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Assessing The Effect of Nutritional Knowledge on Menu Choice Decisions among Customers in Star-Rated Hotels in Nakuru County, Kenya

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Abstract

Menus occupy a significant position in hotel business as they purpose to navigate customers to achieve satisfaction and exceed expectations in their food choices. Eating out has become an integral part of our modern society, and diners want to make informed choices for developing healthy eating habits that allow the body to meet its dietary needs and maintain the required weight. The main objective of this study was to assess the influence of nutritional knowledge on menu choice decisions amongst customers in star-rated hotels in Nakuru County, Kenya. The Food Choice Process Model and Theory of Planned Behaviour informed the study. The study employed an exploratory research design with a closed-ended questionnaire to collect data, which was analyzed using the Statistical Package for Social Sciences (SPSS) version 26.0, and hypothesis tested at $p \leq 0.05$. The study findings show that the knowledge explained 27.9% of the variation in customer menu choice decisions. Nutritional knowledge ($\beta_1=0.608$, $p=0.000$) positively and significantly influenced consumer menu choice. The study concluded that customers understanding of menu information depend on their knowledge to choose and consume foods that meet their nutritional needs. The study recommends that hotels provide in-menu nutrition information to guide customers toward healthy meal choices.

Keyword: Menu, Nutritional Knowledge, Menu Choice Decisions, Star Rated Hotels, Customers

Introduction

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 et al., 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 et al., 2018). Eateries make available an out-of-home environment that promotes the consumption of diverse meals and snacks (Vadiveloo etal., 2017). In addition,

they have a dynamic responsibility to build return patronage for customers since food is essential for a repeat experience (Jin et al., 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 et al., 2018) due to lack of time for home preparation (Horst et al., 2011). Furthermore, most women are involved in paid labour, where they spend a significant amount of time working, leading to a decline in the frequency of home cooking (Cawley & Liu, 2012). 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 et al., 2016). Today, customers are more particular about their meals (Jin et al., 2017), resulting in a shift towards diets believed to improve health, prevent diseases and enhance the quality of life (Ali & Rahut, 2019).

Nutritional knowledge refers to the degree in which individuals can obtain, process, and understand nutrition information, and skills required to make appropriate nutrition decisions (Spronk et al., 2014). In this study, this concept refers to customers awareness of practices and information related to adequate food intake, significant food sources of nutrients, and dietary guidelines. Thus, customers' 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 nutritional knowledge and health is vital to promote the intake of foods that prevent or control diet-related illnesses (Kolodinsky et al., 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 et al., 2016) based on the premise that food quality is formed by perception (Baiardi et al., 2016). Hence, satisfaction from the eating-out 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 an aversion to certain diets (Boccia et al., 2018).

In spite of customers' nutritional knowledge, 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 that influence 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 et al (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. This research adds new information to the field of hospitality literature by exploring customers nutritional knowledge to assist managers in providing insights into the target markets and the context in which they will incorporate the consumers concerns in menu planning. Thus, a significant

research paucity to comprehend the knowledge that influences menu choice decisions exists among Kenyan hotels and restaurants. This study investigated the influence of nutritional knowledge on menu choice decisions among customers in star-rated hotels in Nakuru County, Kenya.

Theoretical Framework

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

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 considering 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 construct of 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).

Theory of Planned Behaviour (TPB)

Icek Ajzen's Theory of Planned Behavior (TPB) is a significant 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, the increased consumption of fruits, vegetables, and whole-grain cereals is driven by nutritional knowledge (Ali, et al., 2020). This factor is thought to significantly influence menu choice decisions to meet the body's nutritional requirements and maintain a healthy weight (Eze, et al., 2017) and predict customers' intentions to eat healthy foods (McDermott, et al., 2015).

Literature Review

Customer Menu Choice Decisions

Customer menu choice decision is a highly variable and complex process influenced by several factors. 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). 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. 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 higher 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 shaping healthy behaviours (Szalonka, et al., 2021).

Cost of food and customer income are important motivators influencing customers' willingness to pay for menu items (Moura, et al., 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 essential 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 et al., 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.

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 significant public health burden of disease and mortality (WHO, 2018). 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 et al., 2017) is a significant risk factor for increased incidences of diabetes, hypertension, and heart disease, as well as decreased longevity (Mkuu

et al., 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 (Story et al., 2008), such as consuming junk foods associated with increased body weight (Mitchell, 2021). Thus, eateries influence customers' dietary habits and eating patterns (Paquet, 2019).

