UNIVERSITY OF CAPE COAST

MENU DESIGN AND FOOD CHOICE AMONG CUSTOMERS OF UPSCALE RESTAURANTS IN THE ACCRA METROPOLIS

ESTHER CHRISTABEL ADDO

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BY

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Thesis submitted to the Department of Hospitality and Tourism Management of the Faculty of Social Sciences, College of Humanities and Legal Studies, University of Cape Coast in partial fulfilment of the requirements for the award of Master of Philosophy Degree in Hospitality Management

SEPTEMBER 2017

DECLARATION

Candidate's Declaration

I hereby declare that this thesis is the result of my own original research and that no part of it has been presented for another degree in this university or elsewhere.

Candidate's Signature: …… Date: ……

Name: Esther Christabel Addo

Supervisors' Declaration

We hereby declare that the preparation and presentation of the thesis were supervised in accordance with the guidelines on supervision of thesis laid down by the University of Cape Coast.

Principal Supervisor's Signature: ……Date: ……..

Name: Prof. Ishmael Mensah

Co-Supervisor's Signature: …… Date: ……

Name: Dr. Mrs. Alberta Bondzi Simpson

ABSTRACT

Menu design has the potential of influencing restaurant customers' food choice (Baiomy & Jones, 2016; Ozdemir & Caliskan, 2015). Although menu design and customers' food choice have attracted the attention of both academics and practitioners, the link between these two concepts have rarely been examined in the literature. Additionally, the attributes of menu design have not been clearly identified by previous researchers. This study sought to examine the effects of menu design on customers' food choice in upscale restaurants. Based on an extensive review of the literature on menu design and customers' food choice, the various menu design attributes were identified. The Mehrabian-Russell (1974) Stimulus-Organism-Response model was adapted for the conceptual framework of the study. Data was obtained from 390 respondents and was analysed using SPSS and Analysis of Moment Structure (AMOS). Like previous studies, this study also came out that menu design influenced customers' food choice. The study also revealed that not all the menu design attributes have a significant influence on customers' choice of food items. Menu item description (MID) ironically did not influence customers' choice of food items. Owing to this, it is recommended that industry professionals must pay more attention to menu design attributes in order to maximize sales.

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DEDICATION

To my husband Mr. George Yaw Ofosu and my daughter Gina Adomah Ofosu.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ACRONYMS

AGFI	Adjusted Goodness of Fit Index
AMOS	Analysis of Moment Structure
AVE	Average Variance Extracted
CFA	Confirmatory Factor Analysis
EFA	Exploratory Factor Analysis
GFI	Goodness of Fit Index
GTA	Ghana Tourism Authority
IFI	Incremental Fit Index
KMO	Kaiser-Meyer-Olkin
MDC	Menu Design Characteristics
MID	Menu Item Description
MIP	Menu Item Position
MSA	Measures of Sample Adequacy
NFI	Normed-Fit Index
NRA	National Restaurant Association
PCFI	Parsimonious Comparative Fit Index
PGFI	Parsimonious Goodness of Fit Index
PNFI	Parsimonious Normed Fit Index
RFI	Relative Fit Index
RMR	Root Means Residuals
RMSEA	Root Means Square Error of Approx
SEM	Structural Equation Model
TLI	Tucker-Lewis Index

CHAPTER ONE

INTRODUCTION

Background to the Study

A restaurant menu was traditionally a blackboard in a restaurant kitchen which was continuously updated throughout the service period to notify waiters of the price and the number of portions of different menu items remaining (Antun & Gufstasin, 2005). The word restaurant was derived from the French word "restaurer" which means to restore and first appeared in a decree of 1786 to describe an eatery house (Davidson, 1999). Restaurant menu of those days only offered foods which restored lost strength (Davidson, 1999). Menu is a relatively new phenomenon as it was a "byproduct" of the French Revolution which brought about the emergence of fine dining establishments and this marked a distinctive innovation in service (Spang, 2000).

There is no doubt that restaurant menu of this era is of great importance to the food service industry as it forms the basis of a successful restaurant (Donald, Ottenfield & Witte, 2008). The menu reflects the formality, style, price range and overall image of foodservice establishments (Antun & Gustafson, 2005). Thus it is a marketing tool and is modelled to fit the operational strategy of restaurants (Baiomy, Jones, Elias, & Dinana, 2014; Beldona, Buchanan, & Miller, 2014). The objectives of a well-designed restaurant menu are therefore to communicate, provide tangible information, facilitate choice of food items, enable predictions, costing, planning and to analyse a restaurant's sales history (Waller, 2001). Hence the restaurant menu is intended to promote a perception of value to customers and to give more

direction as to what to choose (McCall & Lynn, 2008). It is in this vein that menu designers use strategies such as providing symbols or highlights of particular menu items, placing particular items at the top or bottom of the list (primacy and recency effect), positioning the most profitable items in sweet spots (gaze motion) where customers' eyesight reach most frequently and using salience builders to distract default preferences through contrasting font, font colour, font size and pictures to increase the sales ability of the menu (Dayan & Bar-Hillel, 2011).

The United States National Restaurant Association (2007) also outlined seven key elements of menu design, namely: cover design, physical design format, typefaces and sizes, type weight, paper quality, colour and white space to influence food choice of customers thereby maximizing sales. A crucial marketing and selling tool for the foodservice industry must be designed to suit the facility as it tells customers a story about the dining operation through its descriptions and design as well as sending messages to the customers about their food choices (Panitz, 2000; Jones & Mifll, 2001; Antun & Gustafson, 2005; Reynolds, Merritt & Pinckney, 2005; Ozdemir & Caliskan, 2014).

Ozdemir (2012) defined the menu design concept as the creation of an attractive menu that not only provides information, but also directs customers' attention to the food items that the foodservice establishment wants to sell most. Menu design researchers continue to investigate menu design attributes on item sales or choice to bring out its effects and relationships (Kincaid & Corsun, 2003; Reynolds et al., 2005; McCall & Lynn, 2008; Guéguen & Jacob, 2012). As Ozdemir and Caliskan (2014) put it, "menu design has been

gaining in popularity among menu researchers and signaling as a freshly developing sub-field of research in the mainstream menu literature." In this context, the main focus is on menu design attributes, customers' perception of the menu design and customers' food choice. Customers eat with their eyes, thus it is imperative for a menu design to be desirable and impress the customer as a successful restaurant menu reflects a deep understanding of customers' desires and characteristics (Payne-Palacio & Theis, 2009).

Food choices of restaurant customers are based on their perceptions of the menu design and this is very vital as it has an influence on the overall operational profitability, since the average customer can be guided and influenced by a well-written menu (Antun & Gustafson, 2005; McCall & Lynn, 2008). The concept of food choice has attracted the interest of people from different fields (Delarney & McCarthy, 2011). Food choice is defined by Murcott (1998) as the selection of foods for consumption, which results from the competing, reinforcing and interacting influences of a variety of factors. These factors range from sensory, physiological and psychological responses of individual customers to the interactions between social, environmental and economic influences, and include a variety of foods available and the activities of the food industry to promote them. With the understanding of the decision-making process in this context (Connors, Bisogni, Sobal, & Devine, 2001), the focus of this study is to examine customers' perceptions of menu design in making food choices in multi menu design attributes.

The reason that potential customers have difficulties choosing foods in various contexts is because they have different perceptions of menu design on food choices (Jang, Ha, & Silkes, 2009). Thus, food choice is a complex

process because it is influenced by many internal and external factors to the customer, and carries many different meanings in perception of diverse culture (Backman, Haddad & Lee, 2002). Influential factors toward customers' food choices in restaurants however are menu design, taste for healthful foods, control beliefs, knowledge and availability in predicting food choice intentions (Backman et al., 2002).

From a theoretical perspective, the Mehrabian and Russell (1974) Stimulus-Organism-Response (S-O-R) model provides a theoretical framework to examine the effects of menu design on food choice. The design characteristics of a restaurant menu can influence a customer to either have a negative or positive behaviour (approach or avoidance) towards that menu item. Donovan and Rossiter (1982) and Baker et al. (1992) were the first to employ the S-O-R model to study the impact of store atmosphere on customers' perceptions and patronage decision. Guéguen et al. (2012) have also used S-O-R model to explain the theoretical underpinnings of the association between menu card characteristics (pictures of the sea, countryside, and kitchen scene) and item choice. Similarly, this model appears to be helpful for understanding the theoretical background of effects of menu design, menu design perception of customers and food choice. This theoretical model hence, demonstrates the influence of physical environment on human behaviour (Liu & Jang, 2009).

Well-written designed menus are mostly used in upscale restaurants and they are geared towards influencing customers' choice of food items (Reed, Mikels, & Simon, 2008; Rozin, Fischler, Shields & Masson, 2006). In upscale restaurants where menus are used as one of the major tools to increase

sales, the design of the menu becomes a strategic marketing tool (Ozdemir & Caliskan, 2014). Fine dining is a characteristic of upscale restaurants and is related to the development of culinary skills in France in 1765 (Kovacevic, 2000). Boulanger, a soup seller, opened the first restaurant in Paris and it represented a new era in the development of gastronomy and culinary skills (Kovacevic, 2000).

Fernández-Armesto and Kulshresta (2001), in their book, Food: A history, posits that the selling of food in public places, such as restaurants and market stalls was a twentieth-century phenomenon in Africa, a much more recent development than elsewhere in the world. The first luxury restaurant was La Grande Taverne de Loudre in Paris in 1782 by Antoine Beau Villiers and was the first known restaurateur and host (Hellmann, 2006). Euromonitor (2009) thus defines fine dining restaurants as full-service restaurants that include, "all sit-down establishments where the focus is on food rather than on drink and characterised by table service and a relatively higher quality of food offering to quick-service units".

According to Ghana Tourism Authority (2015) fine dining restaurants or upscale restaurants are restaurants that are rated as "grade one" restaurants based on an extensive evaluation of facilities, services and competencies of staff. The classification ranges from grade one, which is upscale or luxury; grade two, a midway between upscale and an average restaurant; and grade three, is an average restaurant. Hence grade one restaurants are upscale restaurants according to Ghana Tourism Authority (2015). Upscale restaurants are characterized by offering full service, well designed menu, table service, quality food made with fresh ingredients and personalized service (Walker,

2008). Consequently, the focus of this work is to examine the effects of menu design on food choice among customers of upscale restaurants in the Accra Metropolitan Area.

Statement of the Problem

Menu design is seen as a variable that has a considerable potential in influencing customers' item-ordering behaviour from both practical and academic perspectives (Ozdemir & Caliskan, 2014). This had led to a growing number of research on menu design (Antun & Gustafson, 2005). However, researchers have been giving contradicting number of menu design attributes in their various studies in an attempt to identify all the menu design attributes (Baiomy & Jones, 2016; Ozdemir & Caliskan, 2014). Ozdemir and Caliskan (2014) categorized menu design attributes into four dimensions, namely: menu card characteristics (MCC), menu item description (MID), menu item position (MIP) and menu item label (MIL). Baiomy and Jones (2016), who are believed to be the first to make an attempt to bring the various menu design attributes into one single study also categorized menu design attributes into three, namely menu item description (MID), menu design and layout (MDL) and menu variety (MV). Although customers desire menus that are visually attractive, it is still not clear as to what kind of information they want or view as crucial on a menu (Mills & Thomas, 2008). Identification and assessment of the various menu design attributes hence become imperative in the menu design research domain.

The restaurant and fast food sub-sector is the largest and fastest growing industry and has witnessed a phenomenal growth in the last few years, averaging 20% per annum (Ashitey, 2008). New upscale restaurants are

frequently being established serving both continental and ethnic cuisine in major urban centers such as Accra and Kumasi, (USDA Foreign Agricultural Service, 2008). This is an indication that the competition in the foodservice industry in Ghana is growing. In order to have a competitive advantage, it is very necessary for managers and owners to use every opportunity judiciously so far as sales maximization is concerned (Jang & Namkung, 2007). Menu design is an extension of the personality of the restaurant and brand image (Kincaid & Corsun, 2003). A review of literature on menu design shows that it has considerable effect on two critical variables of customers' restaurant experiences; item-ordering behaviour and item perceptions (Ozdemir & Caliskan, 2014). Though there have been some studies on menu design and item sales, the result of some of them have questionable empirical validity and this is due to small sample sizes, samples including only students or lack of information about validity and reliability of measurement instruments, as in the study of McCall and Lynn (2008). In the work of Ozdemir and Caliskan (2014) "it is too early to draw some general conclusions from the existing menu design literature". More studies with larger sample sizes and employing valid and reliable measurement instruments are needed to examine the effect of menu design and food choice in order to further validate the existing findings of subsequent studies (Ozdemir & Caliskan, 2014).

Menu can be considered as the main disseminator of information to restaurant customers (Baiomey & Jones, 2016). However, despite the academic interests in menu design, most of the studies have been conducted in the advanced countries (Choi & Zhao, 2010). Customers' behaviour in developing countries might diverge from the developed world situation

because of the different cultural orientations (Baker, 2001) as choice may differ from country to country based on race and religion and thus may affect item choice due to a wide range of interacting factors aside from menu item perceptions of customers (Reed, Mikels & Simon, 2000; Rozin, Fischler, Shields & Masson, 2006). For example, previous studies on food choice suggest that culture has a considerable impact on customers' food choice decisions, (O'Mahony & Hall, 2007; Prescott, Young, O'Neill, Yau & Stevens, 2002). Thus, findings from previous studies in countries in Europe alone cannot be used to generalize the issue of menu design and food choice everywhere. Further studies are thus required to be done in the developing countries to find the effects of menu design on food choice in the developing countries as well. This study therefore seeks to study the effect of menu design on customers' food choice in upscale restaurants in the Accra Metropolitan Area.

Research Questions

The study aims to address the following research questions:

1. What are the various menu design attributes in upscale restaurants in the Accra Metropolis?
2. What are the customers' reasons for choice of food items in upscale restaurants in the Accra Metropolis?
3. What is the customers' perception of menu design on upscale restaurants in the Accra Metropolis?
4. What are the effects of menu design attributes on customers' food choices in the Accra Metropolis?

5. What is the influence of customers' perception of menu design on customers' food choice in the Accra Metropolis?

Objectives of the Study

The general objective of this study is to examine the effect of menu design on customers' food choice in upscale restaurants. This will be achieved by addressing these specific objectives:

1. Assess menu design attributes on upscale restaurants in the Accra Metropolis.
2. Assess reasons for choice of food items by customers of upscale restaurants in the Accra Metropolis.
3. Assess customers' perception of menu design on upscale restaurants in the Accra Metropolis.
4. Examine the effect of menu design attributes on customers' food choices in the Accra Metropolis.
5. Examine the effects of customers' perception of menu design on customers' food choice in the Accra Metropolis.

Hypotheses

1. H1: Menu design characteristics (MDC) have a significant effect on customers' food choice.
2. H2: Menu item description (MID) has a significant effect on customers' food choice.
3. H3: Menu item position (MIP) has a significant effect on customers' food choice.

4. H4: Customers' perceptions of menu design influence their food choice.

Significance of the Study

According to Kincaid and Corsun (2003), menu design is an extension of the personality of a restaurant and brand image. Lundberg and Walker (1993) further indicated that menu design is "the silent sales person of the restaurant". This research will therefore provide information that will enhance understanding of menu design in upscale restaurants in Ghana.

This research also aims to provide a better understanding of the effect of menu design on customers' choice of food in upscale restaurants in Accra metropolis. The findings of the study would be of immense benefit to restaurateurs and managers as it will further enhance the understanding of the role menu design plays in customers' food choices. Understanding menu design and customers' choice of menu items would also assist upscale restaurant marketers and practitioners in developing marketing strategies by selecting the most salient attributes to attract and retain customers.

The study will make empirical, theoretical, and practical contributions in the domain of menu design and upscale restaurant customers' choice of food in Ghana. This contribution is particularly important due to the limited empirical studies on menu design in developing countries.

Furthermore, this study will serve as a reference material for future research on menu design. The study will help to provide a useful framework regarding menu design and customers food choice in upscale restaurants in the restaurant industry in Ghana.

Delimitations of the Study

The cross sectional study design was conducted on upscale restaurant customers in Accra only due to time constraints. Since the sample was confined to only upscale restaurants in Accra, the findings cannot be generalized to other geographical areas in the country.

Limitations of the Study

According to Ghana Tourism Authority (2015), there were 413 licensed restaurants in Ghana as at 31st December, 2015 with 53 upscale restaurants in the Greater Accra region alone. This study involved only 20 out of 53 upscale restaurants in Accra Metropolis.

Epistemologically, the study was grounded in objectivism and adopts a quantitative method of data collection. The inherent shortcoming of this method, which does not allow for probing, prevented the researcher from having a deeper understanding of menu design and customers' food choice.

Definition of Terms

Menu design: This is the creation of an attractive menu that not only provides information, but also directs customers' attention to the food items that the foodservice establishment wants to sell more. The design of the restaurant menu gives details of what is available, the types of food items on offer and the categories of food and drinks. It also helps customers to decide on what to have and even explains the various food items if it is unknown to them.

Menu design characteristics (MDC): These refer to features of menu card including copy, colour, paper, typeface, size, photo, and use of boxes.

Menu item description (MID): This refers to providing relevant and sufficient information about menu items on menu card.

Menu item position (MIP): This refers to the location of the menu item both on the menu card or board, and in a menu category list.

Food choice: This is the selection of foods for consumption, which results from the competing, reinforcing and interacting influences of a variety of factors.

