :---: |
| Menu Choice Decisions | 6 | .932 |
| Dietary Patterns | 6 | .752 |
| Food Portions | 6 | .859 |
| Nutrition Knowledge | 6 | .835 |
| Food Consumption | 6 | .791 |

### 3.9 Data Analysis

The questionnaires were coded, checked for completeness of response, and tabulated using the number of cases that fell into various categories. The data was then analyzed using descriptive and inferential statistical techniques. Descriptive statistics such as frequency distribution and percentages were used to describe the demographic characteristics of customers. Measures of central tendency and dispersion are computed for variables using means and standard deviations, skewness, and kurtosis. Since the study assessed the relationship between healthy eating concerns and menu choice decisions, a correlation analysis was performed to ascertain a relationship between variables. A correlation coefficient test and significant levels were conducted to check the strength of the linear relationships between pairs of variables. Multiple regression analysis was used to examine the linear relationship between the independent variables (dietary patterns, food portions, nutritional knowledge, and food consumption habits) and the dependent variable (menu choice decisions). The data was analyzed using Statistical Package for Social Sciences (SPSS) software version 26.0. The regression model is as follows:

$$
y=\beta_{o}+\beta_{1} X_{1}+\beta_{2} X_{2}+\beta_{3} X_{3}+\beta_{4} X_{4}+\varepsilon
$$

Where:
$\mathrm{Y}=$ Menu Choice Decisions
$\beta_{0}=$ Intercept when x is zero
$\mathrm{X}_{1}=$ Dietary pattern
$\mathrm{X}_{2}=$ Food Portion
$\mathrm{X}_{3}=$ Nutritional knowledge
$\mathrm{X}_{4}=$ Food Consumption Habit
$\varepsilon=$ Error term

### 3.10 Ethical Considerations

The researcher obtained permission from the National Commission for Science, Technology and Innovation (NACOSTI) through the Department of Hotel and Hospitality in the School of Business, Economics and Management Sciences at the University of Eldoret as required by law on research undertaken in Kenya. Before administering the questionnaire, a letter stating the purpose of the research, how the researcher was to maintain privacy and anonymity, and a consent form was made available to ensure that the participants' rights were protected during data collection. The questionnaire provided instructions to respondents requiring them to indicate the extent to which they agree, disagree or are undecided about the statements of constructs they are required to give their responses.

## CHAPTER FOUR

## RESULTS

### 4.1 Introduction

This chapter presents data analyses using the methodologies discussed in Chapter Three. The main objective of this study was to assess the influence of healthy eating concerns on menu choice decisions amongst customers in star-rated hotels in Nakuru County, Kenya. The study was guided by the following specific objectives: to establish the influence of dietary patterns, food portions, nutritional knowledge, and food consumption habits on menu choice decisions among customers in star-rated hotels in Nakuru County, Kenya. The chapter involves the response rate, demographic characteristics of the respondents, and the presentation of descriptive and inferential statistical results.

### 4.2 Responses Rate

A total of 265 structured questionnaires were distributed to customers of star-rated hotels in Nakuru County, Kenya, out of which 211 questionnaires were filled and returned. Twenty-three (23) questionnaires were discarded because they were incomplete or lacked responses, leaving the researcher with 188 correctly filled questionnaires. This represented a response rate of 70.9 percent, which was considered adequate to draw conclusions for a study. Rea and Parker (2014), posit that a response rate of 50 percent and above is adequate for analysis; 60 percent is good, and 70 percent and above is very good.

### 4.3 Demographic Characteristics of the Respondents

The findings on the demographic characteristics of respondents are presented in Table 4.1. The findings depict that the majority of respondents were males ( $57.4 \%$ ), with females making up $42.6 \%$ of the respondents. This suggests males make up a large population of customers likely to eat out of home. According to the findings, the majority of respondents (39.9\%) were between the ages of 41 and 50 , followed by those between 31 and 40 years ( $30.9 \%$ ), 51 to 60 years ( $20.7 \%$ ), and 20 to 30 years ( $8.5 \%$ ) respectively. This indicates that most customers were over 30 years old. The results also show that a higher percentage of respondents (60.1\%) had attained university education. Customers with a good education could comprehend the purpose of the study and correctly interpret the questionnaire.

Moreover, out of the 188 respondents, $39.9 \%$ had visited star-rated hotels 16 times or more, $32.4 \%$ between 11 and 15 times, $14.9 \%$ between 6 and 10 times, $8.5 \%$ for the first time, and 4.3\% had visited less than 5 times. The implication of this is that most customers had experience dining in star-rated hotels. The main reasons for respondents' visitation varied from business or work-related activities (35.1\%), family gatherings (26.1\%), normal dining or dating ( $16 \%$ ), and special occasions (15.4\%). A few (4.2\%) of the respondents also reported being on holiday, while a smaller percentage (3.2\%) indicated they did not have time to cook. This suggested that these respondents were able to provide valuable insights for the study.

Table 4.1: Demographic Characteristics of Respondents

| Variables | Categories | Frequency | Percentage |
| :--- | :--- | :---: | :---: |
| Gender | Male | 108 | 57.4 |
|  | Female | 80 | 42.6 |
| Age | 20-30 Years | 16 | 8.5 |
|  | 31-40 Years | 58 | 30.9 |
|  | 41-50 Years | 75 | 39.3 |
|  | 51-60 Years | 39 | 20.7 |
| level of Education | Certificate | 34 | 18.1 |
|  | Diploma | 41 | 21.8 |
|  | Bachelors | 84 | 44.7 |
|  | Post-Graduate | 29 | 15.4 |
| Occupation | Unemployed | 24 | 12.7 |
|  | Employed | 102 | 54.3 |
|  | Self-employed | 62 | 33.0 |
|  | First Time | 16 | 8.5 |
| rated hotel | Below 5 Times | 8 | 4.3 |
|  | 6-10 Times | 28 | 14.9 |
|  | 11-15 Times | 61 | 32.4 |
|  | 16 Times and More | 75 | 39.9 |
| The main reason for dining | 29 | 14.4 |  |
|  | Special occasion | 8 | 4.2 |
|  | Foaidily visit | gathering | 49 |
|  | No time to cook | 6 | 26.1 |
|  | Normal dining/dating | 30 | 1.2 |
|  | Business/Work-related | 66 | 16.0 |

### 4.4 Descriptive Statistics for the Study Variables

Respondents were required to rate their level of satisfaction with positively phrased statements on a five-point Likert scale, where 1 represented strongly disagree, 3 undecided and 5 strongly agree.

### 4.4.1 Customer Menu Choice Decisions

The dependent variable of the study was customer menu choice decisions. The study conceptualized that healthy eating concerns could affect consumers' menu choice decisions. To this end, six questionnaire items were used to explore menu choice decisions amongst customers in star-rated hotels in Nakuru County, Kenya. Table 4.2 shows that the respondents agreed that they choose food with good quality to value at $79.8 \% ~(\mathrm{M}=4.21, \mathrm{SD}=.758)$ and are willing to pay more for organic food products
offered on the menu at $75 \%(\mathrm{M}=4.16, \mathrm{SD}=.798)$. These results demonstrate that customers are of the opinion that organic foods form healthier choices amongst hotel customers.

Moreover, the respondents agreed that they choose foods based on their origin or socialcultural background at $79.8 \%(\mathrm{M}=4.18, \mathrm{SD}=.745)$ and what their family and friends prefer on the menu at $87.8 \%(M=4.18, S D=.714)$. This implies that cultural values influence menu choice decisions. Similarly, the respondents considered appearance or colour variation at $75 \%(\mathrm{M}=4.13, \mathrm{SD}=.837)$ and good aroma or flavour at $75.6 \%(\mathrm{M}$ $=4.20, \mathrm{SD}=.820$ ) in their menu choice decisions. This means that sensory appeal affects consumer menu choice decisions. These findings summed up to an average mean of 4.25 .