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 nutrition education as a tool in food choice interventions. Ha, Caine-Bish, Holloman and Lowry-Gordon (2009) investigated the effect of basic nutritional knowledge on soft drink and fat-free milk consumption and reported that nutrition education is a behaviour modifier. However, Chen et al (2020) proposed that knowledge alone cannot 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).

Methodology

The research was carried out in Nakuru County, Rift Valley Region, Kenya, using an explanatory research approach. The sample population was calculated 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. A sample size of 265 customers was chosen using Yamane's (1967) formula, as applied by Kent and Myers (Kent & Myers, 2008). 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 variable for purposes of generalization. Each star-rated hotel was represented based on the number of customers and simple random sampling techniques employed as it permitted the study to apply descriptive and inferential statistics (Saunders, et al., 2018). Data was collected using a closed-ended questionnaire, and items used a 5-point Likert scale. Data was analyzed using Statistical Package for Social Sciences (SPSS) software version 26.0. The regression model is as follows:

$$y = \beta_o + \beta_1 X_1 + \varepsilon$$

Where:

Y = Menu Choice Decisions
β_0 = Intercept when x is zero
X_1 = Nutritional knowledge (NK)
ε = Error term

Results and Discussions

Response 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.

Demographic Characteristics of the Respondents

The findings on the demographic characteristics of respondents are presented in Table 1. The results show that many respondents were males (57.4%), with females making up 42.6% of respondents. This suggests that males make up a large population of customers likely to eat out of their homes. According to the findings, many respondents (39.9%) were between the ages of 41 and 50, indicating that most customers were over 40 years old. The results also show that more respondents (60.1%) had attained a university education. Thus, customers with good education could comprehend the purpose of the study and correctly interpret the questionnaire. Moreover, 39.9% of the respondents had visited star-rated hotels 16 times or more. Implying that most customers had experience dining in star-rated hotels. The main reasons for visitation were business or work-related activities (35.1%), with a smaller percentage (3.2%) indicating that they did not have time to cook. This suggests that these respondents were able to provide valuable insights for the study.

Table 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
Number of visits to a star-rated hotel	First Time	16	8.5
	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
Main reason for dining	Special occasion	29	14.4
	Holiday visit	8	4.2
	Family gathering	49	26.1
	No time to cook	6	3.2
	Normal dining/dating	30	16.0
	Business/Work-related	66	35.1

Source (Author, 2022)

Customer Menu Choice Decisions

The dependent variable of the study was customer menu choice decisions. The study conceptualized that nutritional knowledge 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 2 shows that the respondents agreed that they choose food with good quality to value at 79.8% (M = 4.21, SD =.758) and are willing to pay more for organic food products offered on the menu at 75% (M = 4.16, SD =.798). These results demonstrate that customers are of the opinion that organic foods form healthier choices amongst hotel customers. Earlier, Jo, et al. (2016) indicated that customers are willing to pay more for organic foods because they believe they are healthy food choices. Moreover, the respondents agreed that they choose foods based on their origin or social-cultural background at 79.8% (M = 4.18, SD =.745) and what their family and friends prefer on the menu at 87.8% (M = 4.18, SD =.714). This implies that cultural values influence menu choice decisions. Chen and Antonelli (2020) concluded that social norms and attitudes of group members, such as friends and family, influence menu choice decisions. Similarly, the respondents considered appearance or colour variation at 75% (M = 4.13, SD =.837) and good aroma or flavour at 75.6% (M = 4.20, 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. 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.

Table 2
Customer Menu Choice Decisions

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

SD-Strongly Disagree, D-Disagree, UD-Undecided, A-Agree, SA-Strongly Agree. n=188 Source: Research Data (2022)

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 3. 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. 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. 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. 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 customers satisfaction (Anita & Pratomo, 2021). 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. Previously, Ha and Caine-Bish (2011), established that nutrition education improves customer knowledge in menu choice decisions. Melesse and Berg (2021) also noted that consumer nutrition knowledge increases healthy eating habits.

Table 3
Influence of Nutrition Knowledge on Menu Choice Decisions

No	Response item		SD	D	UD	A	SA	M	Std Dev
1	I select food items that make me feel good	F	0	0	47	64	77	4.16	.798
		%	0.0	0.0	25.0	34.0	41.0		
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		
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	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		
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		
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**	

SD-Strongly Disagree, D-Disagree, UD-Undecided, A-Agree, SA-Strongly Agree. n=188 Source: Research Data (2022)

Linear Regression Analysis

Linear regression analysis was carried out to establish the relationship between the dependent and independent variables of the study, and the findings are summarized in Table 4.