Ghanaian upscale restaurants: These are restaurants that are rated as "grade one" restaurants based on an extensive evaluation of facilities, services and competencies of staff. The classification ranges from grade one, which is upscale or luxury; grade two, a midway between upscale and an average restaurant; and grade three, is an average restaurant

Organisation of the Study

This thesis consists of five main chapters and each of the chapters has specific sub-topics that are discussed. Chapter One is basically an introduction chapter to the research. Sub-topics discussed under this chapter include the background to the study, including previous studies on the topic, problem statement, research questions, research objectives, hypotheses, significance of the study, limitations, delimitation, operational definition of terms and organisation of the study. Chapter Two focuses on review of relevant literature on previous research and a presentation of the conceptual framework used in the study. Chapter three outlines the research methodology employed in the study. Sub-headings here include the study area, study design, data and sources, target population, sample size determination, sampling procedures and techniques, data collection and instrument, pre-testing of instrument,

fieldwork and challenges, ethical issues and data processing and analysis. Chapter Four has to do with the presentation of results and discussions. Chapter five concludes the thesis with the summary of findings of the study, conclusions and recommendations

CHAPTER TWO

REVIEW OF RELATED LITERATURE

Introduction

The purpose of this chapter is to review the available literature on issues of menu design and customers' choice of food items in upscale restaurants. It starts with the theoretical framework, followed by customers' perceptions of menu design, customers' food choice in upscale restaurants, various menu design attributes outlined in the literature and finally ends with the framework for the study.

Concept of Menu Design

A menu is a piece or a set of paper on which expressions and exhibits are printed, and it ought to be colourful, engaging, flawless and intelligent that speaks to the quality, culture and style of the restaurant (Seaberg, 1991). A menu serves as the first impression and the representative of the restaurant, which is comparable in character to a proficient discourse (Bowen & Morris, 1995). Customers in upscale restaurants on a normal day spend only 109 seconds to concentrate on the menu in view of default decisions, they actually do not read all the things on the menu before making choices (Kolodinsky, Reynolds, Cannella, Timmons & Bromberg, 2009; Hanks, Smith & Wansink, 2012). Restaurateurs thus have to deliver their messages effectively in the menu to make sure the menu items that they want to promote are designed in a way that it can affect the choice of customers (Pavesic, 2011).

Previous studies have indicated that menu design conveys to customers the quality of food items, the restaurant theme and the service style (Bowen & Morris, 1995; Scanlon, 1999; Ribeiro Soriano, 2002). For example, a menu

which contains healthy items can encourage diners to eat healthy food in a restaurant. Although a number of studies have empirically tested changes in menu design on restaurant sales, they have reported contradictory results. For example, McCall and Lynn (2008) indicated that subtle changes in menu design can cause an increase of up to 10% in restaurant sales. In contrast, Bowen and Morris (1995) found out that a change in menu design did not create a significant change on item sale.

Hence a menu design according to Jones and Mifli (2001) is a display by which a foodservice establishment communicates its offerings to customers. Bowen and Morris (1995) conceptualized menu design as the way a menu card or display is created. Ozdemir (2012) thus describes menu design concept as the creation of an attractive menu card which does not only provides information, but also directs customers' attention to the items that the foodservice establishment wants to sell more. These spell out the vital roles of menu design in restaurants' communication with customers (Ozdemir & Caliskan, 2014).

According to Ozdemir and Caliskan (2014) there has been a growing number of empirical studies on menu design and its associations with item sales or item choice and that provide important framework for understanding the phenomenon. In an attempt to bring the various menu design attributes together Ozdemir and Caliskan (2014) thus categorized menu design attributes into four dimensions which are menu card characteristics (MCC), menu item description (MID), menu item position (MIP) and menu item label (MIL).

Table 1: Studies Showing the Relationships between Menu Design and Item Sales or Choice

Menu Design attributes	Factors influencing item Sales or Choice	Authors
Menu Item Position (MIP)	Location of menu item on menu board	Sobol and Barry (1980)
	Location of menu item on menu card	Bowen and Morris (1995) Kincaid and Corsun (2003) Reynolds et al. (2005) Choi et al. (2010)
	Position of menu item in a menu category list	Dayan and Bar-Hillel (2011)
Menu Item Description (MID)	Details of item description	Shoemaker et al. (2005)
	Complexity of menu item descriptions	McCall and Lynn (2008)
	Presentation of nutritional information for menu items	Hwang and Lorenzen (2008)
	Presentation of calorie information in different formats	Pulos and Leng (2010) Liu, Roberto, Liu, and Brownell (2012)
	Presentation of calorie information in different formats	Roberto, Larsen, Agnew, Baik, and Brownell (2010)
	Calorie labels of menu items	
Menu Item Label (MIL)	Descriptive labels of menu item names	Wansink et al. (2001)
	Names of menu items	Lockyer (2006)
	Affective menu item labels	Guéguen and Jacob (2012)
	Does nutrition information on menus impact food choice?	Vanderlee Lana and Hammond David (2013)
	Comparisons across two hospital cafeterias	

Table 1 continued

Menu Design Characteristics (MDC)	Boxing of menu item Design features as graphics and marks on menu pictures of the sea, countryside, and kitchen scene	Choi et al. (2010) Guéguen et al. (2012) Ryu and Zhong (2012)
Menu Item Variety (MIV)	Antecedents and consequences of customers' menu choice in an authentic Chinese restaurant Context menu choice: Satisfaction or overload? Measuring menu attributes in the international and local resort hotels in Egypt	Hartwell and Edwards (2013) Baiomy and Jones (2016)

Source: Author (2017).

Baiomy and Jones (2016) also categorized them into three (menu item description [MID], menu design and layout [MDL] and menu variety [MV]) in their work. Based on the conceptual and empirical findings of previous studies, the potential factors affecting item sales or choice in the context of menu design can be used to classify menu design into five main attributes, namely: menu item position (MIP), menu item description (MID), menu item label (MIL), menu design characteristics and menu items variety (MIV). However, this study used only three of the attributes which include menu design characteristics (MDC), menu item description (MID) and menu item position (MIP). Table 1 presents the five attributes along with some of their respective studies and factors influencing item sales or choice.

The Concept of Food Choice

When customers' perception of food is positive, they are likely to choose and when negative they are likely to reject the food (Deliza & Macfie, 2005). According to Yue and Tong (2009) food choice is the selection and consumption of foods and beverages, considering what, how, when, where and with whom people eat as well as other aspects of their food and eating behaviour. Almusiened (2010) also defined food choice as the selection of foods for consumption, which results from the competing, reinforcing and interacting influences of a variety of factors ranging from the sensory, physiological and psychological responses of individual customers to the interactions between social, environmental and economic influences, and include the variety of foods available and the activities of the food industry to promote them. Thus there are variety of factors influencing food choice such as biology and physiology, motivation and decision psychology, sociology, economics, consumer science, perception, memory, emotion, social and decision psychology (Koster, 2009).

People categorize objects into foods and nonfoods, and further classify foods according to their personally constructed food choice values (Furst, Connors, Sobal, Bisogni & Falk, 2000; Connors, M.M., Bisogni, Sobal & Devine, 2001; Falk, Sobal, Devine, Bisogni & Connors, 2001). People also classify food and eating situations such as the belief in that eating at home is healthy whiles eating out is not (Connors et al., 2001). Personally operational classification schemes for food and eating situations are embedded in classification schemes that are significant for one's close social environment such as family or friends, which are embedded in classification schemes

provided by the wider cultural environments. Almusiened (2010) highlights the concept of personally operational classification which allows the same food to be viewed as 'healthy' or 'unhealthy' or as 'cheap' or 'expensive' by different people living in the same household. The concept of socially significant classifications acknowledges the shared categories that two or more people develop for food and eating based on their eating relationships.

According to Furst et al. (2000) and Connors et al. (2001), the classification of foods and eating situations is a way that people simplify food choices in a society where the food system is complex and many different ways of eating are possible and acceptable. In the same vein, people categorize foods and eating situations according to multiple dimensions that they construct based on their food choice values. Additionally, Almusiened (2010) stated that a particular food or eating situation may be seen as a bundle of different attributes that are bound together and must be considered simultaneously in making food choices. The characteristics of each specific food often represent conflicting values that require reconciliation in making food choices.

According to Furst et al. (2000) value negotiation is a key food choice process because only rarely can all food choice values be satisfied in a particular food and eating situation. Furthermore, people prioritize values and weigh the options for how and what they will eat in a given setting. Prioritizing values into a hierarchy often occurs simultaneously as people rate foods according to their salient values and then order choice options according to their hierarchy for those values (Connors et al., 2001). Therefore priority of

food choice values varies according to individual traits, personal states and situational contexts.

Balancing is also a process that people use to resolve many food choice value conflicts according to Almousiened (2010). People construct their own ways of ensuring that all of their salient values are met in food choices. Balancing occurs over personally defined frames of reference such as times (day, week, and month), eating occasions, places or eating partners (Connors et al., 2001). Other people vary the importance of health over months, restricting food choices at certain seasons of the year (Smart & Bisogni, 2001; Bisogni et al., 2002). Others may limit the amount of money spent on food for everyday eating but not worry about cost on vacations or holidays. Still others may seek out spicy food when eating alone or with co-workers but accept eating bland food with their children (Bisogni et al., 2002).

People may have different behavioural plans, routines and rules to develop how and what they eat in recurring situations (Furst et al., 1996; Connors et al., 2001). These strategies simplify food choice by eliminating the cognitive effort and time required for deliberation about every food choice. Strategies emerge from initial conscious food choice decisions for a specific situation and eventually become less mindful when that situation occurs repeatedly.

People construct primary food choice values such as taste, convenience, cost, health and managing relationships, conceptually organize foods and eating situations according to these values, prioritize food choice values in specific situations, and negotiate values and balance ways of eating as needed and desired. Food choices in recurring situations are simplified by

the construction of strategies that result in rules, routines and habits for decision making and food behaviours (Almousiened, 2010).

Gaze Motion Theory

According to Panitz (2000) gaze motion theory was propounded by William Doerflier in 1971 and introduced by Livingston in 1978. William Doerfler who was a menu and graphic designer suggested that customers' focus on a single-fold menu with two facing pages lying in the region above a diagonal line cutting across both facing pages (shaded region in Figure 1) and that the most influential area lies just above the mid-point of the right page (Livingston, 1978 ; Yang, 2012). However, Choi, Lee, and Mok (2010) are of the view that gaze movement of customers may vary depending on their cultural backgrounds and physical features as according to Left Marketing Theory, people who live in a keep-to-the-left culture customarily gaze at the left side rather than the right side. Furthermore, according to a Gallup Organization's test of Doerfler's theory in 1987, the gaze motion theory is reliable only in the single panel menu as different outcomes were produced from double and triple-panel menus.

Yang (2012) however stated that the only publicly available gaze motion study published to date was commissioned by the National Restaurant Association and conducted by Gallup in 1987. Although several studies implied that menu viewers study menus, instead of remaining on spots, from top to bottom and left to right, many restaurateurs still place higher-profit items in these positions alternatively with boxes and highlights (Gallup, 1987; Yang, 2012).

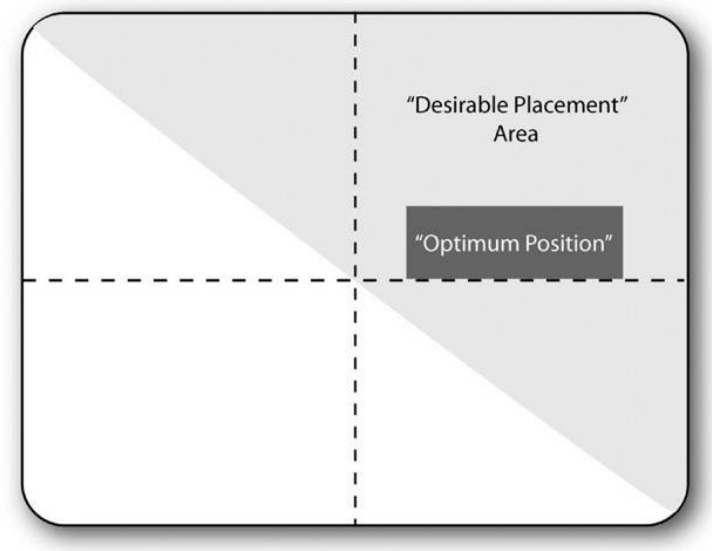


Figure 1: Two-Page Menu Focal Areas
Source: Yang (2012).

Scan Path and Sweet Spot

According to Yang (2012) a scan path is a series of movements made by the eye as it shifts between fixation points during the viewing of a stimulus. Yang (2012) highlighted that customers knowingly or unknowingly direct their eye movements to fixation points based on where their past experiences, knowledge, or overall beliefs suggest the most important centers of information might be located and as a result, search scan paths are more likely to reflect customers' experiences and expectations. Additionally, understanding the scan path used by customers to evaluate restaurant menus can provide insight into the information gathering and decision making processes used to make meal choices (Yang, 2012). Wedel and Pieters (2008) and Holmqvist et al. (2003) pointed out that the analysis of scan path has effectively been used to evaluate things such as consumer attention to advertisements, websites, traditional print media and online print media.

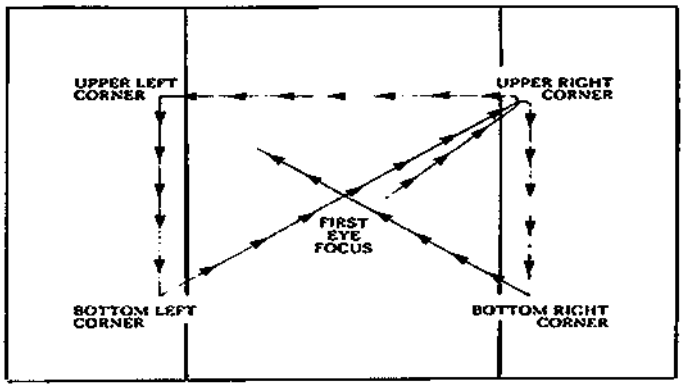


Figure 2: Scan Path

Source: Pavesic (2011).

Primacy and Recency Theory

The rules of recency and primacy theory indicate that the items at the beginning and the end of the list are more popular ones for customers to memorize easily and order frequently (Dayan & Bar-Hillel, 2011; National Restaurant Association [NRA], 2007; Pavesic, 2011; Sysco Food Service, 2011; Yang, 2012).

These design recommendations are based on two effects in psychology and cognitive science, the Von Restorff effect which refers to a person's ability to more accurately recall distinctive items from a list, those items that are presented in such a way where they somehow violate the prevailing context of the overall presentation (Yang, 2012). The Von Restorff effect was identified by Hedwig von Restorff in 1933. She conducted a set of memory experiments around isolated and distinctive items, concluding that an isolated item, in a list of otherwise similar items, would be better remembered than an item in the same relative position in a list where all items were similar. In psychological terms, the primacy effect can be described as what people can best remember at the beginning of a list of items; the recency effect states

people tend to remember the items that come at the end of a list (Garnefeld & Steinhoff, 2013). However, according to Yang (2012), though there is lack of empirical evidence linking primacy and recency with either memorability or purchase behaviour with restaurant menus, practitioners continue to advocate the use of menu 'sweet spots' that is where customers tend to focus on or look to first, last, or most frequently (Ninemeier & Hayes, 2003; NRA, 2007). Figure 3 shows the primacy and recency effect.

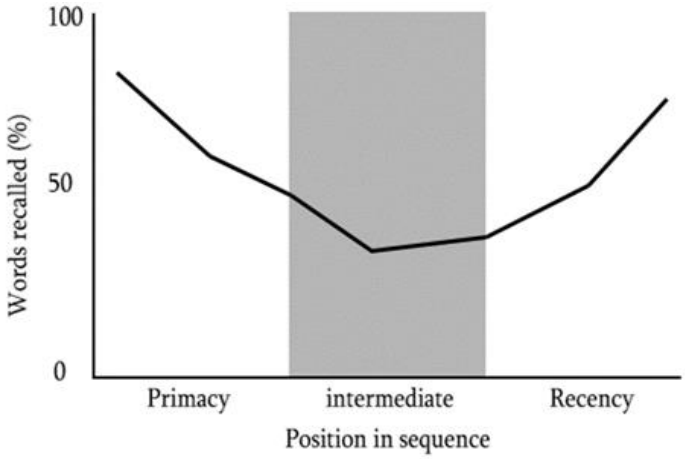


Figure 3: The Primacy and Recency Effect
Source: Pavesic (2011).

Stimulus-Organism-Response Model

The Mehrabian Russell Stimulus-Organism-Response (S-O-R) model was propounded by Albert Mehrabian and James A. Russell in 1974. The model describes the relationship between environmental stimuli, intervening variables, and consumer behaviours. The model posits that physical stimulus such as colour, music, scent and lighting influence human emotions such as pleasure, arousal, and dominance (Yoon, 2012). Physical stimuli refer to the sensory variables of the everyday surroundings such as colour, music, scent,

and texture (Ha, 2006). The application of this model facilitates predicting and understanding the effects of environmental changes on human behaviour. The model has three parts namely: a stimulus taxonomy, a set of intervening variables, and a set of responses. According to Eroglu, Machleit, and Davis, (2001), Yoon and George (2012) and Bakker, Voordt Vink and Boon (2014) the environment creates an emotional response in individuals, which in turn elicits either approach or avoidance behaviour. Yoon and George, (2012) furthered that the model claims that three basic emotional states mediate approach-avoidance behaviours in environmental situations.

Hence according to Bakker et al. (2014) the three dimensions are pleasure, arousal and dominance. Erolugu et al. (2001) highlighted that Mehrabian and Russell used these three dimensions to describe the state of feeling of the observer and as such concern a response. According to the Mehrabian Russell Stimulus-Organism-Response (S-O-R) model any environment will generate in an individual an emotional state that can be characterized in terms of the three emotional states, which are factorially orthogonal. The pleasure-displeasure dimension refers to the extent to which a person feels happy, pleased, satisfied, or content. High arousal-low arousal distinguishes between feelings of high arousal such as stimulated, excited, and aroused and low arousal like relaxed, bored or sleepy. The dominance dimension relates to the degree to which an individual feels dominance with examples being influential, in control, important, and autonomous or submissiveness being submissive, passive and lacking control. Approach behaviours are seen as positive responses to an environment and avoidance behaviours include not wanting to spend or explore (Yoon, 2012). Figure 4

presents the original S-O-R model, developed by Mehrabian and Russell (1974).