Table 4.2 Customer Menu Choice Decisions

| No | Response item |  | SD | D | UD | A | SA | M | Std <br> Dev |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1.1 | I choose food that has | F | 0 | 0 | 38 | 72 | 78.4 | 4.21 | . 758 |
|  | good quality to value | \% | 0.0 | 0.0 | 20.2 | 38.3 | 41.5 |  |  |
| 1.2 | I am willing to pay more | F | 0 | 0 | 47 | 64 | 77 | 4.16 | . 798 |
|  | for organic food products offered on the menu | \% | 0.0 | 0.0 | 25.0 | 34.0 | 41.0 |  |  |
| 1.3 | I choose to eat foods from | F | 0 | 0 | 38 | 78 | 72 | 4.18 | . 745 |
|  | my origin or socialcultural background | \% | 0.0 | 0.0 | 20.2 | 41.5 | 38.3 |  |  |
| 1.4 | I select foods that other | F | 0 | 1 | 31 | 90 | 66 | 4.18 | . 714 |
|  | family members and friends prefer on the menu | \% | 0.0 | 0.5 | 16.5 | 47.9 | 35.1 |  |  |
| 1.5 | I consider appearance and | F | 0 | 4 | 43 | 66 | 75 | 4.13 | . 837 |
|  | colour variation in my food choice | \% | 0.0 | 2.1 | 22.9 | 35.1 | 39.9 |  |  |
| 16 | I choose and eat foods that | F | 0 | 1 | 45 | 58 | 84 | 4.20 | . 820 |
|  | I consider to have good aroma or flavour | \% | 0.0 | 0.5 | 23.9 | 30.9 | 44.7 |  |  |
|  | Average Mean |  |  |  |  |  |  | 4.25 |  |

### 4.4.2 Influence of Dietary Patterns on Menu Choice Decisions

The research sought to determine the influence of dietary patterns on menu choice decisions using six items on the questionnaire. According to the findings in Table 4.3, the respondents agreed that they often eat at least three meals a day at $90.4 \% ~(M=4.48$, $\mathrm{SD}=.666)$, snack in between meals at $78.7 \%(\mathrm{M}=4.26, \mathrm{SD}=.839)$ and consider variety in selection of their food items at $73.4 \%(M=4.07, S D=.916)$. This implies that the variety and frequency of meals influence customers' dietary patterns. In addition, a majority of respondents agreed that hotels offer a variety of diets to be selected from the menu at $74 \%$, as presented in Table 4.3. This item achieved a mean of 4.18 and a standard deviation of (0.833), indicating that customers are satisfied with the variety of foods offered by the hotels. Moreover, the respondents agreed that they often eat more when in the company of others at $88.3 \%(\mathrm{M}=4.14, \mathrm{SD}=.599)$ but were undecided on their preference to eat alone at $31.4 \%(\mathrm{M}=3.77, \mathrm{SD}=.773)$. These suggest that people eat more when they observe others eat. The results summed up to an average mean of 4.15.

Table 4.3 Influence of Dietary Patterns on Menu Choice Decisions

| No | Response item |  | SD | D | UD | A | SA | M | Std <br> Dev |
| :--- | :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2.1 | I often eat at least three | F | 0 | 0 | 18 | 62 | 108 | 4.48 | .666 |
|  | meals a day | $\%$ | 0.0 | 0.0 | 9.6 | 33.0 | 57.4 |  |  |
| 2.2 | I often snack in between | F | 0 | 4 | 36 | 56 | 92 | 4.26 | .839 |
|  | meals | $\%$ | 0.0 | 2.1 | 19.1 | 29.8 | 48.9 |  |  |
| 2.3 | I consider variety in the | F | 0 | 11 | 39 | 63 | 75 | 4.07 | .916 |
|  | selection of food items to | $\%$ | 0.0 | 5.9 | 20.7 | 33.5 | 39.9 |  |  |
|  | eat |  |  |  |  |  |  |  |  |
| 2.4 | The hotel offers a variety | F | 0 | 1 | 48 | 55 | 84 | 4.18 | .833 |
|  | of diets to be selected | $\%$ | 0.0 | 0.5 | 25.5 | 29.3 | 44.7 |  |  |
|  | from the menu |  |  |  |  |  |  |  |  |
| 2.5 | I often eat more when in | F | 0 | 0 | 22 | 117 | 49 | 4.14 | .599 |
|  | the company of others | $\%$ | 0.0 | 0.0 | 11.7 | 62.2 | 26.1 |  |  |
| 2.6 | I prefer to eat alone | F | 0 | 8 | 59 | 90 | 31 | 3.77 | .773 |
|  |  | $\%$ | 0.0 | 4.3 | 31.4 | 47.9 | 16.5 |  |  |
|  | $\quad$ Average Mean |  |  |  |  |  |  | $\mathbf{4 . 1 5}$ |  |

### 4.4.3 Influence of Food Portions on Menu Choice Decisions

The research used six questionnaire items to examine the effect of food portions on menu choice decisions. Results in Table 4.4 show that respondents agreed to eat large servings of fruits and vegetables at $83.2 \%$. The item scored a mean of 4.23 , with a standard deviation of (0.715), indicating that customers understand how to select foods that are good for their health. Similarly, the respondents agreed that they prefer larger food portions as they offer value for money at $80.3 \%$, represented by a mean of 4.26 and a standard deviation of (0.768). However, respondents rated this construct as undecided at $33.0 \%$, with a mean of 3.88 and a standard deviation of (0.768). These suggest that customers consider the economic value of food when making their menu choices.

Besides, the respondents agreed that star-rated hotels consider food portion control during service at $81.9 \%$, with a mean of 4.16 and a standard deviation of ( 0.721 ). This implies that staff in star-rated hotels explain the menu to customers. Furthermore, $18.1 \%(\mathrm{M}=3.31, \mathrm{SD}=.853)$ were undecided on choosing a smaller plate size, while $25.5 \%(\mathrm{M}=3.72, \mathrm{SD}=.820)$ were undecided on considering the MyPlate concept during self-service. These results suggest that customer satisfaction could be influenced by the size of the tableware and the type of food they like. These items scored an average mean of 3.93.

Table 4.4 Influence of Food Portions on Menu Choice Decisions

| No | Response item |  | SD | D | UD | A | SA | M | $\begin{aligned} & \text { Std } \\ & \text { Dev } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 3.1 | I eat large servings of fruits and vegetables | F | 0 | 0 | 31 | 82 | 75 | 4.23 | . 715 |
|  |  | \% | 0.0 | 0.0 | 16.5 | 43.6 | 39.6 |  |  |
| 3.2 | I prefer larger food portions as they offer me value for money | F | 0 | 0 | 37 | 65 | 86 | 4.26 | . 768 |
|  |  | \% | 0.0 | 0.0 | 19.7 | 34.6 | 45.7 |  |  |
| 3.3 | I consider food portion control in my selection of what to eat | F | 0 | 2 | 62 | 81 | 43 | 3.88 | . 768 |
|  |  | \% | 0.0 | 1.1 | 33.0 | 43.1 | 22.9 |  |  |
| 3.4 | The hotel considers food portioning during service | F | 0 | 1 | 33 | 89 | 65 | 4.16 | . 721 |
|  |  | \% | 0.0 | 0.5 | 17.6 | 47.3 | 34.6 |  |  |
| 3.5 | I choose smaller plate sizes on self-service (buffet) | F | 0 | 48 | 34 | 106 | 0 | 3.31 | . 853 |
|  |  | \% | 0.0 | 25.5 | 18.1 | 56.4 | 0.0 |  |  |
| 3.6 | I consider the MyPlate concept during selfservice (buffet service) <br> Average Mean | F | 0 | 16 | 48 | 96 | 28 | 3.72 | . 820 |
|  |  | \% | 0.0 | 8.5 | 25.5 | 51.1 | 14.9 |  |  |
|  |  |  |  |  |  |  |  | 3.93 |  |

### 4.4.4 Influence of Nutrition Knowledge on Menu Choice Decisions

The respondents' perceptions were sought on the influence of nutritional knowledge on menu choice decisions using six questionnaire items, as illustrated in Table 4.5. The respondents agreed at $75 \%$ that they preferred foods that make them feel good. The item realized a mean of 4.16 and a standard deviation of (0.798). The findings also indicate that respondents agreed (81.4\%) that they preferred foods that keep them awake or alert. The item mean was 4.13 , with a standard deviation of (0.697). The results indicate that the customers have knowledge of foods that delight their moods.