Regression Model Summary

Nutritional knowledge explained 27.9% of the variation in consumers' menu choice decisions (Adjusted R2 =.279), with the remaining 0.721 (72.1%) explained by factors not addressed in the study (Table 4). The Durbin-Watson statistic was also utilized in the study to assess the assumption of autocorrelation. The Durbin-Watson score for this study was 1.472, within the recommended range of 0 to 4 (Babatunde et al., 2014).

Table 4
Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.532[a]	.283	.279	.365	1.472

a. Predictors: (Constant), nutritional knowledge
b. Dependent Variable: Menu Choice Decisions
Source: Research Data (2022)

Regression Model Goodness of Fit

The Analysis of variance (ANOVA) output was examined to evaluate the model fitness. Results in Table 5 show that the F-statistics were highly significant (F= 73.333, P≤ 0.05). This indicates that the model was valid for rejecting the null hypotheses, which improved the ability to predict customers' menu choice decisions.

Table 5
ANOVA[a]

Model	**Sum of Squares**	**Df**	**Mean Square**	**F**	**Sig.**
Regression	9.787	1	9.787	73.333	.000[b]
Residue	24.823	186	.133		
Total	34.611	187			

a. Dependent Variable: Menu Choice Decisions
b. Predictors: (Constant), nutritional knowledge
Source: Research Data (2022)

Linear Regression Coefficients

The β value describes the relationship between customer menu choice decisions and nutritional knowledge. A positive β value indicates that the predictor and outcome have a significant positive relationship. Nutritional knowledge had a positive β value (β = 0.608, p = 0.000). Hence the regression equation was specified as shown in Table 6.

Table 6
Regression Coefficients[a]

	Unstandardized Coefficients		Standardized Coefficients		
Model	**β**	**Std. Error**	**β**	**T**	**Sig.**
(Constant)	1.696	.290		5.859	.000
NK	.608	.071	.532	8.563	.000

a. Dependent Variable: Menu Choice Decisions

Source: Research Data (2022)

$$y = 1.696 + 0.608X_1 \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots Equestion\ 1$$

Conclusions

Customers understanding of the information provided on 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.

Recommendation

Hotels should provide in-menu nutrition information to guide customers toward making healthy meal choices.

References

Ahn, J., Park, H., Lee, K., Kwon, S., Kim, S., Yang, J., . . . Lee, Y. (2015). The effect of providing nutritional information about fast-food restaurant menus on parents' meal choices for their children. *Nutrition Research and Practice*, Vol. 9(6), pp. 667-672.

Ajzen, I. (1991). Theory of planned behaviour. *Org Beh and Soc Human Decision Proc*, Vol. 50, pp. 179-211.

Ajzen, I. (2002). *Icek Ajzen: Theory of planned behavior*. Retrieved April, 16th 2022, from http://people.umass.edu/aizen/tpb.html

Aktar, N., Qureshi, N. K., & Ferdous, H. S. (2017). Obesity: A Review of Pathogenesis and Management Strategies in Adult. *Delta Med Col J*, Vol. 5(1), pp. 35-48.

Ali, A., & Rahut, D. B. (2019). Healthy Foods as Proxy for Functional Foods: Consumers' Awareness, Perception, and Demand for Natural Functional Foods in Pakistan . *International Journal of Food Science* , Vol. 2019, pp. 1-12.

Ali, A., Al Naabi, F. M., Al-Hakamani, H. S., Al-Fahdi, H. M., & Waly, M. I. (2020). Assessment of Nutritional Knowledge, Dietary Habits, Nutrient Intake and Nutritional Status of Omani University Students. *Canadian Journal of Clinical Nutrition*, Vol, 8(2), pp. 35-52.

Anita, T. L., & Pratomo, A. (2021). Food safety management and food quality in hospitality industry during covid-19 pandemic. *Uncertain Supply Chain Management*, Vol. 9, pp. 1-5.

Babatunde, O. S., Oguntunde, P. E., Ogunmola, A. O., & Balogun, O. S. (2014). On the Performance of RESET and Durbin Watson Tests in Detecting Specification Error. *Int J of Modern Math Sci*, Vol. 11(3), pp. 144-151.