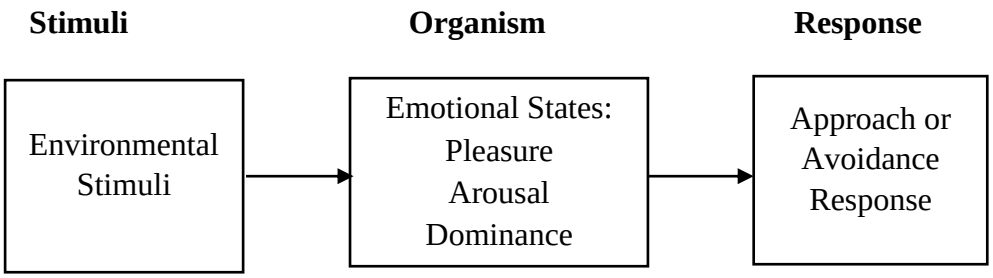


Figure 4: Stimulus-Organism-Response Model

Source: Erolugu, Marchleit and Davies (2003).

Relevance of the S-O-R Model to the Study

This study offers two advantageous reasons for extending the S-O-R model. First, the study provides a theoretically justified way to examine the menu design environmental cues as stimuli. Previous researchers have examined the effects of the retail environment on affective states and response behaviours (Donovan & Rossiter, 1982; Baker et al., 1992; Fiore & Kimle, 1997; Sherman, Mathur, & Smith, 1997). Researchers have focused on the various influences of online website stimuli on customers' shopping experiences, such as website design (Eroglu et al., 2003; Ha & Lennon, 2010), music and amount of information (Kim & Lennon, 2012), and interactivity (Jiang, Chan, Tan, & Chua, 2010).

Using the S-O-R model for this study will determine the significant menu design attributes and how they stimulate restaurant customers' meal experience. Moreover, the S-O-R model contributes to an understanding of mediating role of customers' perception (cognitive) between the menu design environmental cues and customers' food choice. The mediating role of cognitive states between stimuli and response behaviours has been considered

an interesting focus by researchers. For instance Eroglu et al. (2003) found that perceived online environmental cues induced customers' pleasure and arousal, which in turn affected online customers' shopping outcomes. Jang and Namkung (2009) tested the mediating role between perceived quality and behavioural intentions. Ha and Lennon (2010) found that the affective states (i.e., pleasure and arousal) played a mediating role in various consumer response behaviours. However, this study will only dwell on the cognitive states of the customers which will influence them to make a choice.

Socio-demographic Characteristics and Food Choices

According to Mhlanga, Hattingh and Moolman (2015), customers with different individual characteristics have different reasons to choose an item and factors of selection of an item differ from individual to individual. Geissler and Rucks (2011) are of the view that demographic variables play a decisive role in influencing customers' food choice, such as the way customers evaluate a food item for quality. Since customers hold different perceptions of their choices in different restaurant type (Kim & Moon, 2009), they may also have different selection criteria on what to choose. Demographic characteristics provide a powerful determinant of customers' choices which affects the meal experience in a restaurant (Chung & Kim, 2011). Additionally, to Tinne (2012) and Gareth (2011), demographic variables are one of the major factors determining customers' experiences and subsequent behaviours.

According to Sriwongrat (2008), demographic variations are used in numerous studies to differentiate the market segments of customers due to findings of previous studies that demonstrate how different demographic

characteristics affect customers' choice of items. For instance, Olsen et al. (2000) reported evidence of food choice mainly based on education level, age, and income. The authors stated that the likelihood of choosing a particular item decreased with age (Olsen et al., 2000). Moreover, Mohsin (2008) reports that food item selection was found to vary according to gender, ethnic and cultural groups (Josiam & Monteiro, 2004), age groups, occupation, income and benefit seeking behaviour (Yüksel & Yüksel, 2002). Likewise, Shaw (2012) states that customers' food choice can also be influenced by demographic variables. Though important, food is only a part of the total dining experience (Gareth, 2011). Therefore, the restaurant experience is not only influenced by food but by demographic variables such as age, income, educational level, marital status, ethnicity and gender (Lee & Widdows, 2011)

Tinne (2012) is of the opinion that, there has been some contradictory findings on the influence of demographic variables on food choices. Lee and Widdows (2011) studied the influence of demographic variables on food choices and argues that choices of customers are influenced by their age groups and income levels. According to Rahman (2012) customers' food choice are influenced by their age groups, and contends that older customers are more concerned about their health and the quality of food as health is a major factor. Kaura (2011) therefore acknowledges that food quality does not stand out as the most important reason for young restaurant customers though customers over 60 years of age indicate food quality as the most important attribute determining their experience. The common demographic groups that are found to have many choices are the well-educated and high income groups (Turgeon & Pastinelli, 2002).

Customers' Perception of Restaurant Menu Design

According to Lockyer (2006) customers are always looking for something new that they would almost certainly not cook at home when they visit restaurants. Customers' perceptions are fundamentally impacted by numerous visual factors, including menu background colour, text styles, menu texture, pictures, menu size, etc. (Panitz, 2000). In recent years, colour and texture are fundamental features of natural pictures that play an essential role in visual perception and object identification (Pouladzadeh, Shirmohammadi, & Al-Maghrabi, 2014). For instance, Lohse (1997) reported that advertisements featuring colour in the "Yellow Pages" were viewed more often and longer than those without colour. Different characters of colour and texture are combined together to deliver message and promote items more effectively (Jain & Healey, 2002).

Menu item's description creates an image in the customers' mind about the upscale restaurant as well as raising the perceptions of value (Shoemaker, Dawson & Johnson, 2005). Most upscale restaurants present individual menus listing items and providing detailed descriptions and also offer photographs of menu items. Some words have more selling power than others, for example, Panitz (2000) argued that a menu with common and familiar descriptions would not attract sophisticated customers; certain words hold more marketing power than others. For instance, "roasted" or "cooked in wood-fire oven" appears more appealing than "fried" to customers, and the word "fried" can be replaced by "hand-battered" (Panitz, 2000).

Although Davis, Lockwood, Alcolt and Pandelitis (2012) identified that long descriptions take additional space and may confuse customers,

Wansink, Van Ittersum and Painter (2005) countered this by explaining that menu items that were described in more detail were perceived as being of higher quality and better value by customers and could "increase sales by 27%" and encouraged customers to be more frequent visitors to a restaurant in comparison to those described in less detail. It is very important for restaurants offering menu items at premium prices that their menu items are perceived to be of better value when they have detailed and complex descriptions (Shoemaker, Dawson & Johnson 2005; McCall & Lynn 2008).

In terms of the menu size, Pavesic (2011) reports that customers have complained about the menu sometimes being too large for the table and were blocking their sight when talking with their dining partners. Especially for first-time customers, it may take longer for them to make a decision and the table turnover rate will be lowered (Pavesic, 2011). Pavesic also reported that 18-24 menu items contributed to 60 – 70% of restaurant sales, hence it did not make a difference to provide extensive listings of menu items. A menu with smaller size and fewer items will not only shorten the order time but also reduce the inventory and relevant costs (Pavesic, 2011).

According to Bessiére (2001), customers are increasingly sophisticated in their attempts to be aware of the different components in the food they eat. In that sense, Mills and Thomas (2008) pointed out that the number of customers with health conditions such as diabetes, heart disease, allergies and obesity has increased and this has impacted on the interest of customers in the nutritional content of menu items. Wansink and Love (2014) furthered that restaurateurs can help customers enhance their taste expectations by providing appealing names and detailed descriptions on ingredients.

Hence, restaurateurs can direct customers to certain healthy items with high profit by using appealing descriptions. From the aforementioned studies on customers' perception, customers will choose items that will impact on their cognitive state and make decisions on what they deem fit.

Menu Item Position (MIP)

Antun and Guftasin (2005) define menu item position as the location of the menu item both on the menu card or board, and in a menu category list. According to Ozdemir and Caliskan (2014), the existing literature on menu item position has sought answers to three major questions such as the replacement of an item on a menu card resulting in an increase in its sales, whether the position of a menu item in a menu category list influence its choice by customers and finally, whether there are some spots on a menu card that are more visible than the remaining parts. They hinted that there has been some contradictory findings in previous research. Sobol and Barry's (1980) study was an early attempt at investigating the effect of menu item position on item sales. Specifically, they investigated entree location on a menu board with item sales and realised that the placement of entrees on a menu board significantly and positively influences item sales.

However, research by Bowen and Morris (1995), Kincaid and Corsun (2003), and Reynolds et al. (2005) presents controversial findings. Dayan and Bar- Hillel (2011) also investigated the association between the position of items in a menu category list and their sales and their result was that people are more likely to order items at the top or bottom of the list rather than items in the middle of the list. According to Ozdemir and Caliskan (2014), this

finding signifies that ordering of menu category is important since the position of an item on the list may affect its sales.

The conceptual framework adopted by these studies largely relied on gaze motion studies and the rule of primacy and recency. These theories state that identifiable pattern of customers' gaze movements across the menu card and people can more accurately recall the first and last items on a list. In gaze motion studies, the gaze motion patterns of customers are identified by investigating how they move their eyes across the menu card and how much time they spent in viewing a particular place on the menu. According to the William Doefler (1978) and Von Restroff theories people read menus in a predictable pattern and menu sweet spots emerge depending on where their initial and final glances focus on and these are considered as the menu's most visible locations. Placement of menu items in these spots may increase their sales.

However, Choi et al., (2010) and Yang (2012) have questioned the conventional sweet spots proposed by gaze motion studies. Their empirical findings suggest that customers' gaze movements across the menu may not be identical to the models proposed. Nevertheless, Choi et al. (2010) also report empirical findings that respondents tend to order items placed on the menu where their eyes first gaze. Despite some controversial findings, much of the relevant literature proposes that the position of items both on a menu card and in a menu category list may affect item sales. Furthermore, the literature also maintains the idea that whether it is consistent with the traditional wisdom or not, there might be sweet spots on the menu card where the customers glance

first or finally focus, and items positioned at those spots may generate higher sales than their regular placements (Antun & Gufstasin, 2005).

Other findings suggest that the visual impact on customer choice of an item, can so long prepare the human mind for the next selection. Nicholas (2012) examined four food items namely, salads, meat, fish and desserts. The results were that as the visual relationship between selected food on the menu and foods production place and their origin increase, the possibility of acceptance and selection on the menu by customers will be increased. In their research, for example, to raise the food choice motivation by customer, images related to fish and places for fishing have been added to the restaurant background.

The main focus of menu design is based on the increased attention and the importance of items to the customer. For example, one of the suggestions to increase the attention to the content of the menu is highlighting the upper and lower parts of the list of items (Hopkins, 2005). Menu design theory is thus based on two well-known theories of psychology and cognitive science which are Von Restroff position and effect (Panitz, 2000; National Restaurant Association, 2007).

Studies conducted by eye tracking techniques have shown increasing desire to buy products that are less likely to remain in memory. Yang's findings (2012) showed that customers at the time of reading the restaurant menu are doing a general survey on the list of foods. In other words, they act like reading a book. He concluded that when the customer is surfing through the menu, he is taking a cursory glance from top to down from the first page and then the second page. Yang (2012), Reynolds (2005) and Hopkins (2005)

acknowledged that due to the principle of customers' perception about the choice and purchase of food, they pay more attention to the menu arrangement based on main course and sub-course, but the effect on choices will differ. It is upon these findings that the researcher seeks to examine customers' food choices in relation to the position of food items on the menu.

Menu Design Characteristics (MDC)

Menu card characteristics are features of menu including the copy, colour, paper, typeface, size, photo, and use of boxes (Bowen & Morris, 1995; Kincaid & Corsun, 2003; Kwong, 2005; Reynolds et al., 2005; Ozdemir & Caliskan, 2014)). To Kotschevar (2008) effect on sales can be improved through the use of uppercase type or a larger type size font for words; italicizing the typeface or putting it in bold print, and using an exotic font. Likewise, Hensdill (1998) suggested that a menu item with a picture, in a box or in a different colour can generate higher sales than its regular presentation. In addition, Sheridan (2001) highlights that a menu should be readable in any lighting, its size should be proportional to the size of table and any changes should easily be assembled into the menu, it should be soil and water resistant, and should also complement the atmosphere and style of restaurant.

According to Eisseman (2000), it is very necessary to consider colour objectively when designing restaurant menus as it can have negative or positive impact on customers. Eisseman (2000) pointed out that colours are very important in communicating and conveying messages to audiences and can grab customers' attention, making text and images more meaningful and memorable. According to him studies show that colour accelerates learning, retention, and recall by 55% to 78%, improves and increases comprehension

by up to 73%, increases recognition by up to 87%, increases motivation and participation, moves people to action by up to 80%, reduces error count from 55% to 35%, and sells products and ideas more effectively by 50% to 85%. Additionally, Honigman (2013) also indicated that colour is more important than any external part of the menu as it has a strong urge of affecting customers psychologically. Aside making artistic contribution, colour can assist in affecting legibility and speed of reading (Kotsechever & Withrow, 2008). DiMarco (2010) also indicated that colours can be used to hold attention, guide the reader, intensify a visual message, speed interpretation, accentuate positives, establish mood, make sense and clarify ideas, explain and persuade and that using two complementary colours will cause a visual vibration and will excite the eye (Stone, Morioka & Adams, 2008).

According to the Americans with Disabilities Act, D (ADA), a 70 percent contrast between an object and its background is the minimum contrast for the best function. The ADA also suggests using dark type on a light background for better legibility. Both physical environment and culture differences will affect how people interpret colours. O'Grady and O'Grady (2008) explained that when designing with colours different kinds of visual deficiencies need to be considered, such as aging eyes and colour blindness including protanope, dueteranope, and tritanope.

A study by Singh (2006) highlights the colour impacts on people in different ways. Prior studies carried out have examined colours and emotions and have concluded that colours such as yellow, orange and blue were happy colours while brown, black and red were sad colours (Buchanan, 2011). Singh (2006)'s findings showed that while colours such as red were sad colours,

when it is used in restaurants it stimulates the appetite because of the effect it has on an individual‘s metabolism. The findings also revealed that yellow got customers’ attention and encouraged them to eat, thus encouraging sales.

According to Buchanan (2011) some restaurants use blue colour for customers’ relaxation as it is believed that it will lead to an increase in the time spent in the restaurant which may increase sales. However there are some studies that contradict this theory (Buchanan, 2011), an example is Kaiser (1984)’s findings which indicate that evidence that links specific colours to specific responses are inconclusive and that physiological responses to colours are just a part of human experience. There was also some limitations to Singh (2006)’s study which was conducted under the assumption that everyone could see colour which contradicts the notion that people that are colour blind may have varied reactions not due to perception of colour. Putra (2014) however advises that though colour is important in designing menu to draw customers’ attention to dishes on offer, too much colour on the menu can distract a customer’s attention.

Typefaces will be supported by other elements such as colour, size and background (Eisseman, 2000). The menu should be legible as this will have an impact on the overall ordering experience for customers (Cichy & Wise, 1999). The typeface accompanied by other factors such as the colour, size and background will affect the legibility of the menu. According to Scanlon (1999) typeface can be defined as the type of lettering used in the printing process and should be used to complement the character and personality of the restaurant and be consistent with the overall design of the restaurant‘s menu. The typeface used in the menu is very important as it has an effect on customers

and can also be used in the menu to highlight high profit items or specials on the menu. Seaberg (1991) stated that the typeface establishes a link between the restaurant operation and the customers in the form of written communication as it provides a descriptive copy for customers.

According to Scanlon (1999) different typefaces can be used on the menu to convey different moods and therefore suggested that restaurateurs should consider letter spacing and the contrast as it will affect the readability of the type used in the menu development. Typefaces with fine details such as fine serifs, ultrathin strokes, small counters and other visual eccentricities may reduce legibility when colour is not carefully chosen (Carter, Day & Meggs, 20011). According to Scanlon (1999), six commonly used typefaces in menu design are Commercial Script, Helvetica Thin, Zapf Chancer Medium Italic, Goudy Cursive, Bodoni, and Bodoni Open (Scanlon, 1999).

A study conducted by Martin (2009) shows that Arial, Georgia and Verdana are the most commonly used fonts for body copy on screen while Arial, Verdana and Helvetica are used for headlines. Lucida Grande is another font that is often used by designers for both body copy and headlines on screen (Martin, 2009). According to Cullen (2005), typefaces have their own characteristics and personalities. They can be cold, warm, simple, intimidating, sophisticated or friendly, and these personalities will help to build the attitude of the entire design as well as to support legibility and readability. In order to serve the communicative function of the design, typefaces need to be chosen wisely when designing menu as it will be a reflection of the personality of the restaurant.

The use of illustrations and graphics are very important in menu development as they make the menu more visually appealing to customers and spark a customer‘s interest to actually review the menu (Seaberg, 1991). With the change in lifestyle as mentioned above, it is the restaurateur‘s duty to make the menu visually appealing to capture their desired target market, especially children. The use of illustrations also helps to reflect the interior design of the restaurant and help to give the customer an idea of what should be expected from the restaurant. This is consistent with Fellman (2001) who stated that with the increase in the number of working mothers and single parents, menus to attract children are very important. Restaurants need to use illustrations on the menu in order to attract and cater for younger target markets. The use of illustrations will be able to achieve this goal not just for kids but for adults as well.

Brown (1988), stated that a picture is worth thousand words and that the human ability to extract information from visual scenes is far more important than an individual‘s ability to manipulate data verbally or arithmetically. While the use of illustrations and designs have proven to be of great importance in the development of restaurant menus, it is important that restaurateurs do not overcrowd their menus with graphics and illustrations. Scanlon (1999) stated that menus too busy with illustrations and graphics distract customers from their food selection, as the graphic overpower the menu items causing customers to overlook menu selection which may result in the suffering of restaurant sales.

Research shows that the combination of text and image helps readers to retain information. Images will grab readers’ eyes more easily than text

does. “Flip through” readers would prefer to read the caption of an intriguing image rather than read a paragraph. People scan patterns and differences in order to read quickly. Changes in weight and scale of images and elements will help information to be noticed (Baer, 2008).Using background images related to the coastal areas and the sea on the restaurant menu, suggested that in the absence of the inducing stimulus, fish consumption has been increased significantly, however, sometimes the images used related to suburban areas such as the use of images of animals and landscape has slightly increased the meat consumption among customers. Thomas and Mills (2006) explained that customers might not return to a restaurant if their expectations are derived from inaccurate menu representation. Thus, restaurateurs have to design menus to make them more appealing to give customers accurate picture of the food items they have on offer (Thomas & Mills 2006).

