

**EFFECT OF DIETARY PATTERN ON MENU CHOICE AMONG
CUSTOMERS. EVIDENCE FROM STAR-RATED HOTELS IN
NAKURU COUNTY, KENYA**

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Abstract

The main purpose of this study was to assess the influence of dietary patterns on menu choice among customers in star-rated hotels in Nakuru County, Kenya, guided by the Theory of Planned Behaviour. An explanatory research design was adopted, targeting a population of 785 customers, from which a sample size of 265 respondents was determined using the Yamane formula. Star-rated hotels were purposively selected and clustered, with Neyman's allocation used to proportionately distribute the sample. Primary data was collected using a structured questionnaire measured on a five-point Likert scale, and instrument reliability was confirmed using Cronbach's alpha coefficients above 0.7. Regression results revealed that dietary patterns significantly influenced customer menu choice, with dietary patterns explaining 36.1% of the variation in menu choice and demonstrating a strong positive effect ($\beta = 0.602, p < 0.05$), while the overall model was statistically significant. The findings further showed that customers commonly consumed three meals a day, snacked between meals, preferred dietary variety, and were influenced by social dining environments, which shaped both food selection and quantity consumed. The study concluded that dietary patterns reflected in menu choice are largely motivated by lifestyle factors, including biological nutritional needs and social values attached to food consumption. Consequently, the study recommends that star-rated hotels should provide diverse and nutritionally balanced menu options that align with customers' healthy eating concerns in order to promote positive dietary behaviors and informed menu choices.

Keywords: *Dietary Patterns, Menu Choice, Star-Rated Hotels*

1. Introduction

Menus play a central role in the hotel industry as they guide customers' food choices, influence satisfaction, and shape overall dining experiences (Davis et al., 2013). In star-rated hotels, menus are not only tools for communication but also strategic instruments for achieving competitive advantage through quality service delivery and skilled personnel (Jawabreh et al., 2018). Eating outside the home has become increasingly common, particularly in urban settings, providing customers with access to a wide variety of meals and snacks (Vadiveloo et al., 2017). However, meals consumed away from home are often associated with large portion sizes, high caloric content, and low nutritional value, which increase the risk of weight gain and obesity (Cohen & Story, 2014; Ahn et al., 2015; Mohammadbeigi et al., 2018). Consequently, dietary patterns have emerged as a critical determinant influencing customers' menu choices and long-term health outcomes.

Globally, unhealthy dietary patterns continue to contribute significantly to the growing burden of non-communicable diseases. The Global Nutrition Report (2020) indicates that over 677 million people worldwide are obese, with higher prevalence in urban populations where convenience foods high in fats and sugars dominate consumption patterns (Chen et al., 2018). Time constraints, increased participation of women in paid employment, and reduced home cooking have further shifted consumers toward eating out (Horst et al., 2011; Cawley & Liu, 2012). In response, customers have become more health-conscious and increasingly prefer diets associated with disease prevention and improved quality of life (Ali & Rahut, 2019). Hotels have therefore introduced healthier menu options such as grilled meals, reduced-fat cooking methods, fruits, vegetables, and organic foods, alongside nutritional disclosures such as calorie labeling (Din et al., 2012; Suvittawat et al., 2019). Nevertheless, evidence suggests that such initiatives have had limited influence on healthier menu selection, as customers often continue to base choices on cuisine preferences rather than nutritional considerations (Beltran & Romero, 2019; Turkistani & Saaty, 2020).

In Kenya, empirical studies on menu choice have largely emphasized restaurant selection attributes rather than the influence of dietary patterns on menu decisions. Existing research has focused on lifestyle, convenience, cultural influences, and demographic factors affecting dining behavior, particularly within Nairobi and the North Rift region (Wasike et al., 2017; Onyango & Wasike, 2018; Bor et al., 2018). However, limited attention has been given to how customers' dietary patterns—such as health consciousness, nutritional awareness, and preference for balanced diets—influence actual menu choices within hotels. This gap is particularly evident in star-rated hotels in Nakuru County, a rapidly growing tourism and hospitality hub. Consequently, insufficient empirical evidence exists to explain how dietary patterns shape menu selection among hotel customers in this context. This study therefore examined the effect of dietary patterns on menu choice among customers in star-rated hotels in Nakuru County, Kenya.