Baiardi, D., Puglisi, R., & Scabrosetti, S. (2016). Individual attitudes on food quality and safety: Empirical evidence on EU countries. *Food Qual. Prefer*, Vol. 49, pp. 70-74.

Bartkiene, E., Steibliene, V., Adomaitiene, V., Juodeikiene, G., Cernauskas, D., Lele, V., . . . Guine, R. P. (2019). Factors Affecting Consumer Food Preferences: Food Taste and

Depression-Based Evoked Emotional Expressions with the Use of Face Reading Technology. *BioMed Research International*, Vol. 2019, pp. 1-10.

Bian, S., Gao, Y., Zhang, M., Wang, X., Liu, W., Zhang, D., & Huang, G. (2013). Dietary nutrient intake and metabolic syndrome risk in Chinese adults: a case - control study. *Nutrition Journal*, Vol. 12 (106), pp. 1-7.

Boccia, F., Covino, D., & Sarnacchiaro, P. (2018). Genetically modified food versus knowledge and fear: A Noumenic approach for consumer behaviour. *Food Res. Int*, Vol. 111, pp. 682-688.

Bor, T. B., Kieti, D., & Rotich, D. J. (2018). Hotel choice attributes and demographic characteristics of tourists in North Rift Region, Kenya African. *Journal of Hospitality, Tourism and Leisure*, Vol. 7(3), pp. 1-12.

Bujisic, M., Hutchinson, J., & Parsa, H. (2014). The effects of restaurant quality attributes on customer behavioural intentions. *Int J Contemp. Hosp. Mgt*, Vol. 26, pp. 1270-1291.

Cawley, J., & Liu, F. (2012). Maternal employment and child hood obesity: A search for mechanisms in time use data. *Econ Hum Biol* , Vol. 10, pp. 352-364.

CBK. (2022). *Monetary policy committee hotels survey - March 2022.* Nairobi - Kenya: Central Bank of Kenya.

Chen, K. J., Yeh, T. M., Pai, F. Y., & Chen, D. F. (2018). Integrating Refined Kano Model and QFD for Service Quality Improvement in Healthy Fast-Food Chain Restaurants. *Int J Environ Res Public Health*, Vol. 15(7), pp. 1310.

Chen, P. J., & Antonelli, M. (2020). Conceptual models of food choice: Influential factors related to foods, individual differences, and society. *Foods*, Vol. 9(12), pp. 1898.

Chen, Y., Perez-Cueto, F. J., Giboreau, A., Mavridis, I., & Hartwell, H. (2020). The Promotion of Eating Behaviour Change through Digital Interventions. *Int. J. Environ. Res. Public Health*, Vol. 17(7488), pp. 1-19.

Chiciudean, G. O., Harun, R., Muresan, I. C., Arion, F. H., Chiciudean, D. I., Ilies, G. L., & Dumitras, D. E. (2019). Assessing the Importance of Health in Choosing a Restaurant: An Empirical Study from Romania. *Int J Environ Res Public Health*, Vol. 16(2224), pp. 1-15.

Choi, J., & Zhao, J. (2010). Factors Influencing Restaurant Selection in South Florida: Is Health Issue One of the Factors Influencing Consumers' Behavior When Selecting a Restaurant? *J. Foodserv. Bus. Res*, Vol. 13, pp. 237-251.

Cohen, D. A., & Story, M. (2014). Mitigating the Health Risks of Dining Out: The Need for Standardized Portion Sizes in Restaurants . *Am J Public Health*, Vol. 104, pp. 586-590.

Davis, B., Lockwood, A., Pantelidis, I., & Alcott, P. (2013). *Food and beverage management.* Routledge.

Eze, N. M., Maduabum, F. O., Onyeke, N. G., Anyaegunam, N. J., Ayogu, C. A., Ezeanwu, B. A., & Eseadi, C. (2017). Awareness of food nutritive value and eating practices among Nigerian bank workers: Implications for nutritional counseling and education. *Medicine*, Vol. 96(10), (e6283), pp. 1-6.

Furst, T., Connors, M., Bisogni, C., Sobal, J., & Falk, L. (1996). Food choice: A conceptual model of the process. *Appetite*, Vol. 26(3), pp. 247-265.

GNR. (2020). *Action on equity to end malnutrition Suggested citation.* Bristol, UK: Development Initiatives.