Menu Item Description (MID)

According to Antun and Gufstasin (2005), menu item description (MID) refers to the provision of relevant and sufficient information about menu items on a menu. McCall and Lynn (2008) affirm that a product’s description is an important factor on a menu in large part because when customers are deciding on what to order they will often read the description before examining the price. An experiment performed in grocery stores (Swahn et al., 2010) showed that descriptions can positively affect sales and customers’ food choice. In another experiment (Guéguen & Jacob, 2012) it was found that nostalgic food labels generated higher sales rates. These results are in line with an experiment carried out by Wansink et al. (2001) in a

university cafeteria, which again found a positive effect of descriptions on sales and customers' food choice.

A study by Thomas and Mills (2006) revealed that customers desire to see a consistency between the information provided in an item's description and its actual presentation. A supporting finding, reported by Hartwell and Edwards (2009), is that menu descriptions are expected to accurately reflect the dish presented in a hospital foodservice setting. The literature seems to suggest that restaurant customers consider the variety and accuracy of information presented on restaurant menus.

According to the guiding principles of National Restaurant Association of America (2007) there are set guidelines for menu descriptions, including the portion size, the use of brand names and origin points. As Dittmer and Keefe (2009) explained the language used to describe menu items may make a good impression and induce customer orders. The description of food items on the menu may make the customer hungry and may help to increase the number of sales (Baiomy, Jones, Elias & Dinana 2014). Additionally, food and beverage operators can exercise great influence over the amount of the average check by using written descriptions that make menu items sound interesting as customers tend to react positively to foods that are appealingly described and negatively to those that are not.

Studies had investigated the associations between menu item descriptions and customers' food choice. In one particular study it was hypothesized that detailed description of a food item positively influences the probability of choosing that item (Caliskan & Ozdemir, 2014). It received support from empirical findings of studies by Shoemaker et al. (2005) and

McCall and Lynn (2008). Shoemaker et al. (2005) revealed that since detailed menu descriptions negate the impact of price increases on the menu items, they positively influence item selection by employing an experimental research design. Alternatively, McCall and Lynn (2008) demonstrate that menu items described in more complex terms are more desirable than those items with less complex descriptions. Thus, complexity of an item's description enhances its popularity (Ozdemir & Caliskan, 2014).

When customers are exposed to descriptions and select an item from a menu, they infer the quality of the food, how it will taste and how it will make them feel (Wansink et al., 2001). Selection is thereby not only about elimination, but about scanning the menu to find benefits that the customer believes will satisfy his or her expectations (Wansink, et al. 2001). Thus, customers' choice from a menu reflects beliefs that expectations will be satisfied (Wansink et al., 2001; Hartwell & Edwards, 2009) and these beliefs reflect the words and the associations with the words deployed in describing the menu-items (Grossman & Wisenblit, 1999).

McCall and Lynn (2008), define words in two categories including style words and content words. Style words would be considered function words "a", "and," and "it" (Tausczik & Pennebaker, 2010) and content words being nouns, regular verbs, adjectives, and adverbs, and convey the content of a communication (Tausczik & Pennebaker, 2010). Ludwig et al. (2013) suggest that cues through the use of adverbs, adjectives, and nouns will impact consumer responses to a product.

According to Green and Nachtigal (2012), flavours are often described in terms of the qualities of taste and sight, but also include qualities that refer

to the texture of the food or beverage. Descriptions of taste, sight and 'mouth feel' of the menu item will help the customers imagine themselves buying and enjoying the item (Wansink et al., 2001). Just as how the food looks affect how it tastes, the description of a dish is an important clue to the flavor (Wansink et al., 2001). A variety of categories of descriptions is essential, thus according to Drysdale and Galipeau (2009) combining a mixture of food temperature, cooking methods, textures, shapes, sizes and colours gives a well-descriptive menu. Therefore additionally, by deploying descriptive names targeting and arousing several senses, customers can be influenced and provided with better insight into the taste of food compared to if only one single sense had been aroused. In essence, the more senses aroused, the higher the taste awareness created (Chen & Engelen, 2012).

Studies present evidence that restaurant customers expect specific information from menus. Mills and Thomas (2006) demonstrated that restaurant customers wish to see nutrition information such as calorie and fat, product information like harmfulness and ingredients, and food preparation information such as cooking method, quality, and ingredients on menus. Mackison, Wrieden, and Anderson (2010) reported that customers welcome information on ingredients and nutrition composition of salt, energy, and fat content of menu items due to health issues. Antun and Gufstasin (2005) are of the view that, providing nutrition information in descriptions is receiving academic attention because it is believed that informing customers about nutritional content of menu items may help them make healthier choices. Hwang and Lorenzen (2008) show that customers desire to see information about calories, macronutrients (protein, carbohydrates), and fat content of

menu items, whereas providing too much nutritional information in item descriptions may overload customers and be ineffective. Moreover, Roberto et al. (2010), Yoon and George (2012) highlighted that a sufficient amount of nutrition information may assist customers in recognizing the healthier menu items and selecting them over unhealthy options. Subsequent research studies also present findings that support this argument. Accordingly, restaurant customers can notice the nutrition information on menu and they may use it in their item ordering. Additionally, customers may order items lower in calories and fat when they are provided with nutritional information on menus (Liu et al., 2012; Pulos & Leng, 2010).

It has been argued that the language used to describe menu offerings can make the customer hungry as well as increase the number of sales (Walker & Lundberg, 2001). Moreover, the associations created by descriptions may result in a halo effect, that is they may positively influence how the customer actually experiences the food in terms of, for example, looks and taste relatively independent of reality; that is, in essence a self-fulfilling prophecy (Wansink & Love, 2014).

However, the effects of descriptions in upscale restaurants are not given (Reynolds et al., 2005). Customers are often highly involved in their decisions in upscale restaurants (Bloemer & de Ruyter, 1999) (the experience may entail a higher price, or a special occasion), and high involvement implies that the processing done by customers is more extensive (Sarathy & Patro, 2013), which should make customers less susceptible to the effect of descriptive names as they hence make more conscious and rational decisions. Upscale restaurants may also differ since the former present information on a

paper menu in front of the customer rather than on a menu board above the checkout. Most often, customers of upscale restaurants also have the opportunity to spend more time evaluating the menu (Liu et al., 2012). In sum, this allows for more systematic and rational evaluation of the menu in upscale restaurants, which in turn leads to question the effect of descriptions in upscale restaurants. Based on these consistent empirical evidences noted above, the relevant literature concludes that menu item descriptions may affect customers' food choice in upscale restaurants.

Conceptual Framework for the Study

This study applies the concept of menu design environmental cues, customers' perception and food choice by applying the S-O-R model (Mehrabian & Russell, 1974).

The Mehrabian and Russell's (1974) stimulus organism- response (SOR) model is used in this study to provide a theoretical framework to further investigate the relationships between menu design and food choice. Guéguen et al. (2012) applied SOR model to explain the theoretical underpinnings of the association between menu card characteristics such as pictures of the sea, countryside, and kitchen scene and item choice. Likewise, this model is helpful for understanding the theoretical background of relationships among menu design, item perception, and item choice. SOR theoretical model demonstrates the influence of physical environment on the customers (Liu & Jang, 2009). The model posits that external environment presents stimuli (S) which lead individuals to make evaluations (O), and these evaluations further elicit their behavioural responses as approach or avoidance (R) (Yoon, 2012).

Thus this study applies the concept of menu design environmental cues, customers' perception of menu items, and response behaviours which is food choice by applying the S-O-R model (Mehrabian & Russell, 1974). A conceptual model for the present study is shown in Figure 5. The proposed model examines whether customers' perceptions of menu design environmental cues influence their food choice in upscale restaurants.

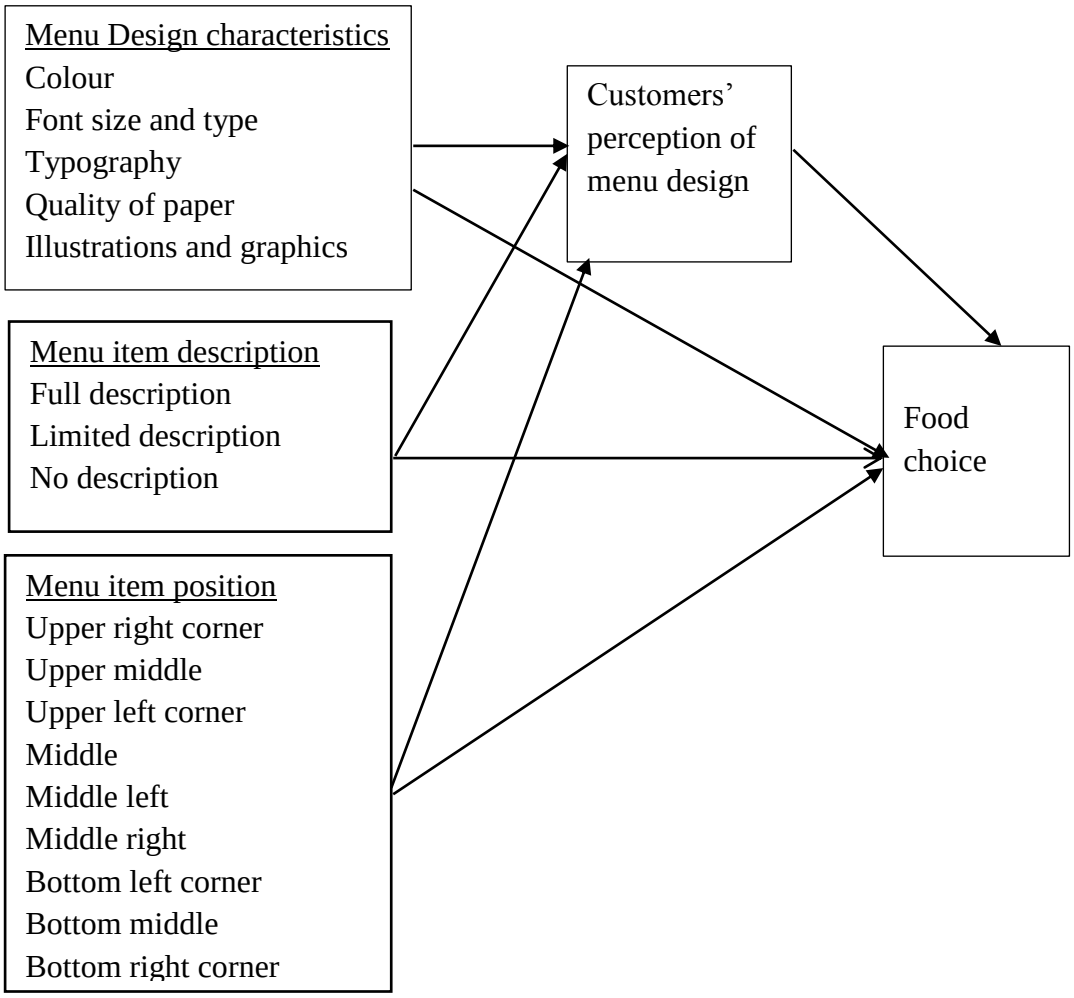


Figure 5: Conceptual Framework of Menu Design and Customers' Food Choice

Source: Adapted from Mehrabian and Russell Stimulus-Organism-Response Model (1974).

Stimulus: Environmental Cues in Menu Design

Stimulus is conceptualized as something that encourages the individual to act (Mehrabian & Russell, 1974). Eroglu et al. (2001) defined stimulus as the sum total of all the cues that are visible and audible to the customer.

In menu design context, menu design attributes which include menu design characteristics (MDC) (font size and type, colour, illustrations and graphics typography and quality of paper), menu item description(MID) (full description, limited description, no description) and menu item positioning (MIP) (upper right corner, upper left corner, middle, bottom left corner, bottom right corner) are the environmental stimuli. Previous research studies have investigated various environmental cues in order to identify the relationships between the stimulus and customers' attitudes, as well as response behaviours. For instance, Davis et al. (2012) employed two different website designs as stimuli to examine online customers' emotional responses. Lee et al. (2010) examined the effects of image interactivity technology on consumer's online shopping enjoyment and attitudes.

Organism: Customers' Perception of Menu Design

Previous studies have emphasized the significance of the organism in the Mehrabian Russel model. The organism is the affective and cognitive states of the customer between the environmental stimuli and response. For instance Eroglu et al. (2003) found that website environmental cues such as colour, background pattern, music, and font influence customers' affective states. Park et al. (2005) also investigated the effects of image rotation on customers' responses which showed that image interactivity technology

influenced both customers' affective (moods) states and cognitive (perceptions of information) states (Park et al., 2005).

Response: Food Choice

Research have shown that cognitive states induced by stimuli influence customer response (Yoon, 2012). A 3-D product presentation on the website may affect customers' cognitive states and purchase decisions (Park & Stoel, 2005; Park et al., 2005). Park and Stoel (2005) found that the amount of information provided to customers as they view the product presentation is positively related to the consumer's purchase intention. Richard (2005) stated that customers are likely to be involved in the website when perceived information content is effective. Information content in the website played a role in customers' cognitive states, high involvement toward the website, and purchase intention (Richard, 2005). Consequently, the subtle cues provided by menu display, which are present in the immediate environment, may have a notable impact on customers' favorable item perceptions and item choice.

Summary

The chapter reviewed related literature, which are of importance to the study. The chapter started with the definition of menu, followed by menu design concept and dimensions, upscale restaurants and food choice concept and the theories guiding this study. The review suggests that menu design is important as an advertising tool so far as sales maximization is concerned. It is argued that menu design in Ghanaian upscale restaurants does not influence customers' food choice. Based on this the various demographic characteristics

were examined, followed by the perception of customers and the various menu design attributes as well as the conceptual framework for the study.

CHAPTER THREE

METHODOLOGY

Introduction

This chapter presents the methods of data collection and analysis including profile of study area, research design, sources of data and target population. The rest are sample size and sampling technique, research instrument, problems encountered on the field and ethical considerations.

Profile of the Study Area

Accra is the capital and most populous city of Ghana, with an estimated urban population of 2.27 million as of 2012 and also the capital of the Greater Accra Region. According to Songsore, (2008), the city is the anchor of a larger metropolitan area and the thirteenth-largest metropolis in Africa. Accra stretches along the Ghanaian Atlantic coast and extends north. Originally built around three different settlements including a port (Jamestown), it served as the capital of the British Gold Coast from 1877.

According to Ghana Tourism Authority (2015), Accra Metropolis happens to be the metropolis with the highest number of upscale restaurants in the country. The Metropolis which is the capital and the largest city in Ghana is the study area for this study. The sub-metros within the metropolis are namely: Ashiedu Keteke, Ablekuma North, Ablekuma South, Ablekuma Central, Okaikoi North, Okaikoi South, Ayawaso Central, Osu Klottey, Ayawaso West and Ayawaso East (Accra Metropolitan Assembly, 2016). Most of the upscale restaurants are located in the Ayawaso West and the Osu Klottey sub-metros with a few scattered in the other sub-metros. Figure 6 shows the study area indicating the locations of the upscale restaurants to be

studied. Kotoka International Airport, which is the only international airport in the country and the country's main gateway for inbound travel is located in Accra. The city of Accra also hosts the seat of government, diplomatic missions, government ministries and agencies and head offices of most business and organisations.

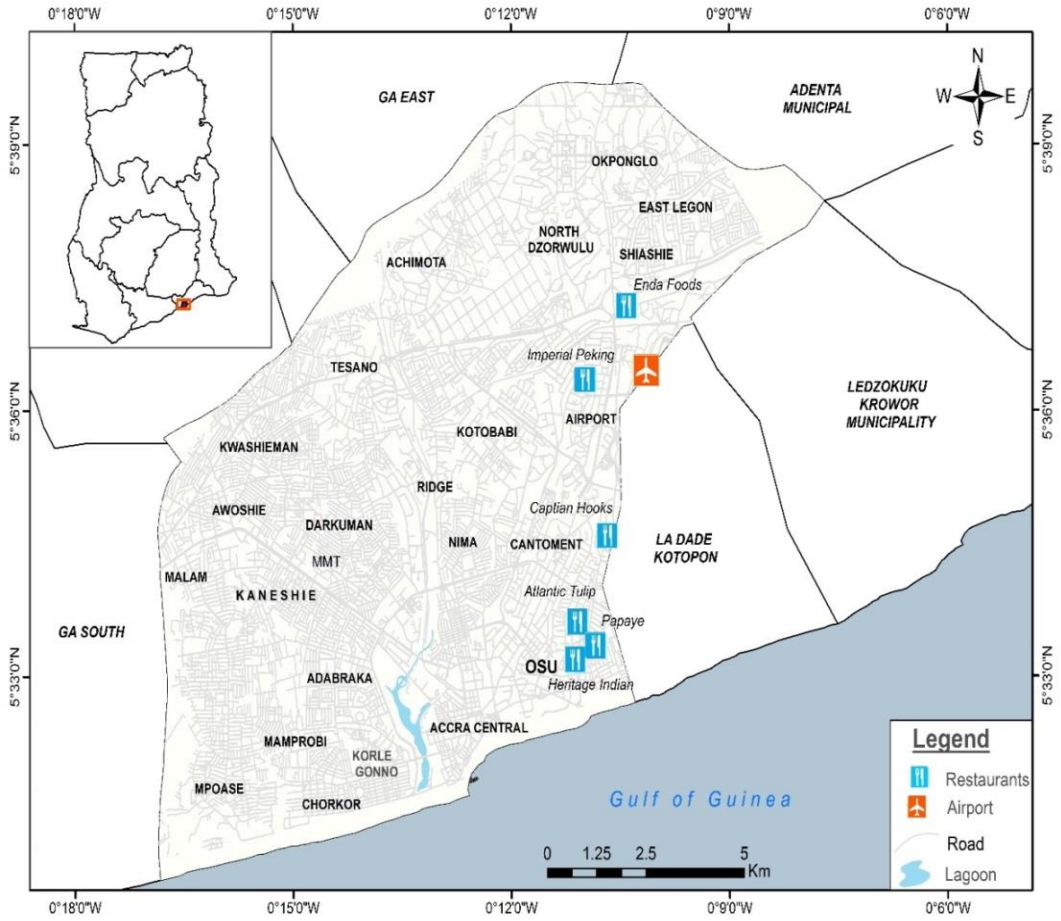


Figure 6: Map of Accra Metropolitan Area

Source: Cartography Unit of University of Cape-Coast (2017).