2. Theoretical Framework

The Theory of Planned Behavior (TPB), developed by Ajzen (1991), explains how individual behavior is shaped by intention, which in turn is influenced by attitude, subjective norms, and perceived behavioral control. Attitude reflects a person's positive or negative evaluation of performing a behavior, subjective norms represent perceived social pressure from significant others, while perceived behavioral control relates to an individual's belief in their ability to perform the behavior despite existing constraints (Ajzen, 2002; McDermott et al., 2015). In the

context of food consumption, these components jointly determine customers' intentions to select healthy menu items. Empirical evidence indicates that strong intentions to eat healthily are associated with favourable attitudes toward nutritious foods, social encouragement from peers or family, and confidence in one's ability to make healthy choices when dining out (Guillaumie et al., 2010; McDermott et al., 2015). Dietary patterns such as frequent consumption of fruits, vegetables, and whole grains are influenced by established eating habits, portion control practices, and nutritional awareness (Branscum & Sharma, 2014; Alam et al., 2020). Furthermore, nutritional knowledge significantly shapes menu selection by enabling customers to align food choices with health needs and weight management goals (Ali et al., 2020; Eze et al., 2017). Therefore, TPB provides a strong explanatory framework for understanding how customers' beliefs, social influences, and perceived control affect healthy eating intentions and ultimately influence menu choice in star-rated hotels.

The Food Choice Process Model, developed by Furst et al. (1996) and later elaborated by Gorton and Barjolle (2013), offers a comprehensive framework for understanding how individuals make food-related decisions over time. The model emphasizes that food choices are not isolated decisions but are shaped by a life-course perspective, whereby past experiences, cultural upbringing, family background, and accumulated habits continuously influence present food preferences (Chen & Antonelli, 2020). According to the model, food choice is constructed through an interaction of thoughts, emotions, and actions, resulting in personal systems that guide everyday decisions. These systems are influenced by multiple factors including personal ideals and beliefs, health goals, taste preferences, affordability, availability of food options, and social contexts such as family and peer influence. In addition, the physical food environment and menu offerings within hotels play a critical role in shaping customers' choices by determining what is accessible and acceptable at the point of consumption. Through ongoing value negotiations—such as balancing health concerns against taste, cost, and convenience—customers develop strategies that influence menu selection behaviour (Guiné et al., 2020). Consequently, the Food Choice Process Model is particularly relevant in explaining how dietary patterns, personal preferences, and contextual factors interact to influence menu choice among customers dining in star-rated hotels.

3. Review of Literature (Hypothesis Development)

Dietary patterns are shaped by food selection, preparation, and utilization practices, which collectively influence customers' health and menu preferences (Kabir et al., 2018). Poor eating habits such as irregular meal timing, meal skipping, and frequent consumption of nutrient-deficient foods have been associated with adverse physical and mental health outcomes (El Ansari et al., 2015; Hilger et al., 2017). Customers' menu choices are therefore influenced by lifestyle dynamics, technological advancements, biological needs, and personal values attached to food (Montanari, 2006; Parappurathu et al., 2015). Empirical evidence indicates that positive eating behaviors—such as consuming a variety of foods, maintaining regular meal frequency, and demonstrating mindful eating—are key indicators of healthy dietary patterns (Demirci et al., 2018). In hotel settings, these dietary behaviors are reflected in menu selection decisions, suggesting that customers' habitual eating patterns play a significant role in shaping their food choices when dining out.

Dietary diversity is a critical component of healthy eating and a widely accepted proxy for nutrient adequacy. The World Health Organization and Food and Agriculture Organization (WHO & FAO, 1996) define dietary diversity as the consumption of foods from different food groups, reflecting both nutritional quality and socio-demographic influences. Studies have

shown that higher dietary diversity is associated with improved diet quality and greater likelihood of meeting nutritional requirements (Parappurathu et al., 2015; Bernardo et al., 2015). Exposure to diverse cuisines enhances familiarity and willingness to select varied menu items in restaurant and hotel settings (Guzek & Głabaska, 2022). However, insufficient dietary diversity remains a global concern, largely driven by limited access to nutritious foods and unhealthy food environments (Micha et al., 2020). Within star-rated hotels, customers with diverse dietary patterns are more likely to prefer balanced menus that incorporate fruits, vegetables, whole grains, and lean proteins, thereby influencing menu choice toward healthier options.