Gorton, M., & Barjolle, D. (2013). Theories of Food Choice. In D. Barjolle, *Food Consumer Science: Theories, Methods 15 and Application to the Western Balkans,* (pp. 15-26). Dordrecht: Springer.

Guine, R. P., Bartkiene, E., Szucs, V., Tarcea, M., Ljubicic, M., Cernelic-Bizjak, M., . Ferreira, M. (2020). Study about Food Choice Determinants According to Six Types of Conditioning Motivations in a Sample of 11,960 Participants. *Foods*, Vol. 9(888), pp. 1-18.

Ha, E. J., Caine-Bish, N., Holloman, C., & Lowry-Gordon, K. (2009). Evaluation of effectiveness of class-based nutrition intervention on changes in soft drink and milk consumption among young adults. *Nutrition Journal*, Vol. 26(8), pp. 50-55.

Ha, E., & Caine-Bish, N. (2011). Interactive introductory nutrition course focusing on disease prevention increased whole-grain consumption by college students. *Journal of Nutrition Education and Behaviour*, Vol. 43(4), pp. 263-267.

Horst, K. v.-d., Brunner, T. A., & Siegrist, M. (2011). Ready-meal consumption: Associations with weight status and cooking skills. *Public Health Nutr*, Vol. 14, pp. 239-245.

Jawabreh, O. A., Al Jaffal, T., Abdelrazaq, H., & Mahmoud, R. M. (2018). The Impact of Menus on the Customer Satisfaction in Restaurants Classified in Aqaba Special Economic Zone Authority (ASEZA) . *Journal of Tourism, Hospitality and Sports*, Vol. 33, 29-39.

Jin, N. P., Line, N. D., & Lee, S. (2017). The health conscious restaurant consumer: Understanding the experiential and behavioral effects of health concern. *International Journal of Contemporary Hospitality Management*, Vol. 29(8), pp. 2103-2120.

Jo, J., Lusk, J. L., Muller, L., & Ruffieux, B. (2016). Value of parsimonious nutritional information in a framed field experiment. *Food Policy*, Vol. 63, pp. 124-133.

Kaya, I. Z. (2016). Motivation Factors of Consumers' Food Choice. *Food and Nutrition Sciences*, Vol. 7, pp. 149-154.

Kent, J., & Myers, N. (2008). *The citizen is willing, but society won't deliver: The problem of institutional roadblocks.* Washington, DC: International Institute for Sustainable Development.

Kolodinsky, J., Harvey-Berino, J. R., Berlin, L., Johnson, R. K., & Reynolds, T. W. (2007). Knowledge of current dietary guidelines and food choice by college students: Better eaters have higher knowledge of dietary guidance. *Journal of the American Dietetic Association*, Vol. 107(8), pp. 1407-1413.

Konttinen, H. H., Fogelholm, M., Saarijarvi, H., Nevalainen, J., & Erkkola, M. (2021). Sociodemographic differences in motives for food selection: results from the LoCard cross-sectional survey. *Int J of Beh Nutr and Phys Act*, Vol. 18(71), pp. 1-15.

Maina, J. W. (2018). Analysis of the factors that determine food acceptability. *The Pharma Innovation Journal*, Vol. 7(5), pp. 253-257.

McDermott, M. S., Oliver, M., Svenson, A., Simnadis, T., Beck, E. J., Coltman, T., . . . Sharma, R. (2015). The theory of planned behaviour and discrete food choices: A systematic review and meta-analysis . *International Journal of Behavioral Nutrition and Physical Activity*, Vol. 12(162), pp. 1-11.

Melesse, B. M., & Berg, M. V. (2021). Consumer Nutrition Knowledge and Dietary Behavior in Urban Ethiopia: A Comprehensive Study. *Ecology of Food and Nutrition*, Vol. 60(2), pp. 244-256.

Mitchell, T. D. (2021, November 14th). *Regulation of Junk food marketing is key to talking obesity crisis* . Retrieved from https://www.sinnfein.ie/contents/51562

Mkuu, R. S., Epnere, K., & Chowdhury, M. A. (2018). Prevalence and Predictors of Overweight and Obesity among Kenyan Women. *Prev Chronic Dis* , Vol. 15(E44), pp. 1-10.

MoH. (2021). *National Strategic Plan for the Prevention and Control of Non-Communicable Diseases – 2021/22 – 2025/26.* Nairobi, Kenya: Ministry of Health.