According to Ghana Tourism Authority (GTA, 2015), there is a total of 413 registered or licensed restaurants nationwide. However, Greater Accra Region has the highest number of grade one (upscale) restaurants which are 53 in number.

Research Paradigm

This study was based the positivist research paradigm. The positivist paradigm stems from natural science and hypothesis testing through the quantification of apparent social realities, thus positivist epistemology is deductive in nature (Flowers, 2009). This perspective claims that the world exists externally and objectively, that knowledge is functional only if it is constructed from accounts of this external realism. It also assumes that universal laws exist in the real world (Bryman, 2004). Essentially, positivism is grounded on values of reason, truth and validity. It also places a lot of emphasis on facts that can be evaluated empirically through the utilisation of quantitative methods such as experiments and survey designs, from which the gathered data is analysed statistically (Blaikie, 1993; Hatch & Cunliffe, 2006; Saunders, Lewis & Thornhill, 2012; Easterby-Smith et al., 2004; Eriksson & Kovalainen, 2008). In addition, this perspective advocates that it is possible to formulate models that are generalisable (Ates, 2008). Such models can effectively explain cause and effect associations, and can be useful in forecasting outcomes.

Research Approach

In line with the research paradigm as well as the research problem, a quantitative methodology was deemed suitable to meet the study objectives. Additionally, this study sought to determine the relationship between the variables. Consideration was given to the use of a quantitative methodology. As stated by Hair, Money, Samouel and Page (2007), quantitative research design allows for the analysis of data to determine and validate or reject relationships between variables of interest.

Generally, there are two research approaches; the deductive approach (testing theory) and the inductive approach (building theory) (Saunders et al., 2012). The deductive approach was used in this study due to the fact that it follows the positivist philosophy which is the research philosophy for this study. Subsequently, the research hypotheses are derived from the proposed conceptual framework that illustrated the relationship between menu design attributes and food choice. Additionally, quantitative data is collected to test these hypotheses and examine the identified outcomes. Accordingly, these steps in fact fit only the deductive approach (Creswell, 2003; Saunders et al. 2012). Moreover, the concepts were operationalized in a way that enables variables to be measured quantitatively and this is consistent with the deductive approach (Saunders et al., 2012). Lastly, the study depends on a large sample to generalize the findings to the study population, which is consistent with the deductive approach (Saunders et al., 2012)

Research Design

According to Creswell (2003) research designs are procedures for collecting, analyzing, interpreting, and reporting data in research studies. The research design for this study is explanatory cross-sectional design. According to Sarantakos (2005), an explanatory research design aims to explain social relations or events. Dudovskiy (2016) highlighted that explanatory design identifies the extent and nature of cause and effect of relationships as it can be conducted in order to assess the impacts of specific changes on existing norms and various processes. Furthermore, this type of design is associated with greater levels of internal validity due to systematic selection of

subjects. Hence explanatory design focuses on an analysis of a situation or a specific problem to explain the patterns of relationships between variables.

Cross-sectional study is a positivist design to gain information at a single point of time, moreover it is strongly placed in the context of quantitative research (Collis & Hussey, 2003; Bryman & Bell, 2003). Longitudinal study is also a positivist design which involves the study of a variable or group of subjects over a long period of time (Collis & Hussey, 2003).

In view of the above, this study collected data using a cross-sectional design for the following reasons; First, the research does not consider changes or development in the relationship between the study variables but it searches the relationship at a given point-in time. Second, time constraint is another reason to choose cross sectional design, as the researcher has limited time to collect data.

Target Population

The target population refers to all the elements such as individuals, objects or substances that meet a certain criteria for inclusion in a given universe (Burns & Grove, 2005). It includes all the people who have certain features that are of interest to the researcher and must emanate from where the researcher wishes to extrapolate certain conclusions or generalisations (Chinomona, 2012). The first step in the sampling process is to define the target population (Mhlophe, 2015). An unclear or improper description of the population is likely to give rise to false results (Levy & Lemeshow, 2008). In light of this study, the target population was the customers in upscale restaurants in the Accra Metropolitan Area. Therefore, the criterion for a

respondent to qualify or participate in this study was that the individual was supposed to be at any of the selected upscale restaurants during the time when the data was collected.

Population

The population for this study comprises of all customers of upscale restaurants in the Accra Metropolis. A list of grade one restaurants which are classified as upscale restaurants in Ghana was obtained from the Greater Accra Regional office of Ghana Tourism Authority (GTA, 2015). However, the actual number of respondents to be sampled was not known. Twenty (20) out of fifty-three (53) restaurants were sampled from which the respondents were chosen. Twenty restaurants were chosen for the study because of their management's willingness to allow the study to be undertaken on their premises.

Sample Size

To derive the sample size for the study, the Fisher, Laing, Stoeckel and Townsend (1998) formula for determining sample size was used. This formula is used when the population is unknown.

$$n = \frac{z^2 (pq)}{d^2}$$

Where:

n - The desired sample size

z - The standard normal deviation, set at 1.96, which corresponds to 95% confidence level

p - The proportion in the target population estimated to have a particular characteristic. If there is no reasonable estimate, then use 50 percent (the study used 0.50).

q = 1.0 – p

d = the degree of accuracy desired, here set at 0.05 corresponding to the 1.96.

In substitution,

$$n = \frac{1.96^2 \times 0.5 \times (1-0.5)}{0.05^2} = 384.16$$

The sample size derived is thus 384. However, to accommodate non-response, the sample size was increased to 400. At the end of the study, 390 completed questionnaires were found to be suitable for the analysis. This sample size is suitable because for Structural Equation Modelling analysis using Maximum Likelihood Estimation, a sample size of between 200 and 400 respondents is recommended (Hair et al., 2010).

Sampling Procedure

A list of upscale restaurants in the Accra Metropolitan Area which is 53 was obtained from the Greater Accra Regional office of Ghana Tourism Authority (GTA, 2015). The lottery method of the simple random sampling technique which is a probability sampling was used to select 20 upscale restaurants for the study. The allocation of respondents per each restaurant was done based on the seating capacity of each restaurant (Cooper & Schindler, 2003). Proportional samples were then allocated to the sampled upscale restaurants (Table 2).

Convenience sampling which is a form of non-probability sampling method is a way of drawing representative data by selecting people because of

the ease of their volunteering or selecting units because of their availability or including the selection of the most easily or conveniently accessible respondents (Latham, 2007).

Table 2: Sample Size per Restaurant

Restaurant	Seating Capacity	Number of Respondents per Restaurant
A	20	4
B	30	5
C	38	7
D	40	7
E	50	9
F	54	10
G	60	11
H	70	13
I	80	15
J	90	16
K	100	18
L	120	22
M	130	24
N	150	27
O	158	28
P	160	29
Q	170	31
R	180	33
S	200	36
T	300	55
Total	2200	400

Source: Fieldwork (2017).

This sampling procedure allowed the researcher to obtain the data from respondents or units that were most conveniently available. The chosen method also allowed the researcher to get fundamental information efficiently, quickly and economically as put forward by Zikmund, Babin, Carr and Griffin

(2010) and Cooper and Schindler (2006). Although this method produced many responses quickly and at low cost, respondents may not have been representative owing to the haphazard manner of recruiting respondents.

Sources of Data

Generally, there are two basic sources of data, primary data and secondary data. Primary data is data that is collected specifically for the research project being undertaken by the researcher (Saunders et al., 2007) whilst secondary data is data that already exists such as books, documents and films (Collis & Hussey, 2003). This study used primary source of data derived through a self-administered questionnaire

Research Instrument

The instrument used for data collection was a self-administered questionnaire for restaurant customers. The questionnaire for restaurant customers consisted of four modules, with each module examining different issues in the study. Module 1 looked at the perception of customers, Module 2 covered menu design attributes, Module 3 was food choices and Module 4, socio-demographic characteristics of the respondents. A set of constructs was generated from a review of literature. For each of the modules, a Five point Likert scale ranging from 1 = Strongly Disagree to 5 = Strongly Agree was employed to measure respondents' level of agreement on various issues. Food choices of customers were however rated based on three main levels such as; (1 = Not at all; 2 = To some extent; 3 = To a large extent). Data on menu item position (MIP) was gathered with the help of the restaurant managers and head waiters.

Pre-test

The pretest was carried out in May 2017. This was conducted in order to improve the measurement items in the questionnaire with regard to the content validity of the scale such as clarity, readability and comprehension. According to Hair et al. (2010) when measures are either developed for a study or taken from various sources, some type of pre-test should be performed, the pre-test should use respondents similar to those from the population to be studied so as to screen items for appropriateness. The pre-test was undertaken to evaluate the content validity such as the sequence and flow of questions, ambiguity or bias of words and the simplicity of the questionnaire and to test the format and clarity of scales, length of survey and time to complete the questionnaire (Malhotra, Hall, Shaw & Oppenheim, 2002).

Malhotra et al. (2004) suggest that the sample size required for a pilot test vary from 15 to 30 respondents. In this study, the questionnaire was tested by 39 respondents for wording, layout and comprehension. Cronbach alpha was performed to test the reliability and internal consistency of each of the 48 items used to measure the constructs. The results of Cronbach alpha were well above 0.60, indicating internal consistency (Churchill, 2001). The questionnaire was also checked for content validity; majority of the constructs did not meet the requirement ($0.5 \geq 0.05$) due to the small sample size as sample size has an impact on a study. Respondents were encouraged to make comments on any measured items they thought were ambiguous or difficult to answer. It was identified that the method used for the collection of data for menu item position (MIP) was making the respondents uncomfortable,

complaining that they cannot be eating and filling a questionnaire at the same time, hence a different means was adopted.

Data Collection Procedures

The study involved 384 respondents who were customers of upscale restaurants in the Accra metropolis. However, 400 questionnaires were distributed to prevent the risk of non-response. Out of the 400 questionnaire that were given out, 390 were completed. This means that there was 97.5% active response rate indicating a high-level response rate. Table 3 shows the response rate of respondents.

Table 3: Overall Response Rate

Sample	Number	Percentage (%)
Questionnaires Distributed	400	100
Returned Questionnaires	390	97.5
Incomplete Questionnaire	10	2.5
Total Usable Response	390	97.5

Source: Field work (2017).

The researcher acquired the necessary authorisation from the respective restaurant managers and restaurateurs of the various upscale restaurants in the Accra Metropolitan Area. An introductory letter from the Department of Hospitality and Tourism Management from the University of Cape Coast was presented to the managers and restaurateurs as well as the researcher's student's Identification Card before allowing the researcher to include their restaurants in the study. Consistency during data collection was necessary in ensuring that all respondents interpreted the research questions similarly at all times. This was safeguarded by encouraging respondents to ask questions whenever they were uncertain of what the question was asking or

not certain of the meaning of some words that were used in the questionnaire. After the pretest, the researcher was confident about the measurement instruments as they were perceived to measure what was being measured. Undoubtedly, the collected information was relevant to the questions that were asked. Validity was also guaranteed because minor alterations were made to instruments (Olivová, 2011).

Data was collected during lunch and dinner time as recommended by various researchers (Akinyele, 2010; Sulek & Hensley, 2004). This enabled the researcher to maximise chances of eliciting information from customers of different lifestyles, occupation, income, age and gender (Kivela et al., 1999). During the data collection period customers who were willing to participate in the study received questionnaires. The researcher intercepted every potential respondents as they walked into the restaurant and explained the nature of the study to them. They were informed that their participation in the study was voluntary and the information provided would be kept private and confidential. Restaurant customers aged under 18 years were however excluded from the sample because it was expected they might encounter difficulties in interpreting the questionnaire (Weiss, 2003).

The questionnaires were administered by the researcher in upscale restaurants during lunch (12.00 noon – 3.00 pm) and dinner time (6.00 pm – 9.00 pm) over a period of one month. Respondents could ask the researcher for assistance if they had difficulty interpreting or understanding the questions. The way the questions were structured did not seek to modify responses. The presence of the researcher on the field also did not tamper with the responses of participants as in a quantitative study a researcher is not immersed into the

study. Additionally, the presence of the researcher on the field was to provide clarifications to any questions that the respondents found to be unclear. Also the selection of the restaurants was based on the lottery method which gave each upscale restaurant equal chance of being selected, thus giving a limited chance for bias to creep in and hence it can be said that the researcher was not biased in the selection of respondents.

Methods of Data Analysis

The study used two procedures to analyse the data collected, namely Exploratory Factor Analysis (EFA) and Structural Equation Modelling (SEM) by employing SPSS and AMOS software respectively. SPSS is a data analysis package and one of the most widely used programs for statistical analysis, especially in social science disciplines. It is also capable of handling very complex statistical procedures and it is user-friendly. Hence the researcher was able to organise the SPSS output easily since it is compatible with Microsoft Office packages and also supports an 'add on' of AMOS software (Janssens, Wijnen, Pelsmacker, & Kenhove, 2008; Pallant, 2007; Zikmund, 2003). SPSS was adapted for coding and entering the raw data, performing the data screening, conducting the EFA and calculating the Cronbach alpha. After SPSS statistical analyses' SEM was employed to test the model and hypotheses.

Statistical techniques such as multiple regression analysis have specific limitations because multiple regression analysis assesses only a single relationship between the independent and dependent variables. SEM is a prominent alternative method of investigating the higher-order structure (Ryu et al., 2008). When the phenomena of interest are complex and

multidimensional, SEM is the only analysis that allows complete and simultaneous tests of the relations (Ullman, 2007). Thus, considering the limitations of multiple regression (Chinna, 2009; Hair et al., 2010), SEM was employed in this study to test the hypotheses since normal regression cannot assess the effects of menu design on customers' food choice due to the high order nature of the questionnaire.

AMOS software was chosen for the study due to the fact that it is among the first SEM programmes that are user-friendly. AMOS software is available as an addition to the SPSS software package hence the researcher can organize the output because it was developed within the Microsoft Windows interface. These made it easier for the researcher to handle analysis and organise the work.

Preliminary Data Analyses

According to Aaker, Day, Kumar and Lawley (2005), the quality of statistical analysis is influenced by how well the data is prepared and converted into a form suitable for analysis. Thus, before conducting further statistical analyses, the collected raw data was subjected to preliminary analyses by careful screening to ensure that the data coding and entry were appropriate for carrying out the analyses. It was important to ensure the data was 'clean' before proceeding to the next step. The screening process was necessary because model estimation in SEM is not always successful because of "messy data" (Kline, 2005; Schumacker & Lomax, 2004). Beside the data cleaning procedures, SPSS was also employed to conduct descriptive analysis including frequencies, mean, and standard deviation of each item and

demographic characteristics of the respondents to gain preliminary information about the data collected in the study.

Data Processing

The data collected was processed to ensure legibility and consistency. It was also done in order to detect errors or omissions and correct them where possible (Khothari, 2004; Zikmund et al., 2010). This process also made it possible for the collected raw data to be ready for coding, transfer and storage as suggested by Swanson and Holton (2005). Item non-response was a practical problem for questions left unanswered or otherwise incompletely filled-out questionnaires. The questionnaire was thus edited for completeness.

Data Coding

The researcher used codes function as a way of providing meaning to the senseless data through condensing huge volumes of data (Khothari, 2004). The researcher also ensured that these codes were mutually exclusive (one answer per cell) and exhaustive (a class for each data item) as suggested by Khothari (2004). This means it was acquired through numerals that were fixed to raw data (Cooper & Schindler, 2006). Just like any step within the research process, data coding similarly has its specific segments that necessitate that the researcher should follow, and accordingly, this study followed these steps, from pre-coding to data cleansing.

The data was pre-coded as it was known as to which answer orderings existed prior to data collection (Cooper & Schindler, 2006) due to the fact that a structured questionnaire was utilised for this study, with questions of a closed-ended form, pre-coding was possible, for instance, “Strongly Disagree”

was pre-coded as 1 while "Strongly Agree" was pre-coded as 5. No responses were expected to come outside this pre-set scale and hence these codes were perceived as exhaustive – each item had its own class. Arguably, the responses of the study participants were fixed or pre-determined, making coding for this study to become pre-set.

Data was also cleaned to guarantee that all codes were genuine and that they conformed to the predetermined codes. The data file was thus checked for mistakes on values that fell beyond the range of potential values for the construct as suggested by Pallant (2010). A few abnormal values were noted and were thus corrected, as per the initial specification. The collected data was classified according to attributes and analysed descriptively. Simple tabulation was thus applied to the study. Tables 4 and 5 at appendices 'A' and 'B' show how the data was coded – from descriptive information (including demographic data) to research variables.

Data Analysis Procedure

SPSS was used to analyse and process the data. Descriptive statistics comprising of means, standard deviations, frequencies and percentages were calculated for the measured items of menu design attributes (MID, MDC and MIP), customers' perception of menu design and customers' food choice as well as the respondents' socio-demographic profile.

Exploratory Factor Analysis (EFA) using principal axis factoring was used to explore the given data in terms of the sample size adequacy which was tested using the Measures of Sampling Adequacy (MSA). The Kaiser-Meyer-Olkin was used to ensure that Exploratory Factor Analysis (EFA) could be done and the Bartlett's Test of Sphericity was used to determine the correlation

between the constructs. Half of the correlation of the variables must be greater than 0.3 to fulfill this assumption (Hair et al., 2010).