In addition, a higher percentage ( $72.4 \%$ ) of respondents indicated that they pay attention to nutritional value in food selection, are knowledgeable about food safety ( $73.9 \%$ ), and choose foods that keep them healthy ( $83 \%$ ). These items were represented by mean values of $4.14,4.07$, and 4.26 , with standard deviations of $(0.822,0.770$, and
0.732 ), respectively. These results confirm that customers have knowledge of food quality that aids in enhancing their health status and well-being. Likewise, the respondents were undecided (39.3\%) on their capability to read and interpret menu language while selecting food items, with a mean of 3.60 and a standard deviation of (0.491), implying that these customers could not interpret the terms and language used in the menu. The items summed up to an average mean of 4.06.

Table 4.5 Influence of Nutrition Knowledge on Menu Choice Decisions

| No | Response item |  | SD | D | UD | A | SA | M | Std <br> Dev |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 4.1 | I select food items that make me feel good | F | 0 | . | 47 | 64 | 77 | 4.16 | . 798 |
|  |  | \% | 0.0 | 0.0 | 25.0 | 34.0 | 41.0 |  |  |
| 4.2 | I prefer foods that keep me awake or alert | F | 0 | 0 | 35 | 95 | 59 | 4.13 | . 697 |
|  |  | \% | 0.0 | 0.0 | 18.6 | 50.0 | 31.4 |  |  |
| 4.3 | I pay attention to nutritional value in selecting foods | F | 0 | 0 | 52 | 58 | 78 | 4.14 | . 822 |
|  |  | \% | 0.0 | 0.0 | 27.7 | 30.9 | 41.5 |  |  |
| 4.4 | I have knowledge of foods regarded as safe and cannot cause risk to my health | F | 0 | 0 | 49 | 76 | 63 | 4.07 | . 770 |
|  |  | \% | 0.0 | 0.0 | 26.1 | 40.4 | 33.5 |  |  |
| 4.5 | I select foods that keep me healthy and control my weight in my menu choice | F | 0 | 0 | 32 | 75 | 81 | 4.26 | . 732 |
|  |  | \% | 0.0 | 0.0 | 17.0 | 39.9 | 43.1 |  |  |
| 4.6 | I can read and interpret the menu language while selecting foods of my choice | F | 0 | 0 | 75 | 113 | 0 | 3.60 | . 491 |
|  |  | \% | 0.0 | 0.0 | 39.9 | 60.1 | 0.0 |  |  |
|  |  |  |  |  |  |  |  |  |  |

Average Mean
4.06

### 4.4.5 Influence of Food Consumption Habits on Menu Choice Decisions

The study sought to determine the influence of food consumption habits on menu choice decisions using six questionnaire items (Table 4.6). The respondents (93\%) agreed that star-rated hotels offer foods that are fresh and in season. The item scored a mean of 4.48 and a standard deviation of (0.616), indicating that the customers have knowledge
of foods available during different seasons. In contrast, $29.8 \%$ of respondents were undecided on usually eating fast foods. This item obtained a mean of 3.71 and a standard deviation of (0.994), which demonstrates that customers are aware of foods that are hazardous to their health.

Lastly, the majority of customers (89.9\%) agreed that they value indigenous food products in their food selection, that star-rated hotels offer a variety of natural or local foods on their menus ( $91 \%$ ), that they prefer food items high in fibre and low in fat (93.1\%), and that they prefer foods without additives or preservatives (86.8\%). The items realized means of $.4 .35,4.47,4.44$, and 4.43 with standard deviations of $(0.672$, $0.657,0.638$, and 0.716 ), respectively. These findings reveal that consumers desire natural products or foods free of additives or preservatives. These results summed up to an average mean of 4.31.

Table 4.6 Influence of Food Consumption Habits on Menu Choice Decisions

| No | Response item |  | SD | D | UD | A | SA | M | $\begin{aligned} & \begin{array}{l} \text { Std } \\ \text { Dev } \end{array} \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5.1 | The hotel offers foods that are fresh and in season | F | 0 | 0 | 12 | 73 | 103 | 4.48 | . 616 |
|  |  | \% | 0.0 | 0.0 | 6.4 | 38.3 | 54.8 |  |  |
| 5.2 | I usually eat foods that are convenient and readily available | F | 0 | 24 | 56 | 59 | 49 | 3.71 | . 994 |
|  |  | \% | 0.0 | 12.8 | 29.8 | 31.4 | 26.1 |  |  |
| 5.3 | I value indigenous food products in my food selection | F | 0 | 1 | 18 | 84 | 85 | 4.35 | . 672 |
|  |  | \% | 0.0 | 0.5 | 9.6 | 44.7 | 45.2 |  |  |
| 5.4 | The hotel offers a variety of natural/local foods on the menu | F | 0 | 0 | 17 | 66 | 105 | 4.47 | . 657 |
|  |  | \% | 0.0 | 0.0 | 9.0 | 35.1 | 55.9 |  |  |
| 5.5 | I prefer food items high in fibre and low in fats on the menu | F | 0 | 1 | 12 | 79 | 96 | 4.44 | . 638 |
|  |  | \% | 0.0 | 0.5 | 6.4 | 42.0 | 51.1 |  |  |
| 5.6 | I prefer foods without additives and preservatives <br> Average Mean | F | 0 | 0 | 25 | 58 | 105 | 4.43 | . 716 |
|  |  | \% | 0.0 | 0.0 | 13.3 | 30.9 | 55.9 |  |  |
|  |  |  |  |  |  |  |  | 4.31 |  |

### 4.5 Factor Analysis of the Study Variables

Factor analysis is a statistical technique used to explain differences between observable random correlated variables using fewer unobserved random variables known as factors (Shrestha, 2021). Its primary goal is to summarize data so that relationships and patterns can be easily interpreted and understood. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was used to test the sample adequacy, and the results show that the KMO value was greater than 0.5 , and the Bartlett's Test was significant, indicating that the data was sufficient to conduct a study (Table 4.7).

Table 4.7 Kaiser-Meyer-Olkin (KMO) Measure

| No | Kaiser-Meyer-Olkin and Bartlett's Test |  |  |
| :---: | :--- | :---: | ---: |
| 1 | Kaiser-Meyer-Olkin Measure of Sampling Adequacy | .775 |  |
| 2 | Bartlett's Test of Sphericity | Approx. Chi-Square | 3220.612 |
|  | Df | 435 |  |
|  | Sig. | .000 |  |

Total variation analysis was used to determine the proportion of variance in a set of variables. The results show all of the components found in the study, as well as their eigenvalues, percentage of variation attributed to each component, and cumulative variance of the component and the previous components. The results show that all components were found to be relevant because they yielded eigenvalues greater than one (Table 4.8).

Table 4.8 Total Variance Explained

| No | Extraction Sums of Squared Loadings |  | Rotation Sums of Squared Loadings |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Initial <br> Eigenvalues | \% of <br> Variance | Cumulative <br> \% | Initial <br> Eigenvalues | \% of <br> Variance | Cumulative <br> \% |
| 1 | 7.649 | 25.498 | 25.498 | 3.645 | 12.152 | 12.152 |
| 2 | 2.370 | 7.901 | 33.399 | 3.481 | 11.605 | 23.756 |
| 3 | 1.971 | 6.571 | 39.970 | 2.745 | 9.151 | 32.907 |
| 4 | 1.690 | 5.634 | 45.604 | 2.046 | 6.821 | 39.729 |
| 5 | 1.437 | 4.790 | 50.394 | 1.947 | 6.489 | 46.217 |
| 6 | 1.305 | 4.349 | 54.743 | 1.664 | 5.548 | 51.765 |
| 7 | 1.280 | 4.266 | 59.008 | 1.436 | 4.788 | 56.553 |
| 8 | 1.121 | 3.738 | 62.746 | 1.335 | 4.449 | 61.001 |
| 9 | 1.100 | 3.666 | 66.413 | 1.272 | 4.239 | 65.241 |
| 10 | 1.069 | 3.565 | 69.978 | 1.230 | 4.101 | 69.341 |
| 11 | 1.009 | 3.362 | 73.340 | 1.200 | 3.998 | 73.340 |

Extraction Method: Principle Component Analysis

Principal Component Analysis (PCA) is a statistical method for reducing the dimension of large data sets to improve understanding while minimizing information loss (Jolliffe \& Cadima, 2016). The analyses were conducted to ensure that all elements related were to the same construct. PCA for independent variables of dietary patterns, food portions, nutritional knowledge, and food consumption habits, as well as dependent variable consumer food choice, is shown in Table 4.11. The results show that there were no errors because all variables received values greater than the 0.5 thresholds, satisfying the condition for communality.