Meal frequency and eating environment further shape dietary patterns and influence menu selection behavior. Meal frequency refers to the number of meals consumed in a day and has been linked to metabolic health and weight management (Wagris et al., 2019). Evidence suggests that regular meal patterns particularly consuming breakfast and limiting excessive snacking contribute to improved physiological outcomes and reduced long-term weight gain (Paoli et al., 2016; Kahleova et al., 2017; Fulkerson et al., 2014). In addition, the social and physical environment in which food is consumed plays a crucial role in shaping dietary behaviour. Dining contexts involving social interactions, distractions, portion cues, and atmospheric factors significantly influence eating decisions independent of the food itself (Wansink, 2004; Lacaille et al., 2011). Environments that encourage overeating, frequent snacking, and sedentary behaviour negatively affect healthy dietary maintenance (Sogari et al., 2018). Since dietary patterns develop over time and strongly influence habitual food preferences, they are expected to significantly affect customers' menu choices in hotel settings. Based on this empirical evidence, the study hypothesizes that:

H₁: *There is a significant effect of dietary patterns on menu choice among customers in star-rated hotels.*

4. Methodology

This study adopted an explanatory research design, which is appropriate for examining cause–effect relationships between variables. The design enabled the researcher to explain how healthy eating concerns influence menu choice among customers in star-rated hotels. Explanatory research is suitable where the objective is not merely to describe phenomena but to establish relationships and make predictions regarding social behavior. In this study, the design facilitated assessment of whether and to what extent dietary patterns and related factors influence customers' menu selection decisions in the hotel context.

Sampling

The target population comprised 785 customers drawn from 19 star-rated hotels in Nakuru County, Kenya, based on an average bed occupancy rate of 43.8 percent as reported by the Central Bank of Kenya. Customers were considered appropriate respondents because they directly experience hotel menu offerings and are best positioned to evaluate their dietary behavior and menu choices. Using Yamane's (1967) formula with a 5 percent margin of error, a sample size of 265 respondents was determined. The hotels were treated as clusters based on star ratings, after which Neyman's proportional allocation method was applied to distribute the sample across hotels to enhance representativeness and precision. Within each hotel cluster, respondents were selected using simple random sampling, ensuring that every customer had an equal chance of participation.

Data collection

Primary data was collected using a structured questionnaire comprising closed-ended items measured on a five-point Likert scale to capture respondents' dietary patterns and menu choice behavior. Prior to the main survey, a pilot study involving 27 respondents, representing 10% of the sample size, was conducted in selected star-rated hotels outside Nakuru County, specifically Noble, Starbucks, and Boma Inn hotels in Uasin-Gishu County, to assess the clarity, relevance, validity, and reliability of the research instrument. The pilot study aimed to detect and correct potential weaknesses in the questionnaire before full-scale data collection, thereby enhancing accuracy and user-friendliness (Fink, 2015; Blair, Czaja, & Blair, 2015). Validity was established through face, content, construct, and criterion validity, supported by factor analysis with acceptable loading thresholds. Reliability was evaluated using Cronbach's alpha coefficient, a measure of internal consistency (Dunn, Baguley, & Brunsten, 2014), with values of 0.70 considered acceptable, 0.80 indicating good reliability, and coefficients above 0.90 reflecting excellent reliability (Tavakol & Derrick, 2011). The pilot study results, indicated that all study variables met the minimum reliability threshold, confirming strong internal consistency of the instrument. Based on feedback from the pilot study, necessary revisions were made to the questionnaire before its final analysis in the main survey.

Data analysis

Data analysis involved both descriptive and inferential statistical techniques using SPSS version 26. Descriptive statistics including frequencies, percentages, means, standard deviations, skewness, and kurtosis were used to summarize respondent characteristics and variable trends. Inferential analysis employed simple and multiple linear regression models to determine the effect of dietary patterns, food portions, nutritional knowledge, and food consumption habits on menu choice. The regression model was specified as:

$$y = \beta_0 + \beta_1(DP) + \varepsilon$$

Where y is dependent variable, β_0 is constant, x is independent variable affecting dependent variable, β is the standardized regression coefficient, Dp = Dietary pattern

5. Findings

This section presents findings from data analysis based on the study objectives. Out of 265 structured questionnaires distributed to customers of star-rated hotels in Nakuru County, 211 were returned, of which 23 were discarded due to incompleteness, resulting in 188 valid questionnaires for analysis. This yielded a response rate of 70.9 percent, which is considered very good and adequate for drawing meaningful conclusions, as supported by Rea and Parker (2014). The high response rate was achieved through personal follow-ups, reminders, and the use of research assistants who facilitated questionnaire distribution and collection.

Sample Characteristics

The findings indicate that the majority of the respondents were male (57.4%), while females accounted for 42.6%, suggesting that more men than women were likely to dine away from home. Most customers were aged above 30 years, with 39.9% falling between 41–50 years, 30.9% between 31–40 years, and 20.7% between 51–60 years, implying that dining in star-

rated hotels was more common among working and professional age groups. In terms of education, a significant proportion of respondents (60.1%) had attained university and postgraduate education, indicating their ability to understand and respond accurately to the questionnaire. Regarding hotel visitation, the majority were frequent customers, with 39.9% having visited hotels 16 times or more and 32.4% between 11–15 times, demonstrating adequate experience to provide reliable information. The main reason for dining was business or work-related activities (35.1%), followed by family gatherings (26.1%), normal dining or dating (16.0%), and special occasions (15.4%), suggesting that professional and social commitments were the dominant drivers of hotel dining behavior.