To ensure adequacy, a test of reliability was done on the data gathered to ensure that there is internal consistency within the data. The convergent validity which is used to ensure that the variables measure what they are deemed to measure was done accordingly, and this was done by ensuring that the standardized loadings of the items were greater than 0.5. Finally, the discriminant validity which is used to determine the independence of the constructs was conducted to ensure that there was absent of multicollinearity and this was also done by comparing the AVEs with the square correlations of the item-constructs. Finally, the structure model adequacy was tested by the use of the goodness of fit statistic that is the use of the chi-square test. The proposed causal paths were then created and used to examine the possible effects of menu design on customers' food choice and their perceptions of menu design.

Problems/ Challenges Encountered

The fieldwork was challenged by a number of issues. First and foremost was the inability of some respondents to read, comprehend and write in English especially the Chinese. This resulted in a partial attempt in answering all questions in the instrument. Also, some restaurant owners declined allowing the researcher to conduct the study in their facilities with a major reason being safety of their customers.

Ethical Considerations

This study took into account the issues of informed consent, anonymity and confidentiality. It is imperative for researchers not to coerce anyone into participating in a study. Participation must be voluntary at all times (Neuman, 2007). Informed consent was sought from respondents and restaurant managers and owners before undertaking the research. Respondents who declined participation were not forced or influenced to do it as it is against the codes of ethics under research (Sarantakos, 2005).

Secondly, the issue of anonymity was ensured. Anonymity protects privacy by not disclosing a participant's identity after information is gathered (Sarantakos, 2005). Respondents were assured of their anonymity since names and other personal details are not associated with specific responses given as Neuman (2007) puts it, 'even if a researcher cannot guarantee anonymity, he or she should always protect participant confidentiality.' For this study, respondents were assured of their confidentiality. The information they provided were not divulged to any third party other than its intended purpose, which is an academic exercise.

Summary

This chapter outlined the research methodology used for the study. The expected sample size and sampling method were explained, as well as the methods of data collection. The questionnaire design, format, pre-testing, and data analysis techniques were also discussed.

CHAPTER FOUR

RESULTS AND DISCUSSION

Introduction

This chapter presents the results obtained from the data gathered from the respondents. Five objectives and four hypotheses were formulated for the study. The four hypotheses were tested using Analysis Moment of Structure (AMOS) version 20 due to the high order nature of the questionnaire. The results are discussed and presented in Tables 6 to 17.

Socio-demographic Characteristics of Respondents

The results in Table 6 indicate that there was an almost equal split in the gender of the respondents as males constituted 51.3% and females 48.7%. This is an indication that there were more males involved in the study than females. The major age group of the respondents was the 30-39 years group as they formed 34.1% of the sample. This was closely followed by the age groups of 21– 29 (32%). Only 2.6% of the respondents were less than 20 years with the least age group being those above 60 years of age (1.5%). A total of 63.3% of respondents were married with 33.3% singles and 2.1 % divorced. Most (23.3%) of them were into banking and finance and a few (12.3%) of them in the media and communication sector. As regards the educational levels of respondents, those who had attained a polytechnic/university degree constituted 63.8% whilst postgraduates were 26.9%. Those with basic education qualifications were the least (0.8%). Majority of the customers (91.3%) were Christians whilst 4.9% were Muslims. Most of them earned above GH¢ 1,500 (44.1%) followed by those who earn < GH¢ 500 as they

constituted 20.5%. Lastly, 36.2% were Africans and the rest were from Europe (25.1%), America (21.3%) and Asia (17.4%).

Table 4: Socio-Demographic Profile of Respondents (N=390)

Socio-demographics	Frequency	Percentage (%)
Gender		
Male	200	51.3
Female	190	48.7
Age Group		
<20years	10	2.6
21-29 Years	128	32.8
30-39 Years	133	34.1
40-49 Years	86	22.1
50-59 Years	27	6.9
>60 Years	6	1.5
Occupation		
Business Consultancy	79	20.3
Banking and Finance	91	23.3
Medical	63	16.2
Media and Communication	48	12.3
Legal	57	14.6
Others	52	13.3
Marital Status		
Married	247	63.3
Divorced	8	2.1
Single	130	33.3
Separated	2	0.5
Widowed	3	0.8
Education Level		
Primary	3	.8
Secondary	24	6.2
Training College	9	2.3
Polytechnic/University	249	63.8

Table 4 continued

Postgraduate	105	26.9
Religion		
Christian	356	91.3
Muslim	19	4.9
Traditional	4	1.0
Others	11	2.8
Monthly Income		
< GhȻ 500	80	20.5
GhȻ 600-800	172	12.8
GhȻ 900-1100	43	11.1
GhȻ 1200-1400	45	11.5
> GhȻ 1500	50	44.1
Continent		
African	141	36.2
European	98	25.1
American	83	21.3
Asian	68	17.4

Source: Field work (2017).

Customers' Perception of Menu Design

Table 7 presents a summary of the means and standard deviations for the ten items used to measure customers' perception of menu design. From the results, there is an indication that respondents rated colourful and communicative attributes of the menu very high with an average score of 4.08 and 4.00 respectively as shown in the Table 7. This implies that most of the respondents perceive restaurant menu in upscale restaurants to be colourful and communicative. The associated standard deviation to colourful and communicative are 1.07 and 1.01 respectively, though the standard deviations are large, there is a form of related responses by the respondents. Apart from items colourful and communicative all the other items relating to customers'

perception of the menu had an average score greater than 3.5, indicating their agreement with the various items of customers' perception of menu design. The lowest agreement of the items were however, inspiring and thematic.

Table 5: Customers' Perception of Menu Design

Perception	Mean	Std. Deviation
Colourful.	4.08	1.07
Communicative	4.00	1.01
Visually appealing	3.99	1.04
Readable	3.94	1.02
Understandable	3.94	1.00
Descriptive	3.90	1.00
Informative	3.89	1.01
Less voluminous	3.86	1.03
Inspiring	3.84	1.03
Thematic	3.84	1.06
Overall	3.93	1.02

Likert scale: 0.5-1.49 = Strongly Disagree; 1.5-2.49 = Disagree; 2.5-3.49 = Neutral; 3.5-4.49 = Agree; 4.5-5.49 = Strongly Disagree

Source: Field work (2017).

Customers' Reasons for Choice of Food Items

Table 6 presents a summary of the means and standard deviations for the 11 items used to measure reasons for choice of food items. The mean ranged from 1.833 to 2.146 and the standard deviations ranged from 0.700 to 0.797. The items under the constructs were rated based on three main levels such as; (1 = Not at all; 2 = To some extent; 3 = To a large extent). The result obtained indicated that the respondents agreed that the items on the reasons for their choice of food items to some extent. Respondents agreed that the presentation and legibility of the menu affect their choice of food items to

some extent with an average score of 2.146 and 0.700 standard deviation. They were also in agreement to some extent with the statements that the position of food items on the menu as well as a dish that they could not prepare at home were the reasons for their choice of food items (M = 2.113; M = 2.018) respectively. Respondents however did not agree that accompaniment of the dish, ingredients, price, local produce, a healthy option and avoidance of certain foods influenced their food choice as they were rated not at all. All the items were rated on an average of 1.969 approximately 2, with a deviation of 0.735.

Table 6: Reasons for Food Choice by Respondents

Reasons of Food Choice	Mean	Std. Deviation
The presentation and legibility of the menu.	2.146	0.700
The position of food items on the menu.	2.113	0.627
A dish that could not be prepared at home.	2.018	0.780
The accompaniment that comes with the dish.	1.990	0.691
The core ingredient of the dish.	1.967	0.722
A dish representing a healthy option.	1.949	0.781
The method of preparation.	1.931	0.747
A favourite dish.	1.931	0.737
A dish that features local produce.	1.900	0.797
The price of the dish.	1.879	0.737
Avoidance of certain foods.	1.833	0.769
Overall	1.969	0.735

Scale: 1 = Not at all; 2 = To some extent; 3 = To a large extent
Source: Field work (2017).

Restaurant Menu Design Attributes

The menu design attributes have been divided into three main sections, the Menu Item Description (MID), Menu Design Characteristics (MDC) and Menu Item Position (MIP).

Menu Item Description (MID)

Table 7 presents a summary of the means and standard deviations for the 6 menu item description (MID) items.

Table 7: Menu Item Description (MID)

Menu Item Description (MID)	Mean	Std.
The description of the menu items influences my choice of food.	3.96	1.03
The information on the menu is well structured and organized.	3.96	1.12
The information on the menu is minimal and does not distract me in food selection.	3.93	1.01
The names of the dishes match with the theme of the restaurant.	3.92	1.03
The descriptions on the menu are simple and easy to understand.	3.89	1.01
The categories of dishes on the menu can be identified easily.	3.79	1.10
Overall	3.91	1.05

Likert scale: 0.5-1.49 = Strongly Disagree; 1.5-2.49 = Disagree; 2.5-3.49 = Neutral; 3.5-4.49 = Agree; 4.5-5.49 = Strongly Disagree

Source: Field work (2017).

According to the results, respondents rated the items on the average above 3.5, indicating their agreement. Most of the respondents indicated that the description of the menu items influence their choice of food as well as well-structured information on the menu as it had the highest score with an average of 3.96 respectively with standard deviations of 1.03 and 1.12. The lowest agreement was the easy identification of the categories of dishes on the menu as it had a mean of 3.79 and a standard deviation of 1.10.There were however no significant difference among the means. The overall average score

was 3.91 with a deviation of 1.05 indicating the respondents' strong agreement to the menu item description (MID) statements. This suggested that, on average, respondents agreed with the positive menu item description statements relating to food choice in upscale restaurants.

Menu Design Characteristics (MDC)

Table 8 presents a summary of the means and standard deviations for the 11 items of menu design characteristics (MDC).

Table 8: Menu Design Characteristics (MDC)

Menu Design Characteristics (MDC)	Mean	Std.
The overall colour of the menu is attractive.	4.00	1.03
The choice of colour of the menu reflects the overall restaurant concept.	3.97	0.95
The font colour and size used on the menu make it more readable.	3.95	1.04
The typeface on the menu is clear.	3.90	1.03
Illustrations and graphics on the menu are well presented.	3.90	1.01
The font size and colour make the menu simple and of a high standard.	3.88	1.06
The concept of the restaurant is reflected on the menu cover.	3.88	1.07
The type of paper used for the menu complements the concept of the restaurant.	3.88	1.04
The colour used enhanced the legibility of the menu.	3.88	1.01
The paper used for the menu is of good quality.	3.86	1.07
The paper texture of the menu enhances the design.	3.84	1.08
Overall	3.90	1.04

Likert scale: 0.5-1.49 = Strongly Disagree; 1.5-2.49 = Disagree; 2.5-3.49 = Neutral; 3.5-4.49 = Agree; 4.5-5.49 = Strongly Disagree
Source: Field work (2017).

The mean of the measured items ranged from 3.84 to 4.00 and the standard deviations ranged from 0.95 to 1.08. From the results, respondents are in high agreement with the attractiveness of the colour of the menu as it had the highest average of 4.00 and a standard deviation of 1.03. The lowest score was the paper texture of the menu as it had the lowest score of M = 3.84 and 1.08 standard deviation. There was no significant difference among the means. Averagely the respondents rated all the items under the construct above 3.5 indicating high agreement for the items. This is a clear indication that respondents are in agreement with all the menu design characteristics (MDC) items, however they agreed more on the attractiveness of the menu because all the statements on colour were rated higher followed by illustrations and graphics, paper quality and paper texture.

Menu Item Position (MIP)

The results in Table 9 shows the various positions of food items chosen by the respondents. Most of the respondents' food items were chosen from the upper middle (33.33%) whiles 23.85% chose their items from the upper left side of the menu. This was followed by upper right with 20.77% of respondents choosing their menu items from that position. This is an indication that majority of the respondents chose their food items from the upper portion of the menu as the total number of respondents who chose from the upper positions were 77.95% of the total number of respondents. Also, 18.2% of respondents chose their menu items from the middle section of the menu. Just a few of the menu items were chosen from the bottom left (1.03%), right (0.77%) and bottom middle (2.05%) positions.

Table 9: Positions of Menu Items Chosen by Respondents

Positions	Frequency(N)	Percentage (%)
Upper Middle	130	33.33
Upper Left	93	23.85
Upper Right	81	20.77
Middle	40	10.26
Middle Left	21	5.38
Middle Right	10	2.56
Bottom Middle	8	2.05
Bottom Left	4	1.03
Bottom Right	3	0.77
Total	390	100

Source: Fieldwork (2017).

In summary, it is evident that majority of the respondents' food items were chosen from the upper part of the menu especially the upper middle, followed by the upper left and then upper right. The least amount of food items were chosen from the bottom positions. This is not surprising since empirical findings on menu item position have been producing conflicting results. This results confirm the rule of primacy theory but refutes the rule of recency theory since menu items in the upper position were mostly chosen whilst the bottom were the least chosen. According to the rules of recency and primacy theory, items at the beginning and the end of the list are more popular ones for customers to memorize easily and order frequently (Dayan & Bar-Hillel, 2011; Pavesic, 2011; Sysco Food Service, 2011; Yang, 2012)). However, this study found that only items at the top and middle positions affect customers' choice decisions.

Exploratory Factor Analysis

The exploratory factor analysis technique using the principal axis factoring was used to reduce the variations in the large dataset to very few newly correlated factors. The aim of EFA in this study was data reduction of the entire sample or purification of the scale and to ascertain whether the questions loaded on their respective dimensions. All the necessary conditions for performing EFA were met, the sample size for the study was 390 and is sufficient to conduct EFA according to Tabachnick and Fidell (2007) Secondly, an inspection of the correlation matrix shows evidence of coefficients greater than 0.3 which means that the condition of factorability of R (strength of the inter-correlations among the items) was met (Pallant, 2007). Additionally, Bartlett's test of sphericity is significant which supports the factorability of the data set and implies the presence of non-zero correlation among the items and a high level of homogeneity among variables (Field, 2006). Table 12 presents Bartlett's test of sphericity with an approximate Chi square of 4761.917 with 325 df and significance 0.000. The overall measure of sampling adequacy (KMO) is 0.921 which is higher than the cut-off point of 0.6 as recommended by Field (2006) and Hair et al. (2006). Overall, these data satisfy the fundamental requirements for factor analysis (Hair et al., 2006)

Table 10: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.921
Bartlett's Test of Sphericity	Approx. Chi-Square	4761.917
	Df.	325
	Sig.	0.000

Source: Fieldwork (2017).

Factor Loadings of the Items

The communalities analysis for the items was examined to know the items that are loading well. From the result below almost all the items are loading well-meaning that they are been accounted for by the factor solution, according to Hair et al, (2010). Item that is loading well less than 0.50 must be removed from the analysis.

Table 11: Factor Loadings of the Items

Constructs	Extraction
Customers' perception of menu design	
Colourful.	0.771
Visually appealing	0.780
Descriptive	0.707
Inspiring	0.694
Less voluminous	0.573
Readable	0.715
Understandable	0.679
Thematic	0.721
Informative	0.688
Communicative	0.642
Menu design characteristics (MDC)	
The overall colour of the menu is attractive.	0.764
The choice of colour of the menu reflects the overall restaurant concept.	0.725
The colour used enhanced the legibility of the menu.	0.717
The typeface on the menu is clear.	0.635
The categories of dishes on the menu can be identified easily.	0.637
The information on the menu is well structured and organized.	0.646
Illustrations and graphics on the menu are well presented.	0.674
The concept of the restaurant is reflected on the menu cover.	0.676
The type of paper used for the menu complements the concept of the restaurant.	0.687
The paper used for the menu is of good quality.	0.628

Table 11 continued

The paper texture of the menu enhances the design.	0.702
The font colour and size used on the menu make it more readable.	0.593
The font size and colour make the menu simple and of high standard.	0.559
Menu item description (MID)	
The menu is visually appealing and influences my choice of items.	0.616
The information on the menu is minimal and does not distract me in food selection.	0.632
The names of the dishes match with the theme of the restaurant.	0.631
The descriptions on the menu are simple and easy to understand.	0.556
Menu item position (MIP)	
Upper right	0.692
Upper middle	0.718
Upper left	0.643
Middle	0.519
Middle left	0.495
Middle right	0.543
Bottom middle	0.324
Bottom left	0.324
Bottom right	0.341
Reasons of Food Choice	
The presentation and legibility of the menu.	0.617
The positioning of the food item.	0.745
A dish that could not be prepared at home.	0.714
A dish representing a healthy option.	0.671
A dish that features local produce.	0.726
The price of the dish.	0.575
The accompaniment that comes with the dish.	0.715
The core ingredient of the dish.	0.576
The method of preparation.	0.531
Avoidance of certain foods.	0.479

Source: Fieldwork (2017).

From the result in the Table 13, there is an indication that some of the items were not loading well with the exploratory analysis. All the Items that are not up to the specified value recommended were removed.

Test of Reliability

Overall reliability of all the 48 items was performed on the dataset and had reliability value of 0.93 which indicates high internal consistency within the items (Field, 2005).

Table 12: Reliability Test

Cronbach's Alpha	Cronbach's Apha Based on Standardized Items	No. of Items
0.932	0.932	48

Source: Fieldwork (2017).

Items-Construct Reliability

The composite Reliability is what is used to measure the overall reliability and the internal consistency within the constructs, according to the authors (Hair, Black, Babin, Anderson, & Tatham, 2010). It measures the stability of each of the constructs. According to the previous researchers, a value greater than 0.70 is considered to be good reliability. The result as indicated in Table 15 shows the construct and their reliability values. All the constructs such as the Customers' Perception of menu design, Menu Design Characteristics (MDC), Menu Item Description (MID), Menu Item Position (MIP) and Food choices all had composite reliability value of greater than 0.7 as showed in the table above. Hence there is a good reliability of constructs.