## Table 4.9 Principal Component Analysis

| No | Response item | DP | FP | NK | FCH | MCD |
| :---: | :--- | :--- | :--- | :--- | :--- | :--- |
| 1 | $\begin{array}{l}\text { I often eat at least three meals a day }\end{array}$ | .922 |  |  |  |  |
| 2 | I often snack in between meals | .761 |  |  |  |  |$)$

Extraction Method: Principal Component Analysis
Rotation Method: Varimax with Kaiser Normalization

### 4.6 Assumptions of Multiple Regression Analysis

Multiple regression analyses were utilized to describe the linear relationship between the dependent variable (consumer menu choice decisions) and the four dimensions of healthy eating concerns (independent variables) among customers in star-rated hotels.

### 4.6.1 Assumption of Normality

The assumption of normality implies that data was drawn from a normally distributed population, which is required for parametric assumptions (Kothari \& Garg, 2014). Figure 4.1 depicts a linear $=0.998$ distribution, suggesting that the assumption of linearity in multivariate analyses was met. The coefficient of determination is 0.998 , indicating that the four dimensions of healthy eating concerns (dietary patterns, food portion, nutritional awareness, and food consumption behaviours) explained $99.8 \%$ of the variation in consumer menu choice decisions. Correspondingly, the $\mathrm{R}^{2}$ value was close to 1 , demonstrating that the regression equation was valuable for making predictions (Singh \& Masuku, 2014). The regression standardized residual in Figure 4.1 shows a slight deviation of actual sample distribution from the theoretical normal distribution curve, indicating that the data was normally distributed.


Figure 4.1 Frequency Distribution

The skewness and kurtosis data were also used to test for normality. According to Tabachnick and Fidell (2007), skewness evaluates the distribution symmetry, whereas kurtosis measures the distribution peakness or flatness of data. Data skewness values should be between +1 and -1 , and kurtosis values between +3 and -3 (Hair, Money, Samouel, \& Page, 2007). Thus, if both tests are met, the data is normally distributed with no skewed distribution. Results in Table 4.10 indicate that the normality assumption was supported, and none of the skewness or kurtosis values exceeded the specified range.

Table 4.10 Test of Normality

| No | Response Items | Skewness | Kurtosis |
| :---: | :--- | :---: | :---: |
| 1 | Menu Choice Decisions | .042 | -.642 |
| 2 | Dietary patterns | -.279 | -.956 |
| 3 | Food portions | .161 | -.072 |
| 4 | Nutrition knowledge | -.083 | -.438 |
| 5 | Food consumption habits | -.384 | .474 |

### 4.6.2 Assumption of Linearity

The linearity assumption is a statistical model that explains the relationship between the dependent variable and one or more independent variables (Uyanik \& Guler, 2013). The findings on the test of linearity are summarized in Table 4.11. Deviation from linearity and linearity values for dietary patterns were 0.123 and $0.000,0.613$ and 0.000 for food portions, 0.850 and 0.000 for nutritional knowledge, and 0.424 and 0.000 for food consumption patterns, respectively. The results of the four independent variables had values less than 0.001, implying that assumptions of linearity were met. Equally, the values for deviation from linearity were greater than 0.05 , indicating that there was no deviation from linearity.

Table 4.11 Test of Linearity

| No | Response Items | Linearity | Deviation from Linearity |
| :---: | :--- | :---: | :---: |
| 1 | Dietary patterns | .000 | .123 |
| 2 | Food portions | .000 | .613 |
| 3 | Nutrition knowledge | .000 | .850 |
| 4 | Food consumption habits | .000 | .424 |

### 4.6.3 Test of Multicollinearity

Multicollinearity is a statistical phenomenon in which predictor variables have strong or perfect relationships (Oke, Akinkunmi, \& Etebefia, 2019). Tolerance and variance inflation factor (VIF) were used to test for the assumption of multicollinearity among the independent variables. Table 4.12 indicates that the results for tolerance and VIF values varied between 0.436 and 2.294 for dietary patterns, 0.706 and 1.416 for food portions, 0.494 and 2.025 for nutritional knowledge, and 0.568 and 1.761 for food consumption habits. A VIF value greater than 4 or a tolerance of less than 0.25 indicates the possibility of multicollinearity and the need for further investigation. Likewise, when VIF exceeds 10 or a tolerance of below 0.1 , there is considerable multicollinearity that must be corrected (Oke, et al., 2019). Thus, these findings imply that there was no multicollinearity among the independent variables, which improved the accuracy of the regression coefficient estimates.

Table 4.12 Collinearity Statistics

| No | Response Items | Tolerance | VIF |
| :---: | :--- | :---: | :---: |
| 1 | Dietary patterns | .436 | 2.294 |
| 2 | Food portions | .706 | 1.416 |
| 3 | Nutrition knowledge | .494 | 2.025 |
| 4 | Food consumption habits | .568 | 1.761 |

### 4.6.4 Test of Homoscedasticity

Homoscedasticity means that the variance of the error is the same across all levels of the independent variable, which should be between -2 and +2 (Williams, Grajales, \& Kurkiewicz, 2013). However, in a normal situation, the residuals are expected to be randomly distributed around the horizontal line (0), which indicates a uniform distribution. As a result, the variance of residuals is expected to be equal or the same for the projected dependent variable to account for homoscedasticity. As illustrated in Figure 4.2, the assumption of homoscedasticity in multivariate analyses was met in the study, as all residuals were within the accepted threshold.


## Figure 4.2 Scatter plot of Homoscedasticity

### 4.7 Inferential statistics

### 4.7.1 Correlation Analyses

Pearson's product-moment correlation coefficient was used to assess the degree and direction of the relationship between dependent and independent variables. The correlation was employed to determine the dimensions of healthy eating concerns that best provide the most significant predictions for regression analyses. The results of the
inter-correlation between variables are shown in Table 4.13. Dietary patterns, food portion, nutritional knowledge and food consumption habits were significant and positively related to menu choice decisions at $\mathrm{r}=.614, \mathrm{r}=.547, \mathrm{r}=.532$ and $\mathrm{r}=.570$, respectively, which satisfied the assumption of linearity. A correlation coefficient (r) of 0.10 to 0.29 is small, 0.30 to 0.49 is medium, and 0.50 to 1.0 is strong (Daud, Khidzir, Ismail, \& Abdullah, 2018). Thus, it may be summarized that the dimensions of healthy eating concerns evaluated in the present study have a significant and positive joint effect on customers' menu choice decisions.

Table 4.13 Correlation Analyses

| No | Response Items | MCD | DP | FP | NK | FCH |
| :---: | :--- | :---: | :---: | :---: | :---: | :---: |
| 1 | Menu Choice Decisions (MCD) | 1 |  |  |  |  |
| 2 | Dietary Patterns (DP) | $.614^{* *}$ | 1 |  |  |  |
| 3 | Food portions (FP) | $.547^{* *}$ | $.438^{* *}$ | 1 |  |  |
| 4 | Nutritional knowledge (NK) | $.532^{* *}$ | $.697^{* *}$ | $.406^{* *}$ | 1 |  |
| 5 | Food consumption habit (FCH) | $.570^{* *}$ | $.589^{* *}$ | $.505^{* *}$ | $.511^{* *}$ | 1 |

**Correlation is significant at $\mathrm{P} \leq 0.01$ level (2-tailed).

### 4.7.2 Multiple Regression Analyses

The multiple regression model provides the coefficient of determination $\left(R^{2}\right)$, which indicates the proportion of variance in the dependent variable that can be explained by the independent variables. It also shows the correlation coefficient $(\mathrm{R})$, which describes the degree of association between the dependent and independent variables. The multiple regression model summary in this research shows the predictive power to conceptualize the dimensions of healthy eating concerns. Table 4.14 indicates that dietary patterns, food portions, nutritional knowledge, and food consumption habits accounted for $49.4 \%$ of the variation in customers' menu choice decisions (Adjusted $\mathrm{R}^{2}$
$=.494)$. The remainder $0.506(50.6 \%)$ is explained by other aspects of healthy eating concerns not addressed by the present study. The adjusted $\mathrm{R}^{2}$ accurately predict the relationship between independent and dependent variables (Chicco, Warrens, \& Jurman, 2021).