Mohammadbeigi, A., Asgarian, A., Moshir, E., Heidari, H., Afrashteh, S., Khazaei, S., & Ansari, H. (2018). Fast food consumption and overweight/obesity prevalence in students and its association with general and abdominal obesity. *J Prev Med Hyg*, Vol. 59(3), pp. E236-E240.

Moura, A. C., Melo, M. T., Silva, B. L., Paz, S. M., Paiva, A. A., & Carvalho, C. M. (2020). An approach on food choice determinants: a study in the restaurants of a public market in Northeastern Brazil. *Rev Nutr*, Vol. 33(e190126), pp. 1-12.

Okoro, C. S., Musonda, I., & Agumba, J. (2017). Evaluating the Influence of Nutrition Determinants on Construction Workers' Food Choices. *American Journal of Men's Health*, Vol. 11(6), pp. 1713-1727.

Onyango, F. E., & Wasike, K. C. (2018). Healthy Eating Products and Customer Outcomes in Restaurants. *Journal of Tourism and Management Research*, Vol. 3(1), pp. 200 - 212.

Paquet, C. (2019). Environmental Influences on Food Behaviour. *Int. J. Environ. Res. Public Health*, Vol. 16(2763), pp. 1-4.

Rea, L., & Parker, A. (2014). *Designing and Conducting Survey Research: A Comprehensive Guide. 4th Edition.* Jossey-Bass, CA: John Wiley & Sons, Inc.

Rossner, S. (2014). *Obesity: Why Bother? In Controversies in Obesity.* London: Springer.

Saunders, B., Sim, J., Kingstone, T., Baker, S., Waterfield, J., Bartlam, B., . . . Jinks, C. (2018). Saturation in qualitative research: exploring its conceptualization and operationalization. *Qual Quant*, Vol. 52(4), pp. 1893-1907.

Sharma, S. V., Hoelscher, D. M., Kelder, S. H., Diamond, P., Day, R. S., & Hergenroeder, A. (2010). Psychosocial Factors Influencing Calcium Intake and Bone Quality in Middle School Girls. *J Am Diet Assoc*, Vol. 110(6), pp. 932-936.

Spronk, I., Kullen, C., Burdon, C., & O'Connor, H. (2014). Relationship between nutrition knowledge and dietary intake - Systematic Review. *Br J of Nutr*, Vol. 111, pp. 1713-1726.

Story, M., Kaphingst, K., Robinson-O'Brien, R., & Glanz, K. (2008). Creating healthy food and eating environmental policy and environmental approaches. *Annu. Rev. Public Health*, Vol. 29, pp. 253-272.

Szalonka, K., Stanczyk, E., Gardocka-Jałowiec, A., Waniowski, P., Niemczyk, A., & Grodek-Szostak, Z. (2021). Food Choices and Their Impact on Health and Environment. *Energies*, Vol. 14(5460), pp. 1-14.

Trafialek, J., Czarniecka-Skubina, E., Kulaitiene, J., & Vaitkeviciene, N. (2020). Restaurant's Multidimensional Evaluation Concerning Food Quality, Service, and Sustainable Practices: A Cross-National Case Study of Poland and Lithuania. *Sustainability*, Vol. 12(234), pp. 1-21.

Vadiveloo, M. K., Malik, V. S., Spiegelman, D., Willett, W. C., & Mattei, J. (2017). Does a grill menu redesign influence sales, nutrients purchased, and consumer acceptance in a worksite cafeteria? *Preventive Medicine Reports*, Vol. 8, pp. 140-147.

Wasike, K. C., Fwaya, E. V., & Kigaru, D. M. (2017). Factors Influencing Customer Needs For Healthy Eating Products In Selected Restaurants Of Nairobi City, Kenya . *International Journal of Scientific Progress and Research (IJSPR)* , Vol. 36(2), pp. 75-79.

White, C. M., Lillico, H. G., Vanderlee, L., & Hammond, D. (2016). A voluntary nutrition labeling program in restaurants: Consumer awareness, use of nutrition information, and food selection. *Preventive Medicine Reports*, Vol. 4, pp. 474-480.

WHO. (2018). *Non-communicable diseases*. Retrieved from World Health Organization: https://www.who.int/news-room/fact-sheets/detail/noncommunicable-diseases

Wongprawmas, R., Mora, C., Pellegrini, N., Guine, R. P., Carini, E., Sogari, G., & Vittadini, E. (2021). Food Choice Determinants and Perceptions of a Healthy Diet among Italian Consumers. *Food*, Vol. 10, 318.