Table 13: Item-construct Reliability and Loadings

Constructs	Items	Standardized Loadings	Composite Reliability	Average Variance Extracted
Consumers' Perception of Menu Design	CP3	0.744	0.884	0.605
	CP5	0.745		
	CP6	0.845		
	CP7	0.807		
	CP9	0.743		
Menu Design Characteristics (MDC)	DC3	0.786	0.881	0.650
	DC4	0.839		
	DC5	0.821		
	DC6	0.778		
Menu Item Description (MID)	MID1	0.776	0.858	0.548
	MID2	0.777		
	MID4	0.741		
	MID5	0.721		
	MID6	0.683		
Menu Item Position (MIP)	MIP1	0.821	0.763	0.466
	MIP2	0.826		
	MIP3	0.616		
	MIP4	0.358		
Food choices	FC1	0.770	0.759	0.459
	FC2	0.859		
	FC3	0.606		
	FC7	0.374		

Source: Fieldwork (2017).

Convergent Validity

Standardized factor loadings was to determine if the constructs have high proportion of variances (Hair et al., 2010). The factor loadings must be greater than 0.50. From the results majority of the items have standardized loadings of more than 0.50 with the exception of items MIP4 and FC7 which recorded loadings less than the recommended value. Based on the values obtained, there is an indication that the constructs conform to constructs convergent validity.

Discriminant Validity

The independence of the constructs was determined using the discriminant validity approach as indicated by (Hair et al., 2010). The statistical technique that was used to measure the discriminant validity was computed by the Average Variance Extracted (AVE). The computed value of the AVE was compared with the square correlation of each construct (Fornell & Larcker, 1981).

Table 15: Inter-Item Correlation

Constructs	1	2	3	4	5
Menu Design Characteristics (1)	0.806				
Menu Item Description (2)	0.742**	0.740			
Menu Item Position (3)	0.132**	0.173**	0.678		
Customer Perception (4)	0.769**	0.721**	0.135**	0.778	
Food choice (5)	0.445**	0.443**	0.137**	0.396**	0.678

** *Correlation is significant at 0.01 level (2-tailed).*
Source: Fieldwork (2017).

To ensure the discriminant validity, the AVE of any two structured constructs must be greater than the square correlation between any given two

constructs. The square root of the Average Variance Extracted is displayed in the leading diagonal in a font. From table 16, almost all the constructs are greater than the square root of the AVE indicating that there is no presence of multicollinearity among the constructs hence independence of the constructs (Byrne, 2001).

Test of Model Fit Using Overall Fit and Other Relative Measures

The overall model fit using the chi-square test was not statistically adequate for the dataset as the chi-square value was 2900.12, with a degree of freedom 802, and a probability value of 0.000 which indicates that the model does not fit well. However of all the common indices or measures used in determining model fit such as the Root Mean Square Error Approx. = 0.07, Goodness of Fit Index = 0.737, Adjusted Goodness of Fit Index = 0.708, Comparative Fit Index = 0.832 and others, RMSEA met the recommended value of less than 0.100. The rest could not meet the recommended values. Due to this outcome, there was the need for a modification of the dataset to remove all the items that were not significant to the model. Appendix 'A' represents the original model fit for the study.

The data was hence modified by removing items that were not contributing to the model. As a result, 6 items under the Menu Design Characteristics (MDC) such as MDC1, MDC2, MDC3, MDC4, MDC9, MDC10 and MDC11 and six items under customer perception (CP) such as the CP1, CP5, CP7, CP8, CP9 and CP10 were removed. Items FC1, FC4, FC5, FC6, FC7, FC8 and FC9 were also removed under the constructs food choice. Two items under the menu design description (MD2 & MID3) and menu five items under menu item position (MIP) were removed from the model.

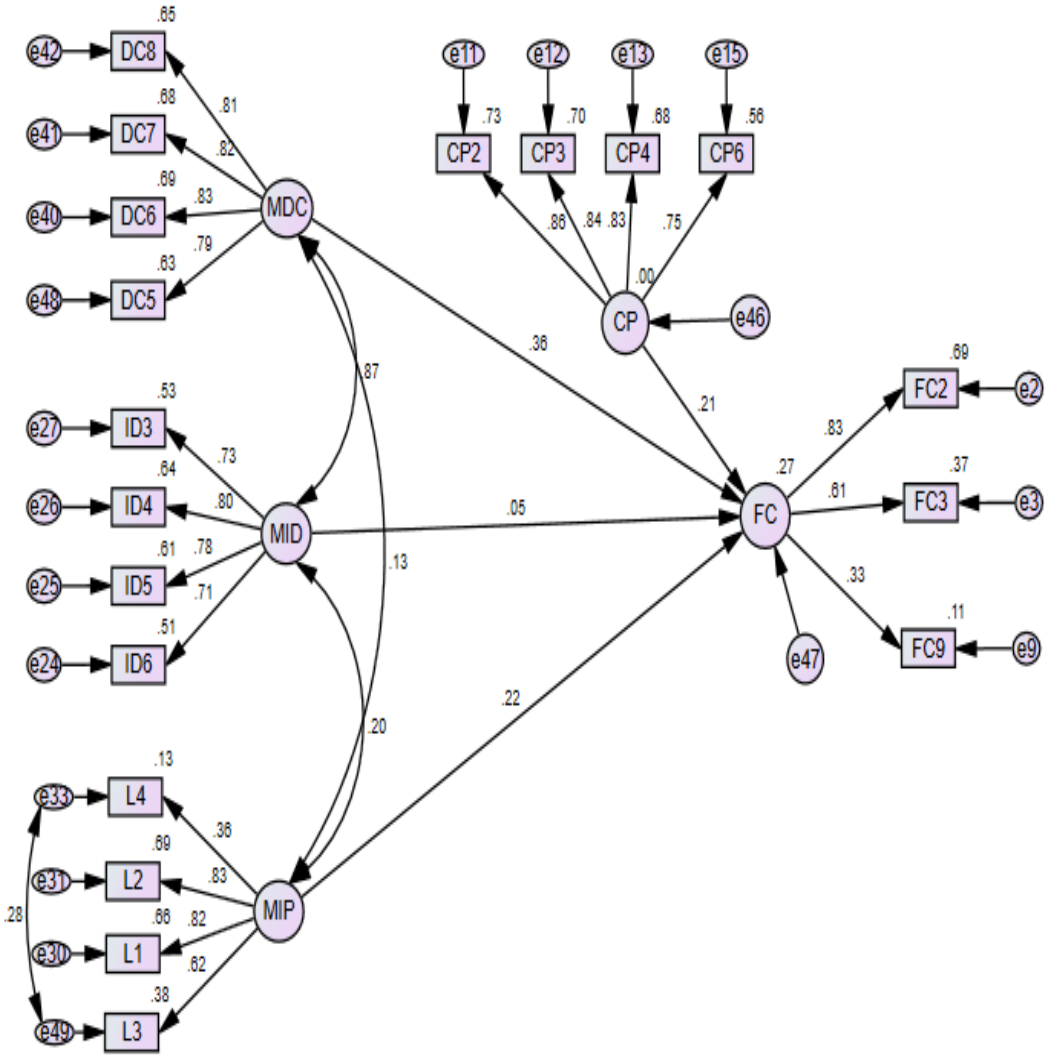


Figure 7: Modified Model Fit for the Data

Source: Fieldwork (2017).

The items indicated above were removed from the model before the recommended indices were achieved. The chi – square/df= 1.349, Comparative Fit Index = 0.967, Goodness of Fit Index = 0.920, Adjusted Goodness of Fit Index = 0.901, Normed-Fit Index = 0.911, Parsimonious Comparative Fit Index = 0.845, and Root Mean Square Error Approx. = 0.037. The overall values as indicated provides evidence of a good model fit to the data gathered.

Table 15: Goodness-of-Fit Indices for the Proposed Model for the Study

Fit indices	Author	Acceptable Values	Model Values	Goodness of Fit
Absolute indices				
Chi-square (χ^2)			260.484	
Df			193	
χ^2/df	Tabachnick & Fidell (2007)	< 3.00	1.349	Acceptable
Root Means Square Error of Approx. (RMSEA)	Hu & Bentler,(1999)	< 0.100	0.037	Acceptable
Root means residuals (RMR)	Tabachnick & Fidell, 2007	Good models have small RMR	0.126	Acceptable
Goodness of fit index (GFI)	Miles & Shevlin, 1998	> 0.900	0.920	Acceptable
Adjusted goodness of fit index (AGFI)	Miles & Shevlin, 1998	> 0.900	0.901	Acceptable
Incremental fit indices				
Normed -Fit Index (NFI)	Bentler & Bonnet (1980)	> 0.900	0.911	Acceptable
Comparative Fit Index (CFI)	Hu & Bentler, (1999)	> 0.900	0.967	Acceptable
Incremental Fit Index (IFI)	Bollen, (1990)	> 0.900	0.967	Acceptable
Relative Fit Index (RFI)	Bollen, (1990)	> 0.900	0.922	Acceptable
Tucker-Lewis Index (TLI)	Bollen, (1990)	> 0.900	0.962	Acceptable
Parsimony Fit Indices				
Parsimonious	Mulaik, James,	> 0.500	0.796	Acceptable

Table 15 continued

Normed Fit Index (PNFI)	Van Alstin, Bennet, Lind & Stilwell, (1989)			
(Parsimonious Comparative of Fit Index (PCFI)	Mulaik et al, (1989)	> 0.500	0.845	Acceptable
Parsimonious Goodness of Fit Index (PGFI)	Mulaik et al, (1989)	> 0.500	0.744	Acceptable

Source: Fieldwork (2017).

The modified model had distinct sample moments of 351, distinct parameters to be estimated 67 and Degrees of freedom (351 - 67) of 284. The test was conducted under 5% confidence level. It is estimated that the predictors of Food Choice (FC) such as Customer Perception (CP), Menu Design Characteristics (MDC), Menu item positions (MIP), Menu Item Design (MID) can explain R^2 = 27.00% of its variance. It indicates that the error variance of Food Choice is approximately 63.00 percent of the variance of the Food Choice. The result in Table 17 provides evidence of good model fits indices as all of the indices met the recommended values.

Effects of Menu Design Attributes on Customers' Food Choice

The structural equation modeling using the Analysis of Moment Structure (AMOS) was computed in order to test the stated hypotheses for the study. The analysis was done using the Maximum Likelihood Estimator (MLE) to perform the alterations of the analysis. The hypotheses results are shown in Table 18 below which contains the unstandardized estimates, the

standardized estimates (beta-values), the Standard Error (S.E), the significance values (p-value) and the decision for the hypotheses tested.

Hypothesis one examined the significant effect of menu design characteristics (MDC) on food choice of customers. The menu design characteristics (MDC) is one of the menu design attributes. The result obtained confirms the significance of menu design characteristics (MDC) on food choice as it contributed approximately 32.5% ($\beta = 0.325$; $P \leq 0.05$) indicating support for the hypothesis. Findings of menu design characteristics (MDC) on item choice have reported conflicting findings. Reynolds et al. (2005) found that presentation of menu items in boxes fails to increase sales of food items whilst Choi et al. (2010) revealed that menu design characteristics (MDC) may influence the sales of particular items featured by using graphics or marks. Moreover, Guéguen et al. (2012) in an experimental research study, demonstrated that pictures related with the sea significantly increase the consumption of fish dishes, whereas the pictures of a countryside landscape do not significantly affect the consumption of meat dishes. In spite of the controversial findings of previous research, the relevant literature appears to show the potential of menu design characteristics (MDC) in influencing item selections of customers. This result confirms the presumption that subtle cues present in the immediate environment which happens to be the menu deign characteristics (MDC) have the power to influence the customers' food choice (Dijksterhuis et al., 2005; Fitzimmons et al., 2002).Thus menu design characteristics have a significant effect on customers' choice of food.

Hypothesis two examines the significant effect of menu item description (MID) on food choice of customers in upscale restaurants. The

result obtained indicated that MID has no significant effect on food choice. The contribution made by MID to food choice was approximately 1.3% which is very small and this is an insignificant contribution as it is confirmed by the p-value of 0.935 > 0.05 significance level. These results contradict the results of an experiment performed in grocery stores by Swahn et al., (2010) which showed that menu item descriptions (MID) can positively affect sales and customers' food choice as well as the experiment carried out by Wansink et al. (2001) in a university cafeteria, which again found a positive effect of descriptions on sales and customers' food choice. Similarly it contradicts Baiomy and Jones (2016) findings, which showed that menu item descriptions have been used to influence customer's satisfaction and attitudes towards selecting menu items. However, this result is in line with the second finding Baiomy and Jones (2016) since they used a qualitative approach and as such interview was used as the research instrument. Probing further, the interviewees revealed that although menu item descriptions (MID) may avoid problems particularly for people who have dietary requirements, some interviewees believed that menu item descriptions were insignificant, because they assumed that customers were already familiar with most menu items on offer. This is a clear indication that not all the menu design attributes affect food choice especially for customers in developing countries since culture may differ (O'Mahony & Hall, 2007; Prescott, Young, O'Neill, Yau & Stevens, 2002). In Ghana for instance, most upscale restaurants sell dishes that are well known to foreigners so they do not see the need for any description. There is no doubt that a majority of foreigners patronize upscale restaurants, as indicated earlier in the demographic profile of the respondents, though the

percentage of Africans was 36.2% which was in fact the highest, Europeans, Americans and Asians additionally were 63.8% which meant majority of the respondents were foreigners. Also Ghanaians are very much cautious of the foods they eat due to superstition and taboos so it comes as no surprise that they know the ingredients very well and hence need no description of the food item.

Hypothesis three examined the significant effect of menu item position (MIP) on food choice by customers in upscale restaurants. The result obtained indicated that the positioning of the food items contributed approximately 18% (β = 0.184) to food choice and this effect is confirmed by the small p-value of 0.002, a value which is smaller than the alpha value of 0.5, however the hypothesis is supported at 5% confidence level, 0.002<0.05. , Literature on the association between menu item position and item choice have produced mixed findings (Sobol & Barry, 1980; Bowen & Morris, 1995; Kincaid & Corsun, 2003; Reynolds et al., 2005). Conceptual frameworks adopted by these studies were gaze motion studies and the rule of primacy and recency, however, researchers such as Choi et al. (2010) Yang and (2012) have recently questioned the conventional sweet spots proposed by gaze motion studies. Nevertheless, literature still maintains the idea that whether it is consistent with the traditional wisdom or not, there might be sweet spots on the menu card where the customers glance first or finally focus, and items positioned at those spots may generate higher sales than their regular placements (Ozdemir & Caliskan, 2014). Thus this result is in line with Dayan and Bar- Hillel's (2011) investigations on the association between the position of items on the menu category list and their sales, whereas the finding was that people are

more likely to order items at the top or bottom of the list rather than items in the middle of the list. This finding also signifies that ordering of menu items is important since the position of an item on the list may affect its item choice Ozdemir and Caliskan (2014).

Hypothesis four examines the impact of customer perception of menu design on food choice of customers. From the result obtained it is evident that customer perception has a significant impact on food choice of customers. The contribution to food choice was estimated to be approximately 20% (β = 0.208) with p-value of 0.033 supporting the claim that customer perception has significant impact on food choice of customers. Hence the hypothesis is supported. This finding is consistent with the Ozdemir and Caliskan's (2014) claim that menu item perceptions of customers, viewed as the interpretation process by which customers make sense of the menu items affect item choice. Thus the findings of this study indicate that customers' perception of menu items had a significant mediating role in the relationship between menu design and customers' food choice in the proposed framework.

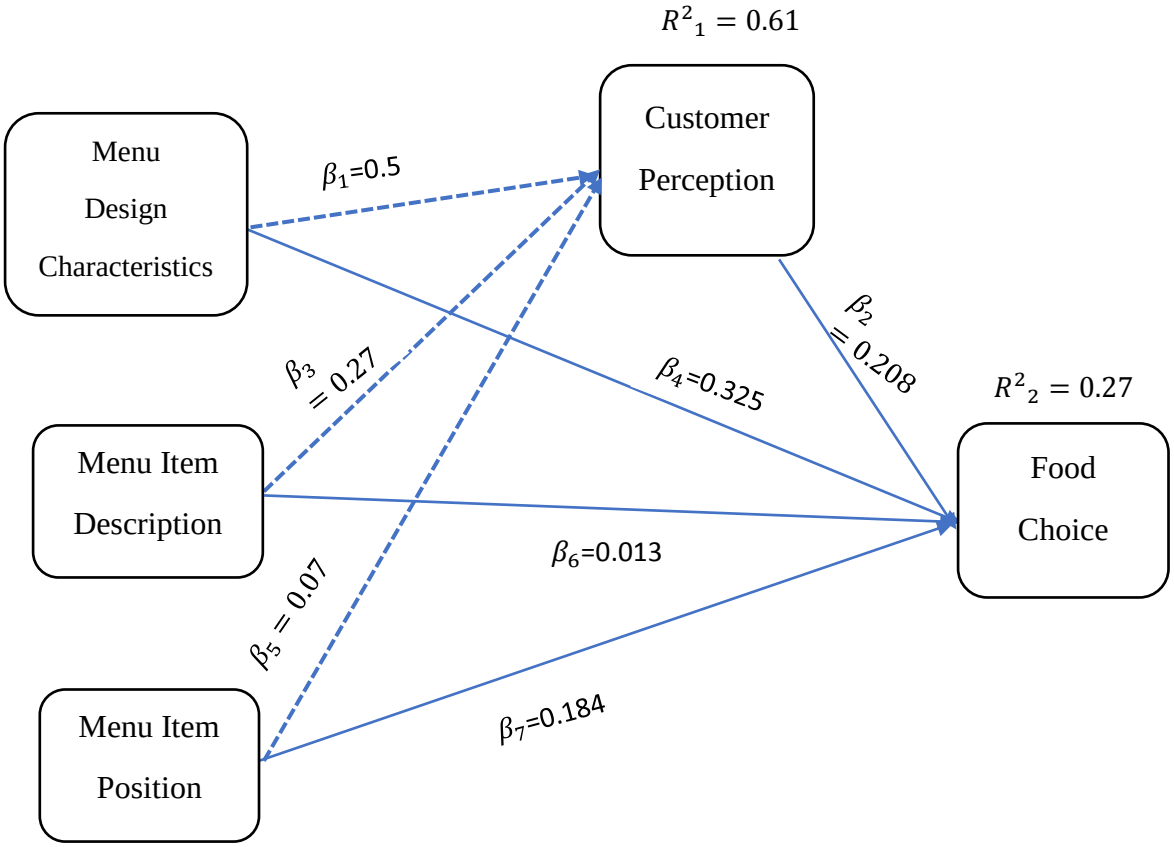
Table 16: Summary of Hypotheses Tests

			Estimate	Beta(β)	S.E.	C.R.	P	Outcome
FC	<--	MDC	0.227	0.325	0.111	2.043	0.041	Supported
FC	<--	MID	0.009	0.013	0.112	0.082	0.935	Not supported
FC	<--	MIP	0.067	0.184	0.022	3.093	0.002	Supported
FC	<--	CP	0.157	0.208	0.073	2.134	0.033	Supported

Customer Perception (CP), Food Choice (FC), Menu Design Characteristics (MDC), Menu Item Positions (MIP), Menu Item Design (MID)
Source: Fieldwork (2017).