Table 1: Demographic Characteristics of Respondents

Variables		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	39.9
	51-60 Years	39	20.7
Level of education	Certificate	34	18.1
	Diploma	41	21.8
	Bachelors	84	44.7
Occupation	Post-Graduate	29	15.4
	Unemployed	24	12.8
	Employed	102	54.3
Number of visits to a hotel	Self-employed	62	33.0
	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	15.4
	Holiday visit	8	4.3
	Family gathering	49	26.1
	No time to cook	6	3.2
	Normal dinning/dating	30	16.0
	Business/Work related	66	35.1

Descriptive Statistics of the Study Variables

The research sought to determine the influence of dietary pattern on menu choice using six questionnaire items. According to the findings presented in Table 4.3, the customers agreed that they often eat at least three meals a day ($M = 4.48$, $SD = 0.666$), snack in between meals ($M = 4.26$, $SD = 0.839$) and considered variety in selection of their food items ($M = 4.07$, $SD = 0.916$). A majority of respondents agreed that hotels offer a variety of diets to be selected from the menu ($M = 4.18$, $SD = 0.833$). Moreover, the respondents agreed that they often eat more when in a company of others ($M = 4.14$, $SD = 0.599$) and undecided on preference to eat alone ($M = 3.77$, $SD = 0.773$). These results suggest that dietary patterns demonstrated in choice of menu may be motivated by lifestyle factors including biological needs of the body and values attached to food.

Table 2 Dietary Patterns

Response Items	Mean	Std. Deviation
I often eat at least three meals a day	4.48	.666
I often snack in between meals	4.26	.839
I consider variety in selection of food items to eat	4.07	.916
The hotel offers a variety of diets to be selected from the menu	4.18	.833
I often eat more when in a company of others	4.14	.599
I prefer to eat alone	3.77	.773

The results indicate a high level of agreement that several healthy-eating and preference-related factors shape customer menu choice in star-rated hotels in Nakuru County. Specifically, respondents strongly agreed that they select foods offering good quality for value (M = 4.21, SD = 0.758), prefer meals with appealing aroma or flavour (M = 4.20, SD = 0.820), and often choose foods linked to their social-cultural background (M = 4.18, SD = 0.745) and those preferred by family and friends (M = 4.18, SD = 0.714), showing that both personal identity and social influence matter in menu decisions. In addition, customers reported willingness to pay more for organic food options (M = 4.16, SD = 0.798), suggesting that perceived health and safety value can justify higher prices, while appearance and colour variation also influenced choices (M = 4.13, SD = 0.837), highlighting the role of visual appeal in food selection. Overall, the consistently high mean scores (all above 4.0) suggest that menu choice is notably influenced by value considerations, sensory attributes, cultural familiarity, and social preference cues, implying that hotels can improve menu uptake by emphasizing quality value, taste and aroma, culturally familiar options, organic choices, and attractive presentation.

Table 3 Customer Menu Choice

	Mean	Std. Deviation
I choose food that has good quality to value	4.21	.758
I am willing to pay more for organic food products offered in menu	4.16	.798
I choose to eat foods from my origin or social – cultural background	4.18	.745
I select foods that other family member and friends prefer in menu	4.18	.714
I consider appearance and colour variation in my food choice	4.13	.837
I choose and eat foods that I consider to have good aroma or flavour	4.20	.820

Source (Author, 2022)

Correlation analysis

The correlation results presented in Table 4.8 indicate a significant and positive relationship between dietary patterns and choice of menu, with a Pearson correlation coefficient of $r = 0.544$ ($p \leq 0.001$). This suggests that customers’ dietary patterns are strongly associated with their menu selection decisions. The significant correlation confirms the presence of a linear relationship between the two variables, thereby satisfying the assumption of linearity and supporting their suitability for further regression analysis.

Table 4 Test of Linearity

	Dietary patterns	Choice of menu
Dietary patterns (DP)	1	
Choice of menu (CM)	544**	1

**Correlation is significant at $P \leq 0.001$ level (2-tailed).

Regression Analysis (Hypothesis Testing)

The regression results presented in Table 3 indicate that dietary patterns have a statistically significant effect on customer choice of menu in star-rated hotels. The standardized regression coefficient ($\beta = 0.602$) shows a strong positive relationship between dietary patterns and menu choice, implying that improvements in dietary patterns are associated with increased likelihood of selecting healthier menu options. The t-value of 15.694 with a significance level of $p = 0.000$ confirms that dietary patterns significantly predict customer menu choice. This suggests that customers’ eating structures, including regular meal planning and balanced food combinations, play a critical role in influencing menu decisions within hotel settings.