The study also assessed the assumption of autocorrelation using the Durbin-Watson statistic, which measures the degree of correlation between values of the same variables across different observations. The Durbin-Watson value for this study was 1.641 (Table 4.14). According to Babatunde, Oguntunde, Ogunmola, and Balogun (2014), DurbinWatson statistic values should be in the range of 0 to 4 , with values near 0 suggesting positive autocorrelation, values near 4 indicating negative autocorrelation, and values near 2 signifying no autocorrelation. This means that the present study variables were free of errors since they met the Durbin-Watson threshold of between 0 and 4 .

Table 4.14 Model Summary ${ }^{\text {b }}$

| Model | R | R Square | Adjusted R <br> Square | Std. Error of the <br> Estimate | Durbin- <br> Watson |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | $.710^{\mathrm{a}}$ | .505 | .494 | .306 | 1.641 |

a. Predictors: (Constant), dietary pattern, food portion, nutrition knowledge, food consumption habits
b. Dependent Variable: Menu Choice Decisions

### 4.7.3 Regression Model Goodness of Fit

The Analysis of variance (ANOVA) output was examined to evaluate the model fitness. Results in Table 4.15 show that the F -statistics were highly significant ( $\mathrm{F}=46.582, \mathrm{P} \leq$ 0.05). This indicates that the model was valid for rejecting the null hypotheses, which improved the ability to predict the customers' menu choice decisions.

Table 4.15 ANOVA $^{a}$

| Model | Sum of Squares | Df | Mean Square | F | Sig. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Regression | 17.461 | 4 | 4.365 | 46.582 | $.000^{\text {b }}$ |
| Residue | 17.149 | 183 | .094 |  |  |
| Total | 34.611 | 187 |  |  |  |

a. Dependent Variable: Menu Choice Decisions
b. Predictors: (Constant), dietary pattern, food portion, nutrition knowledge, food consumption habits

### 4.7.4 Multiple Regression Coefficients

The regression coefficient results shown in Table 4.16 demonstrate the estimates of $\beta$ values as predicted by the model. The $\beta$ value describes the relationship between customer menu choice decisions and each predictor. Positive $\beta$ values indicate that the predictors and outcome have a significant positive relationship. Dietary patterns ( $\beta=$ $0.265, p=0.001)$, food portions $(\beta=0.276, p=0.000)$, nutritional knowledge ( $\beta=$ 0.157, $\mathrm{p}=0.037$ ) and food consumption habits $(\beta=.188, \mathrm{p}=0.007)$ had positive values. A positive $\beta$ represents the direction of the relationship between predictors and outcomes. Therefore, the regression equation was specified based on the results in Table 4.16 as follows:

$$
\begin{gathered}
\mathrm{y}=\beta_{\mathrm{o}}+\beta_{1} \mathrm{X}_{1}+\beta_{2} \mathrm{X}_{2}+\beta_{3} \mathrm{X}_{3}+\beta_{4} \mathrm{X}_{4}+\varepsilon \\
\mathrm{y}=0.637+0.265 \mathrm{X}_{1}+0.276 \mathrm{X}_{2}+0.157 \mathrm{X}_{3}+0.188 \mathrm{X}_{4}+0.506
\end{gathered}
$$

Where:
Y - Represents the dependent variable
$\beta_{0}$ - Intercept when $x$ is zero
$\mathrm{X}_{1} \ldots \mathrm{X}_{4}$ - Represents the Independent Variables
$\beta_{1} \ldots \beta_{2}$ - Represents the coefficients of proportionality, and
$\varepsilon$ - Represents the error caused by intervening variables (1-R ${ }^{2}$ )

Given that all variables in the model are standardized, coefficients for each variable indicate the amount of change in customer menu choice decisions based on a one-unit change in variable value. The results reveal a standardized regression coefficient for dietary patterns $(\beta=0.265, p=0.001)$, implying that a one standard deviation increase in the dietary patterns is likely to result in a 0.265 standard deviation increase in menu choice decisions. The standardized regression coefficient for food portions $(\beta=0.276$, $\mathrm{p}=0.000)$ indicates that a one standard deviation increase in food portions is likely to result in a 0.276 standard deviation increase in menu choice decisions. Similarly, the standardized regression coefficient for nutritional knowledge ( $\beta=0.157, p=0.037$ ) shows that an increase of one standard deviation in nutritional knowledge is likely to result in an increase of 0.157 standard deviations in menu choice decisions. Finally, a standardized regression coefficient for food consumption habits $(\beta=0.188, p=0.007)$ indicates that a one standard deviation increase in food consumption habits is likely to result in a 0.188 standard deviation increase in customer menu choice decisions. This implies that changes in dietary patterns, food portions, nutritional knowledge and food consumption habits significantly influence customer menu choice decisions in starrated hotels. From the findings, the most significant predictor of customer menu choice decisions is food portions, followed by dietary patterns, food consumption habits, and nutrition knowledge.

Table 4.16 Regression Coefficients ${ }^{\text {a }}$

|  | Unstandardized <br> Coefficients |  |  |  |  |  |  | Standardized <br> Coefficients |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Model | B | Std. <br> Error | B | T | Sig. |  |  |  |  |  |  |  |
| (Constant) | .637 | .333 |  | 1.912 | .047 |  |  |  |  |  |  |  |
| DP | .265 | .079 | .265 | 3.371 | .001 |  |  |  |  |  |  |  |
| FP | .276 | .063 | .276 | 4.418 | .000 |  |  |  |  |  |  |  |
| NK | .157 | .075 | .157 | 2.103 | .037 |  |  |  |  |  |  |  |
| FCH | .188 | .069 | .188 | 2.740 | .007 |  |  |  |  |  |  |  |

a. Dependent Variable: Menu Choice Decisions

### 4.7 Hypotheses Testing

$\mathbf{H}_{01}$ : There is no significant relationship between dietary patterns and menu choice decisions among customers in star-rated hotels in Nakuru County, Kenya. Multiple regression analysis revealed a significant relationship between dependent (menu choice decisions) and independent variable (dietary patterns). The $\beta$ value from regression im analysis in Table 4.17 was ( $\beta_{1}=0.265, p=0.001$ ), demonstrating relative importance in rejecting the null hypothesis. This indicates that foods are combined as meals or snacks rather than individual products or nutrients that promote healthy menu choice decisions. Thus, behaviours that promote the consumption of a variety of foods (Embling, et al., 2021), snacking on high-protein or whole-grain snacks (Njike, et al., 2016), and consumption of three meals a day (Fulkerson, Larson, Horning, \& Neumark-Sztainer, 2014) appropriately enhance satiety, control appetite, and decrease cases of overweight and obesity (Njike, et al., 2016).
$\mathbf{H}_{02}$ : There is no significant relationship between food portions and menu choice decisions among customers in star-rated hotels in Nakuru County, Kenya. Table 4.17
shows a positive and significant relationship caused by the independent variable (food portion) on the (dependent variable) menu choice decisions ( $\beta_{1}=0.276, \mathrm{p}=0.000$ ). As a result, the null hypothesis was rejected. This alludes to concerns about eating adequate food influenced by portions served. These results concur with those earlier reported by Reinders, Huitink, Dijkstra, Maaskant, and Heijnen (2017) that healthy behaviours such as increasing vegetables and reducing meat portions could keep customers satisfied without jeopardizing their patronage. Likewise, the MyPlate concept has been introduced to communicate dietary guidelines for customers to build a healthy plate during meals (Almiron-Roig, Dominguez, Vaughan, Solis-Trapala, \& Jebb, 2016).
$\mathbf{H}_{03}$ : There is no significant relationship between nutritional knowledge and menu choice decisions among customers in star-rated hotels in Nakuru County, Kenya. As per the findings in Table 4.17, the $\beta$ value from multiple regression analysis $\left(\beta_{1}=0.157\right.$, $\mathrm{p}=0.037$ indicates a rejection of the null hypothesis. Thus, nutritional knowledge might be an important predictor of menu choice decisions since it impacts food purchase and dining out decisions. Higher nutritional knowledge encourages eating whole grain cereal, fruits, vegetables, and dairy products, which increase lean body mass and physical activity (Koch, Hoffmann, \& Claupein, 2021). Besides, it is associated with utilizing varied diets and rejecting harmful eating behaviours related to food taboos (Melesse \& van den Berg, 2021).
$\mathbf{H}_{04}$ : There is no significant relationship between food consumption habits and menu choice decisions among customers in star-rated hotels in Nakuru County, Kenya. The $\beta$ value from multiple regression in Table 4.17 is $\left(\beta_{1}=0.188, p=0.007\right)$, which supports rejecting the null hypothesis. This is justified by the fact that food consumption habits
are determined by a people's way of life, including what they eat, significantly influencing menu choice decisions. As a result, menu choice decisions are behaviours developed from beliefs throughout life because preference for sweetness and aversion to bitter or sour taste are present in humans from infancy (Szalonka, et al., 2021). For example, Nemeth, Rudnak, Ymeri and Fogarassy (2019) assessed food consumption habits of international students in Hungary and established that they unquestionably preferred local or indigenous foods because they are fresh and contain no preservatives.

Table 4.17 Test of Hypotheses

| Hypotheses | $\beta$ and $P$ values | Decision |
| :---: | :---: | :---: |
| $\mathrm{H}_{\mathrm{O}}$ There is no significant relationship between dietary patterns and menu choice decisions among customers in star-rated hotels in Nakuru County, Kenya | $\beta=$ | Reject the null hypothesis |
| $\mathrm{H}_{\mathrm{O}}$ There is no significant relationship between food portions and menu choice decisions among customers in star-rated hotels in Nakuru County, Kenya | $\beta=.276, \mathrm{P}<.00$ | Reject the null hypothesis |
| $\mathrm{H}_{03}$ There is no significant relationship between nutritional knowledge and menu choice decisions among customers in star-rated hotels in Nakuru County, Kenya | $\beta=.157, P<.037$ | Reject the null hypothesis |
| $\mathrm{H}_{\mathrm{O} 4}$ There is no significant relationship between food consumption habits and menu choice decisions among customers in star-rated hotels in Nakuru County, Kenya | $\beta=.188, \mathrm{P}<.007$ | Reject the null hypothesis |

## CHAPTER FIVE

## DISCUSSIONS

### 5.1 Introduction

This chapter discusses study findings that sought to determine the influence of healthy eating concerns on menu choice decisions amongst customers in star-rated hotels in Nakuru County, Kenya. This study was guided by specific objectives and hypotheses. As a result, this chapter summarizes the study findings and their discussions.

### 5.2 Summary of Research Findings

The main objective of this study was to assess the influence of healthy eating concerns on menu choice decisions among customers in star-rated hotels in Nakuru County, Kenya. The study considered the influence of eating patterns, food portions, nutritional knowledge, and food consumption habits on menu choice decisions among customers in star-rated hotels in Nakuru County, Kenya. From the findings, the four healthy eating dimensions of dietary pattern, food portion, nutritional knowledge, and food consumption habits explained $49.4 \%$ of the variation in customer menu choice decisions. In contrast, food portion $(\beta=.276, \mathrm{P}<.000)$ was the most significant predictor of menu choice decisions.

### 5.3 Results on the Demographic Characteristics of Respondents

The results depict that a majority of the customers were males (57.4\%), with females making up a minority ( $42.6 \%$ ). This might be related to cultural issues that affect how families prepare meals (Baker, Lu, Parrella, \& Leggette, 2022), with women serving as advocates (Janssen, Davies, Richardson, \& Stevenson, 2018). In light of this, males are
more prone than women to consume high calories from foods prepared in food outlets (Matsumoto, et al., 2021).

From the results, age distribution shows that most customers were between 41 and 50 years (39.9\%), followed by those 31 to 40 years (30.9\%), and 51 to 60 years (20.7\%), while the last group was those aged between 20 and 30 years of age ( $8.5 \%$ ). This may be because older consumers have higher monthly incomes to patronize star-rated hotels (Hagan, 2015). Similar results were reported by Fraikue (2016), who revealed that older customers are more likely to eat out to fulfil their social aspects of networking and selfesteem at star-rated hotels. Likewise, as customers age, they become more concerned about their nutrition and health (Baker, et al., 2022; Konttinen, et al., 2021). However, young consumers are presently adopting healthier eating habits due to peer pressure to maintain an excellent physical appearance (Janssen, et al., 2018).

Most respondents (60.1\%) had university degrees and postgraduate education. The results suggest that education levels substantially influence healthy eating and the intention to make healthy choices on the menu (De Jong, Ocke, Branderhorst, \& Friele, 2003; Cakiroglu \& Ucar, 2018). These results align with those previously reported by Baker, et al. (2022), who linked a university degree to a more significant role in utilizing healthy foods. The study also shows that about $40 \%$ of customers had visited star-rated hotels more than 16 times due to business or work-related concerns. This demonstrates that a larger proportion of the respondents were long-term customers and could be relied on to provide valuable insight into the study.

Hotels have a dynamic responsibility to foster customer loyalty, including interaction with food and beverage pricing, service quality, image, and eating environment (Kim \& Kim, 2022). The primary reason for consumers to dine out was business or workrelated. Fraikue (2016), reported that eating out behaviour is influenced by factors related to the physiological needs of the body, convenience, social, esteem, and business. The present findings support those reported by Davis, Lockwood, Alcott, and Pantelidis (2012), who established that all business meetings are concluded with a meal at a predetermined hotel or food outlet.

### 5.4 Customer Menu Choice Decisions

The dependent variable of the study was customer menu choice decisions. The study conceptualized that healthy eating concerns could affect customers' menu choice decisions. The customers chose foods with good quality to value and were willing to pay more for organic food products. The implication is that customers' menu choice decisions are a prerequisite for shifting consumption habits shaped by healthy eating behaviours. Customers are also willing to pay more for organic foods because they believe they are healthy food choices (Jo, Lusk, Muller, \& Ruffieux, 2016).

Furthermore, the customers chose foods from their origin or social-cultural background, those preferred by other family members and friends on the menu, and those considered to have good appearance and flavour. These findings align with those previously reported by Trafialek, et al. (2020), who established that menu choice decisions in food outlets are influenced by the origin of foods, aesthetic appeal, and flavour. Chen and Antonelli (2020) concluded that social norms and attitudes of group members, such as friends and family, influence menu choice decisions. In general, women are more likely
than males to make healthier food choices to stay in good physical shape (Arganini, Saba, Comitato, Virgili, \& Turrini, 2012).

### 5.5 Influence of Dietary Patterns on Menu Choice Decisions

The research determined the influence of dietary patterns on menu choice decisions using six questionnaire items. The customers agreed that they often eat at least three meals a day, snack in between meals and consider variation in the selection of food items to eat. Previously, Fulkerson, et al. (2014) indicated that the choice of three meals a day encourages healthy habits that reduce the risk of becoming overweight. Similarly, snacking on high protein, fibre and whole grain snacks increases satiety, controls appetite and reduces the risk of obesity (Njike, et al., 2016). Inadequate consumption of diverse foods reduces access to nutrient-rich healthy foods (Micha, et al., 2020).

Besides, the majority of the respondents agreed that star-rated hotels offer a variety of diets to be selected from the menu. Proper nutrition is essential to healthy lifestyles and avoiding disease (WHO, 2018a). Moreover, the respondents agreed that they often eat more when in the company of others and are undecided on their preference to eat alone. The eating environment potentially influences dietary behaviour. For example, sharing meals with friends and family significantly affects the amount of food consumed by an individual (Chen \& Antonelli, 2020). These results demonstrate that dietary patterns presented in menu choice decisions could be motivated by lifestyle factors that include the biological needs of the body and values attached to food.