The model summary further demonstrates strong explanatory power, with an R value of 0.602 and an adjusted R^2 of 0.361, indicating that dietary patterns explain 36.1% of the variation in customer menu choice. The ANOVA results confirm the overall fitness of the regression model, as the F-statistic is significant ($F = 246.309, p = 0.000$), implying that the model reliably predicts menu choice behaviour. In addition, the normality tests reported in Table 3 show acceptable results for both Kolmogorov–Smirnov (0.781) and Shapiro–Wilk (0.197), confirming that the data met the assumptions required for regression analysis. Overall, the findings suggest that dietary patterns are a key determinant of customer menu choice and play an important role in promoting food selection behaviours that are appropriate for improving satiety, controlling appetite, and reducing the risk of overweight and obesity.

The study hypothesis (H_1) that there is a significant effect of dietary patterns on menu choice among customers in star-rated hotels in Nakuru County, Kenya was accepted since the regression results indicate a statistically significant relationship between dietary patterns and customer menu choice, as evidenced by the positive regression coefficient and the significant t-value ($t = 2.919, p \leq 0.05$). This confirms that dietary patterns significantly influence customers’ menu selection. This finding implies that customers tend to consume foods in combination as complete meals or snacks rather than as individual food products or nutrients, thereby shaping healthier menu choices. Such eating behaviours support balanced food intake and are consistent with practices that promote satiety, appetite control, and reduced risk of overweight and obesity, including consumption of a variety of foods across meals, preference for nutrient-dense snacks, and regular meal patterns (Embling et al., 2021; Njike et al., 2016; Fulkerson et al., 2014).

Table 5 Regression analysis

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	1.378	0.109		12.643	0.000
Dietary Patterns	0.549	0.035	0.602	15.694	0.000
Model Summary					
R	.6020				
R Square	0.362				
Adjusted R Square	0.361				
Std. Error of the Estimate	0.449				
ANOVA (model fitness)					
F	246.309				
Sig.	.000				
Normality Test; Kolmogorov-Smirnova					
Statistic	0.781				
Shapiro-Wilk	0.197				

a Dependent Variable: Customer Choice of Menu

6. Discussions of the Findings

The study examined the influence of dietary patterns on customer menu choice using six questionnaire items. The findings revealed that most customers reported consuming at least three meals a day, snacking between meals, and considering food variety when selecting menu items. These eating behaviours are consistent with healthy dietary practices. Previous studies have shown that consuming three meals a day promotes healthy eating habits and reduces the risk of overweight and obesity (Fulkerson et al., 2014). Similarly, snacking on high-protein, high-fibre, and whole-grain foods has been found to enhance satiety, regulate appetite, and lower the likelihood of obesity (Njike et al., 2016). In contrast, inadequate dietary diversity limits access to nutrient-rich foods and contributes to poor nutritional outcomes (Micha et al., 2020). The results further indicated that a majority of respondents agreed that star-rated hotels offer a wide variety of food options, enabling customers to make informed and healthy menu choices. Adequate food variety supports balanced nutrition, which is essential for maintaining good health and preventing diet-related diseases (WHO, 2018a). In addition, respondents acknowledged that they tend to consume more food when dining in the company of others, while showing mixed preferences regarding eating alone. This finding highlights the role of the eating environment in shaping dietary behaviour. Previous research confirms that social interactions during meals significantly influence both food choice and the quantity of food consumed (Chen & Antonelli, 2020). Overall, the findings demonstrate that dietary patterns reflected in menu choice are influenced by lifestyle-related factors, including biological nutritional needs and the social values attached to food consumption.

7. Conclusions and Recommendations

The study concludes that customers' dietary patterns are significantly influenced by the eating environment, particularly social interactions with friends and family, which affect both menu selection and the amount of food consumed during shared meals. Consequently, dietary patterns reflected in menu choice are largely driven by lifestyle factors, including biological needs and personal values associated with food. Based on these findings, star-rated hotels are

encouraged to provide a diverse range of healthy food options within their menus to support positive dietary behaviours and promote healthier meal choices among customers.

8. Further Research

The study recommends that future research be conducted using larger and more diverse samples covering hotels across different categories. This would enhance the generalizability of the findings and provide more robust estimates of the relationships between dietary patterns and customer menu choice.

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