### 5.6 Influence of Food Portions on Menu Choice Decisions

The research used six questionnaire items to examine the effect of food portions on menu choice decisions. The respondents agreed that they eat large servings of fruits and vegetables and prefer larger food portions as they offer value for money. Customers primarily determine how much food they eat based on personal factors such as age, gender and level of appetite. (Talati, et al., 2018). Previously, Zuraikat, Roe, Smethers, Reihart and Rolls (2018) noted that customers consume large food portions to maximize economic value. As a result, the cost of meals has no effect on larger food portion sizes. However, serving large food portions encourages overeating, whereas limiting energy intake from large portions promotes healthy eating (Zuraikat, Smethers, \& Rolls, 2020).

The study results also show that respondents were undecided on food portion control when deciding on what to eat but agreed that star-rated hotels consider portion size in serving. A simple and intuitive observation is that people eat more when served large food portions (Zuraikat, Smethers, \& Rolls, 2019). Further, respondents were undecided on choosing a smaller plate size and considering the MyPlate concept in selfservice. This implies that when large food servings are made accessible, customers may eat opportunistically (Hetherington \& Blundell-Birtill, 2018). Nonetheless, eating large portions of fruits and vegetables is linked to healthy eating (Reinders, Huitink, Dijkstra, Maaskant, \& Heijnen, 2017).

### 5.7 Influence of Nutrition Knowledge on Menu Choice Decisions

From the results on the respondents' perception of the effect of nutritional knowledge on menu choice decisions. The majority of the customers preferred foods that made them feel good and kept them awake or alert. These findings imply that the choice of
foods is significantly influenced by emotions or mood. Wongprawmas, et al. (2021) exhibited that consumers eating behaviours are more conditioned by emotional motivations. Another study by Bartkiene, et al. (2019) concluded that mood strongly correlates with food choice.

From the findings, the customers pay attention to nutritional value, foods regarded as safe, that keep them healthy and control weight in the selection of foods. However, they were unable to read and interpret menu language while selecting food items. Despite customer concerns about food quality and safety, understanding menu information heavily relies on personal nutrition knowledge. The selection and consumption of nutritious and safe foods allow the body to meet its nutritional needs (Ali, et al., 2020), maintain the required weight (Eze, et al., 2017), and have a direct effect on customer satisfaction (Anita \& Pratomo, 2021).

### 5.8 Influence of Food Consumption Habits on Menu Choice Decisions

The study sought to determine the influence of food consumption habits on menu choice decisions using six questionnaire items. The findings show that the hotels offer foods that are fresh and sometimes prefer eating readily available foods. Consumer eating habits vary with demands for fresh foods on menus. For instance, seasonal availability critically influences the food choice of health-conscious consumers (Wongprawmas, et al., 2021). In contrast, excessive dependence on convenient or readily available foods exposes consumers to the increased risk of weight gain as they are low in nutritional value and high in saturated fats and sodium (Ahn, et al., 2015).

In addition, a majority of customers value indigenous foods in their selection, hotels offer a variety of natural/local foods on their menu, preferred food items high in fibre and low in fats on their menu and foods without additives and preservatives. This demonstrates that lifestyle changes have enhanced customers' attention to healthier diets and shaped the hotel industry. Demands for natural products or indigenous foods have emerged in hotel menus (Gakobo \& Jere, 2016) and receiving global attention as customers have become increasingly aware of their potential to promote health (FAO, 2013).

## CHAPTER SIX

## CONCLUSIONS AND RECOMMENDATIONS

### 6.1 Introduction

This chapter presents the conclusions drawn from the study, recommendations, and areas for further research about the study findings.

### 6.2 Conclusions of the Study

Customers' dietary patterns are influenced by the eating environment, such as interactions with friends and family that impact the amount of food consumed by an individual during a shared meal. Therefore, dietary patterns demonstrated in menu choice decisions are motivated by lifestyle factors, including the biological needs of the body and the values attached to food.

Customers' food portions are determined by personal factors such as age, gender and level of appetite as well as maximizing economic value. Therefore, when large food portions are made available, customers serve hefty or eat opportunistically. Serving large portions encourages overeating, whereas limiting energy intake from foods promotes healthy eating.

Customers understanding of the information provided in the menu depend on their knowledge to make choices and consume foods that meet their nutritional needs for energy and maintain the required body weight. Selection and consumption of nutritious and safe foods allow the body to meet its nutritional needs, maintain the required weight, and directly impact satisfaction.

Consumption habits are influenced by seasonal availability and demands for fresh foods on menus as consumers pay more attention to healthy diets, with traditional or indigenous foods receiving global attention due to increased consumer awareness of their potential to contribute to better health and sustainable diets. Customers' menu choice decisions are a prerequisite for changing consumption habits and shaping healthy behaviours.

### 6.3 Recommendations of the Study

The study recommends that:

1. Hotels should make available diverse healthy foods on their menus to encourage healthy dietary patterns for customers during meal selection.
2. The hotel management should consider portion control to manage serving sizes of energy-dense foods to promote healthy eating habits.
3. Hotels should provide in-menu nutrition information to guide customers towards making healthy meal choices.
4. The hotel management should make traditional or indigenous foods available on their menus to enhance healthy consumption habits, as they are considered to be natural foods without additives.

### 6.4 Suggestions for Further Research

The study recommends:

1. Further research to be conducted using a larger target population incorporating different categories of hotels for a more reliable estimate of correlations.
2. A similar research to be carried out in other regions using similar methodologies to compare with the results of the present study that was carried out in Nakuru County, Kenya.
3. Another study to investigate other factors that are likely to affect menu choice decisions, but were not within the scope of the current study.

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## APPENDICES

## Appendix I: Introductory Letter

## Dear Respondent,

I am Mildred Limo, a Master's student in the School of Business and Management Science at the University of Eldoret. I am undertaking research on 'The influence of healthy eating concerns on menu choice decisions amongst customers in star-rated hotels in Nakuru County, Kenya' in partial fulfilment of the requirement of the award in Hospitality Management. You have been identified as one of the customers with important and valuable information to assist me in my research. Kindly complete the questionnaire to the best of your ability, as there is no right or wrong answer. Any information given will be handled with confidentiality, and you will never be required to identify yourself. I guarantee that this research will be used solely for academic purposes.

In case of any inquiries, please get in touch with Mildred Limo through the phone number 0720-869877 or email address: sbushhmm00220@uoeld.ac.ke. My supervisors: Dr. Catherine Sempele, phone number 0721-340872 and Dr. Stella Barsulai, phone number 0722-551821.

Your participation will be highly appreciated.

Yours Faithfully,

Mildred Limo

## Appendix II: Questionnaire for Customers

This study focuses on 'The influence of Healthy Eating Concerns on Menu Choice decisions amongst customers in star-rated hotels in Nakuru County, Kenya". The responses will be used solely for academic purposes. The questionnaire has two sections, A and B. Kindly answer all questions to the best of your ability. Please tick an answer appropriately. All the responses given will be treated with confidentiality.

## Questionnaire Number

Kindly put a tick $(\sqrt{ })$ against the correct choice.

## Section A

1. Tick your Gender

| Female | [ ] | Others | [ ] |
| :--- | :--- | :--- | :--- |
| Male | $[$ ] |  |  |

2. What is your Age bracket?

| $20-30$ years | $[~]$ | $31-40$ years | [ ] |
| :--- | :--- | :--- | :--- |
| $41-50$ years | $[~]$ | $51-60$ years | $[~]$ |
| Above 61years | $[~]$ |  |  |

3. What is your highest level of education?

| Diploma | [ ] | Bachelor |
| :--- | :--- | :--- | ---: |
| Postgraduate | $[~]$ | Certificate and below [ ] |

4. What is your occupation status?

Unemployed [ ]
Employed [ ]
Self-Employed [ ]
5. How many times have you visited this establishment?

| First time | [ ] | Below 5 times | [ ] |
| :--- | :--- | :--- | :--- |
| $6-10$ times | $[~]$ | $11-15$ times | $[~]$ |
| 16 times or more | $[~]$ |  |  |

6. Main reason for today's dining? (check only one)

| Special occasion | [ ] | No time to cook | [ ] |
| :--- | :--- | :--- | :--- |
| Holiday visit | [ ] | Normal dining/dating [ ] |  |
| Family gathering | [ ] | Business/Work-related | [ ] |

## Section B

Part I: Please indicate the extent to which you agree or disagree with the following attributes related to menu choice decisions.
Strongly disagree $=1$, Disagree $=2$, Undecided $=3$, Agree $=4$, Strongly Agree $=5$

| No | Customer menu <br> choice | Strongly <br> Agree | Agree | Undecided | Disagree | Strongly <br> Disagree |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 1.1 | I choose food that has <br> good quality to value |  |  |  |  |  |
| 1.2 | I am willing to pay <br> more for organic <br> food products offered <br> on the menu |  |  |  |  |  |
| 1.3 | I choose to eat foods <br> from my origin or <br> social-cultural <br> background |  |  |  |  |  |
| 1.4 | I select foods that <br> other family <br> members and friends <br> prefer on the menu |  |  |  |  |  |
| 1.5 | I consider appearance <br> and colour variation <br> in my food choice |  |  |  |  |  |
| 1.6 | I choose and eat <br> foods that I consider <br> to have good aroma <br> or flavour |  |  |  |  |  |

Part II: Please indicate the extent to which you agree or disagree with the following attributes related to the influence of dietary patterns on menu choice decisions.
Strongly disagree $=1$, Disagree $=2$, Undecided $=3$, Agree $=4$, Strongly Agree $=5$

| No | Dietary patterns | Strongly <br> Agree | Agree | Undecided | Disagree | Strongly <br> Disagree |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 2.1 | I often eat at least <br> three meals a day |  |  |  |  |  |
| 2.2 | I often snack in <br> between meals |  |  |  |  |  |
| 2.3 | I consider variety in <br> the selection of food <br> items to eat |  |  |  |  |  |
| 2.4 | The hotel offers a <br> variety of diets to be <br> selected from the <br> menu |  |  |  |  |  |


| 2.5 | I often eat more when <br> in the company of <br> others |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 2.6 | I prefer to eat alone |  |  |  |  |

Part III: Please indicate the extent to which you agree or disagree with the following attributes related to the influence of food portions on menu choice decisions.

Strongly disagree $=1$, Disagree $=2$, Undecided $=3$, Agree $=4$, Strongly Agree $=5$

| No | Food Portion | Strongly <br> Agree | Agree | Undecided | Disagree | Strongly <br> Disagree |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 3.1 | I eat large servings of <br> fruits and vegetables |  |  |  |  |  |
| 3.2 | I prefer larger food <br> portions as they offer <br> me value for money |  |  |  |  |  |
| 3.3 | I consider food <br> portion control in my <br> selection of what to <br> eat |  |  |  |  |  |
| 3.4 | The hotel considers <br> food portioning <br> during service |  |  |  |  |  |
| 3.5 | I choose smaller plate <br> sizes on self-service <br> (buffet) |  |  |  |  |  |
| 3.6 | I consider the <br> MyPlate concept <br> during self-service <br> (buffet service) |  |  |  |  |  |

Part IV: Please indicate the extent to which you agree or disagree with the following attributes related to the influence of nutritional knowledge on menu choice decisions.
Strongly disagree $=1$, Disagree $=2$, Undecided $=3$, Agree $=4$, Strongly Agree $=5$

| No | Nutrition knowledge | Strongly <br> Agree | Agree | Undecided | Disagree | Strongly <br> Disagree |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 4.1 | I select food items <br> that make me feel <br> good |  |  |  |  |  |
| 4.2 | I prefer foods that <br> keep me awake or <br> alert |  |  |  |  |  |
| 4.3 | I pay attention to <br> nutritional value in <br> selecting foods |  |  |  |  |  |


| 4.4 | I have knowledge of <br> foods regarded as <br> safe and cannot cause <br> risk to my health |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 4.5 | I select foods that <br> keep me healthy and <br> control my weight in <br> my menu choice |  |  |  |  |  |
| 4.6 | I can read and <br> interpret the menu <br> language while <br> selecting foods of my <br> choice |  |  |  |  |  |

Part V: Please indicate the extent to which you agree or disagree with the following attributes related to the influence of food consumption habits on menu choice decisions.

Strongly disagree $=1$, Disagree $=2$, Undecided $=3$, Agree $=4$, Strongly Agree $=5$

| No | Food consumption <br> habits | Strongly <br> Agree | Agree | Undecided | Disagree | Strongly <br> Disagree |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 5.1 | The hotel offers <br> foods that are fresh <br> and in season |  |  |  |  |  |
| 5.2 | I usually eat foods <br> that are convenient <br> and readily available |  |  |  |  |  |
| 5.3 | I value indigenous <br> food products in my <br> food selection |  |  |  |  |  |
| 5.4 | The hotel offers a <br> variety of <br> natural/local foods on <br> the menu |  |  |  |  |  |
| 5.5 | I prefer food items <br> high in fibre and low <br> in fats on the menu |  |  |  |  |  |
| 5.6 | I prefer foods without <br> additives and <br> preservatives |  |  |  |  |  |

## Appendix III: Introduction Letter to Hotels

To,
The Hotel Management,

Dear Sir/Madam,
Re: Request to collect data
I am a student at the University of Eldoret pursuing a Master's in Hospitality Management. I am undertaking research on 'The influence of healthy eating concerns on menu choice decisions amongst customers in star-rated hotels in Nakuru County, Kenya.' I am seeking your permission to conduct my research in your hotel.

The responses will be confidential, as the respondents will not be expected to give their details during the process.

Thank you in advance,

Yours Faithfully,

Mildred Limo
Reg. No. SBUS/HHM/M/002/20
Phone Number: 0720-869877

## Appendix IV: Informed Consent Letter

In case you need clarification or have questions, please feel free to contact the National Council for Science, Technology and Innovation (NACOSTI) or my supervisors Dr. Catherine Sempele, phone number 0721-340872 and Dr. Stella Barsulai, phone number 0722-551821 from the University of Eldoret.

Please confirm your agreement to voluntarily participate in the study by appending your signature in the space provided below.

I have read and understood the explanation, had all my questions answered to the best of my ability, and voluntarily agreed to participate in this study.

Name: $\qquad$
Signature: $\qquad$
Date: $\qquad$

## Appendix V: Data Collection Letter

P. O. Box 1125-30100, Eldoret, Kenya Tel: +254 532063257 / 2033712/13 Ext. 2352/3 Mob: 0736 493555; Fax: +254 532063257 E-mail: directordict@uoeld.ac.ke

## SCHOOL OF BUSINESS AND MANAGEMENT SCIENCES HOTEL AND HOSPITALITY MANAGEMENT

REF: UoE/B/SBUS/HHM/PGM\&SB/041
DATE: 23rd June, 2022

## TO WHOM IT MAY CONCERN

## Dear Sir/Madam,

## RE: DATA COLLECTION - MILDRED I. LIMO SBUS/HHM/M/002/20

The bearer of this letter is a postgraduate student in the Department of Hotel and Hospitality Management. The student is currently undertaking Research, collecting data for the proposal titled "Influence of Healthy Eating concerns on Menu Choice Amongst Customers in Star Rated Hotels in Nakuru, Kenya".

Any assistance accorded to the student will be appreciated.

Thank you.

DR. CATHERINE SEMPELE
HEAD, DEPARTMENT OF HOTEL \& HOSPITALITY MANAGEMENT

## Appendix VI: Nacosti Research License



## Appendix VII: Similarity Report

## University of Eldoret <br> Certificate of Plagiarism Check for Synopsis

| Author Name | Mildred Jelagat Limo Reg. No.: SBUS/HHM/M/002/20 |
| :---: | :---: |
| Course of Study | Type here... |
| Name of Guide | Type here... |
| Department | Type here... |
| Acceptable Maximum Limit | Type here... |
| Submitted By | titustoo@uoeld.ac.ke |
| Paper Title | INFLUENCE OF HEALTHY EATING CONCERNS ON MENU CHOICE DECISIONS AMONGST CUSTOMERS IN STAR-RATED HOTELS IN NAKURU COUNTY, KENYA |
| Simiarity | 14\% |
| Paper ID | 996893 |
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