The Causal Paths for the Hypotheses

The result in Figure 8 indicates the standardized coefficient values for the proposed structured model. The proposed causal path structure was used to examine the possible effect of the three menu design attributes (Menu Design Characteristics, Menu Item Description and Menu Item Position) on customers' food choice, customers' perception of menu design on food choice and their socio-demographics.



**The broken lines are optional paths that were part of the conceptual framework.*

Figure 8: Extracted Standardized paths coefficients of the modified proposed model

Source: Fieldwork (2017).

The impact of the items under the menu design characteristics contributed 68% to the menu design characteristics. From the results in the

figure, the constructs MID, MIP and MDC could explain the customer's perception by about 61%. This shows the extent of the three constructs and their impact on the customer's perception. Furthermore, the results indicated that customers' perception on food was also significant as it contributed about 27% to the food choice. The various constructs impact on the customer's perception and the food choice have been indicated using the beta (β) value.

Summary

This chapter has presented the results based on the research methodology outlined in chapter three. A preliminary examination of the dataset indicates that the questionnaire was reliable and valid. Each path in the conceptual research model was subsequently tested using SEM analysis. The four hypotheses were tested and the five research objectives satisfied.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Introduction

This chapter presents the summary, conclusions and recommendations of the study. The chapter begins with an overview of the purpose of this study, the objectives and hypotheses that guided the study and the research methods employed. It summarizes the major findings of the study and draws conclusions based on the results.

Summary

The general objective of this study was to examine the effect of menu design on customers' food choice in upscale restaurants in the Accra Metropolitan area. Specific objectives were to:

1. Assess the menu design attributes in upscale restaurants.
2. Assess reasons for choice of food items by customers of upscale restaurants.
3. Assess customers' perception of menu design in upscale restaurants.
4. Examine the effect of menu design attributes on customers' food choices.
5. Examine the effect of customers' perception of menu design on customers' food choice.

Four formulated hypotheses were tested. The hypotheses are as follows:

1. H1: Menu design characteristics (MDC) have a significant effect on customers' food choice.
2. H2: Menu item description (MID) has a significant effect on customers' food choice.

3. H3: Menu item position (MIP) has a significant effect on customers' food choice.
4. H4: Customers' perception of menu design has a significant effect on food choice in upscale restaurants.

The Mehrabian Russell (1974) Stimulus-Organism-Response model was adapted to guide the study. The conceptual framework identified five main constructs, which included menu design characteristics (MDC), menu item description (MID), menu item position (MIP), and customers' perception of menu design and food choice. The study adopted an explanatory cross-sectional research design and a quantitative method of data collection and analysis. Questionnaires were administered to 390 restaurant customers through accidental sampling procedure. A simple random sampling procedure using the lottery method was used to select 20 out of 49 upscale restaurants in the Accra Metropolitan area. SPSS and Structural Equation Modelling (SEM) supported by Analysis of a Moment Structures (AMOS 20) software were used to analyse the data.

Summary of Major Findings

More than half (51.3%) of the respondents were males and 48.7% females. The dominant age groups were 30 - 39 (34.1%) and 21 - 29 (32%) with the least being those above 60 years (1.5%). Most of the respondents were married (63.3%). 63.8% had polytechnic/university degree as were highest level of education. Christianity (93.1%) was the dominant religion. Most of the respondents earned between GH₵ 600-800 (44.1%) monthly and were Africans (36.2%).

A substantive number of restaurant customers perceived the menu of upscale restaurants to be colourful (M = 4.08; S.D = I.07) and communicative (M = 4.00; S.D = 1.01). Pertaining to the menu design attributes, menu item description (MID) was rated averagely above 3.5 for almost all the items with an overall means of 3.91 and S.D = 1.05 indicating the acceptance of the positive menu item description (MID) statements relating to food choice. Similarly, menu design characteristics (MDC) was also rated averagely above 3.5 for almost all the items under the construct indicating strong agreement.

Concerning menu item position (MIP), majority of 33.33% of respondents chose food items from the upper middle, followed by the upper left and then upper right with menu items chosen from the bottom being the least (3.85%). Most respondents agreed to some extent that presentation is legibility (M = 2.146; SD = 0.700). Most of them were also to some extent in agreement with the statements that the position of food items on the menu as well as a dish that they could not prepare at home were the reasons for their choice of food items (M = 2.113; M = 2.018) respectively. To most of the respondents the accompaniment of the dish, its ingredients, price, local produce, healthy options and avoidance of certain foods influenced their choice of food (M = 1.969; S.D = 0.735).

The results obtained from the SEM statistical analyses confirmed that menu design characteristics (MDC), menu item position (MIP) and customers' perception of menu design have significant effects on food choice.

Conclusions

Based on the objectives and hypotheses of the study with the ensuing findings presented, the following conclusions are drawn:

- Menu design attributes can be cagorized into five and these are menu design characteristics (MDC), menu item description (MID), menu item position (MIP), menu item labelling (MIL) and menu items variety (MIV).
- Menu item description (MID) is vital to customers when making a choice of food. However, too much information is not advisable as it leads to distraction.
- The design characteristics of the various menus were appreciated by the customers and most of the items were chosen from the upper right, upper middle and upper left positions of the menus of the various restaurants.
- Customers perceived the menu in upscale restaurants to be colourful, communicative, visually appealing, understandable and above all readable.
- Menu design attributes significantly affect food choice with the exception of menu item description (MID).
- Customers' perception of menu design also influence their food choice in upscale restaurants.

Recommendations

Based on the major findings and the subsequent conclusion drawn, the following recommendations are made:

- Menu design should be able to convey enough information to customers in order for them to properly choose their food items. Thus, menu design may assist customers in making more informed choices.
- According to the findings of this current study, menu design attributes, customers' perception of the various menu design attributes and food choice are interconnected constructs and all are vital in the restaurant customers' food choice decisions. The study found out that menu design attributes such as menu item position (MIP), menu item description (MID) and menu design characteristics (MDC) positively influence customers' perceptions and their food choice. Therefore, in order to be competitive in the industry, industry professionals should pay more attention to menu design attributes in all segments of the industry by improving on their menus as they are major marketing tools in the restaurant industry (Donald et. all 2008).
- Emphatically, much attention may be given to the attributes as a background for formulating their management strategies in the Ghanaian restaurant market. Management actions may therefore be planned and employed to increase the attractiveness of menu items relying on the various menu design attributes.

Suggestions for Further Research

According to Ghana Tourism Authority (2015), there were 413 licensed restaurants in Ghana as at 31st December, 2015 with 53 upscale restaurants in the Greater Accra region alone. This study involved only 20 out of 53 upscale restaurants in Accra Metropolis. Thus the results cannot be generalized for the entire country. Future studies should involve restaurants

and customers from the entire country. This study used a quantitative approach, it is recommended that a qualitative approach is employed in order to have an in-depth understanding of menu design and customers' food choice.

Theoretically, the Mehrabian and Russell's (1974) stimulus-organism-response (SOR) model provided a good theoretical framework for this study in investigating effects of menu design on food choice. It was helpful for understanding the theoretical background of relationships among menu design, item perception, and item choice. However, the study used only three of the menu design attributes. Ozdemir and Caliskan (2014) categorized menu attributes into four dimensions (menu card characteristics [MCC], menu item description [MID], menu item position [MIP] and menu item label [MIL]) whilst Baiomy and Jones (2016) also categorized them into three (menu item description [MID], menu design and layout [MDL] and menu variety [MV]). Further research may be carried out involving all the attributes as time was a limitation to this study.

REFERENCES

Aaker, D. A., Day, G. S., Kumar, V. & Lawley, M. (2005). *Marketing research* (Pacific Rim Ed.). Milton, Qld: John Wiley & Sons Australia.

Accra Metropolitan Assembly [AMA] (2016). *Sub-metros within Accra Metropolis in Ghana: June, 2016*. Accra Office, Archives.

Act, D. (2008). Americans with disabilities act. *As it deems necessary, supervise*. *The Maryland State Department of Education*, Maryland, USA.

Akinyele, S. T. (2010). Customer satisfaction and service quality: Customers' re-patronage perspectives. *Global Journal of Management and Business Research, 10(6), 83-90.*

Almousiend, H. (2010).*The determinants of food choice*. Islamic Food research center, Asia

Antun, J. M., & Gustafson, C. M. (2005). Menu analysis: Design, merchandising, and pricing strategies used by successful restaurants and private clubs. *Journal of Nutrition in Recipe & Menu Development*, *3*(3/4), 81–102.

Ashitey, E. (2008). Ghana's Food Service Sector. *GAIN Report*. USDA Foreign Agricultural Service. Number: GH8008

Ates, A. (2008). Fundamental concepts in management research and ensuring research quality: Focusing on case study method, *8th Annual European Academy of Management (EURAM) Conference,* Slovenia, 1-34.

Backman, D. R., Haddad, E. H., Lee, J. W., Johnston, P. K., & Hodgkin, G. E. (2002). Psychosocial predictors of healthful dietary behavior in adolescents. *Journal of Nutrition Education and Behavior*, *34*(4), 184-193.

Baer, K. (2008). *Information design workbook*. Beverly: Rockport Publishers, Massachusetts, USA.

Baiomy, A., & Jones, E. (2016). The influence of online menus on selecting a resort hotel: a case study of Egypt. *International Journal of Tourism and Hospitality Research*, Anatolia, 27:4,515-525.

Baiomy, A., Jones, E., Elias, A., & Dinana, R. (2014). *Customer perceptions of food item descriptions on online resort hotel restaurant dinner menus*. Proceedings of Council for Hospitality Management Education, Devonshire Dome in Buxton, UK.

Baker, F. B. (2001). *The basics of item response theory*. For full text: http://ericae. net/irt/baker.

Baker, J., Levy, M., & Grewal, D. (1992). An experimental approach to making retail store environmental decisions. *Journal of Retailing, 68*(4), 445–460.

Bakker, I., Van der T., .Voordt, T., Vink P. & Boon, J. (2014). Pleasure, Arousal, Dominance: Mehrabian and Russell revisited. *Springer Science Business Media,* New York.

Barker, M. (2010): Concepts of Food Choice: principles and theories. Southampton: University of Southampton. *School of medicine.*

Beldona, S., Buchanan, N., & Miller, B. L. (2014). Exploring the promise of e-tablet restaurant menus. *International Journal of Contemporary Hospitality Management, 26* (3), 367-382.

Bentler, P. M., & Bonnet, D. G., (1980). Significance tests and goodness of fit in the analysis of covariance structures. *Department of Psychology,* University of California, Los Angeles, CA.

Bessière, J. (2001). *Valorisation du patrimoine gastronomique et dynamiques de development territorial: le haut plateau de l'Aubrac, le Pays de Roquefort et le Périgord Noir* (p. 365). L'Harmattan.

Bisogni, C.A., Connors, M.M., Devine, C., & Sobal, J. (2002). Who we are and how we eat: A qualitative study of identities in food choice. *Journal of Nutrition Education and Behavior 34,* 128–139.

Blaikie, N. (1993). *Approaches to social enquiry*, (1st Edition). Cambridge: Polity Press.

Bloemer, J., De Ruyter, K. O., & Wetzels, M. (1999). Linking perceived service quality and service loyalty: a multi-dimensional perspective. *European Journal of Marketing, 33*(11/12), 1082-1106.

Bollen, K.A. (1990). *Structural equations with latent variables.* New York: John Wiley & Sons, Inc.

Bowen, J. T., & Morris, A. J. (1995). Menu design: Can menus sell? *International Journal of Contemporary Hospitality Management, 7(*4), 4–9.

Brown, R. (1988). *Group processes: Dynamics within and between groups*. Basil Blackwell.

Bryman, A., & Bell, E. (2003). *Business research methods.* Oxford, UK: Oxford University Press.

Bryman, A. (2004). *Social research methods*, (2nd Edition.). New York: Oxford University Press Inc.

Buchanan, N. (2011). *An examination of electronic tablet based menus for the restaurant industry*. University of Delaware, Newark, Delaware 19716-1551

Burns, N., & Groove, S. K. (2005). *The practice of nursing research: Conduct, Critique and Utilize* (5th Ed). St. Louis, Elsevier Saunders

Byrne, B. M. (2001). Structural equation modeling: Perspectives on the present and the future. *International Journal of Testing*, *1*(3-4), 327-334.

Byrne, B., & Swanson, M. S. (1998). Expression of Legionella pneumophilavirulence traits in response to growth conditions. *Infection and immunity*, *66(7), 3029-3034.*

Carter, R., Meggs, P. B., & Day, B. (2011). *Typographic design: Form and communication*. John Wiley & Sons.

Cartographic Unit of University of Cape Coast (2017). Map of upscale restaurants in Accra Metropolitan Area. Accra

Chen, J., & Engelen, L. (2012). *Food oral processing: Fundamentals of eating and sensory perception*. John Wiley & Sons.

Chinna, K. (2009). *Structural equation modeling using AMOS*. Paper presented at lecture for AMOS workshop, 19-20 January 2009, University Technology MARA, Shah Alam, Malaysia

Chinomona, R. (2012). *Research in practice: the start*! The Da Vinci Institute Presentation, Published Slides, *1-70.*

Choi, J. G., Lee, B., & Mok, J. (2010). An experiment on psychological gaze motion: A re-examination of item selection behaviour of restaurant customers. *Journal of Global Business and Technology, 6(1), 68–79*.

Choi, J., & Zhao, J. (2010). Factors influencing restaurant selection in South Florida: Is health issue one of the factors influencing customers' behaviour when selecting a restaurant? *Journal of Foodservice Business Research, 13, 237–251*.

Churchill, G. A. J. (2001). *Basic marketing research* (4th ed.). Florida: Harcourt, Inc.

Cichy, R. F., & Wise, P. E. (1999). *Food and beverage service*. Educational Institute of the American Hotel & Motel Association, Michigan USA.

Collis, J., & Hussey, R. (2003). *Business research: A Practical Guide for Undergraduate and Postgraduate Students* 4th edition, Palgrave Macmillan.

Connors, M.M., Bisogni, C.A., Sobal, J., & Devine, C. (2001). Managing values in personal food systems. *Appetite 36, 189–200.*

Cooper, D. R., & Schindler, P. S. (2006). *Business Research Methods, (9th ed.).* London: McGraw-Hill

Cooper, D. R., & Schindler, P. S. (2003). *Business research methods* (8th ed.). New York, NY: McGraw-Hill.

Creswell, J. (2003). Research design: Qualitative, quantitative and mixed methods approaches (2nd ed.). *Thousand Oaks,* California: SAGE.

Cullen, F. (2005). Factors influencing restaurant selection in Dublin. *Journal of Foodservice Business Research,* 7(2), 53–85.

Davidson, (1999). The impact of service quality and service characteristics on customer retention: Small business and their banks in the UK. *British Journal of Management, 7*(3), 219-230.

Davis, B., Lockwood, A., Alcott, P., & Pantelidis, L. (2012). *Food and beverage management* (5th ed.). New York, NY: Routledge.

Dayan, E., & Bar-Hillel, M. (2011). Nudge to nobesity II: Menu position influences food orders. *Judgment and Decision Making, 6, 333–342.*

Delaney, M., & McCarthy, M. (2011). Food choice and health across the life course: A qualitative study examining food choice in older Irish adults. *Journal of food products marketing, 17*(2-3), *114-140.*

Deliza, R., MacFie, H. A. L., & Hedderley, D. (2005). The consumer sensory perception of passion-fruit juice using free-choice profiling. *Journal of Sensory Studies, 20*(1), *17-27.*

Dijksterhuis, A., Smith, P. K., Van Baaren, R. B., & Wigboldus, D. H. (2005). The unconscious consumer: Effects of environment on consumer behavior. *Journal of Consumer Psychology*, *15*, 193–202.

DiMarco, J. (2010). *Digital design for print and web: An introduction to theory, principles, and techniques.* Hoboken, NJ: John Wiley and Sons, Inc.

Ditmer, P.R., Griffin, G., 1994. *Principles of food, beverage and labor cost control for hotels and restaurants.* Von Nostrand Rheinhold, New York, NY.

Dittmer, P. R. & Keefe, J. D. (2009) Principles of food, beverage, and labor cost controls. (9^{th} ed.), John Wiley & Sons, New Jersey, USA.

Donald, B., Ottenfeld, M., & Witte, C. L. (2008) A study of consumer attitudes regarding variability of menu offerings in the context of an upscale seafood restaurant, *Journal of Foodservice Business Research*, 11:4, 398-411

Donovan, R. J., & Rossiter, J. R. (1982). Store atmosphere: An environmental psychology approach. *Journal of Retailing, 58*(1), 34-57.

Drysdale, J., & Galipue, J. (2008). *Profitable menu planning* (4th ed.). New Jersey, NJ: Pearson Education.

Dudovskiy, J. (2016). The ultimate guide to writing a dissertation in business studies: A step by-step assistance. *Research-methodology. net*.

Easterby-Smith, M., Thorpe, R., & Lowe, A. (2004) *Management research: An introduction*. London: Sage Publications.

Eisemann, L. (2000). *Pantone's guide to communicating with color*. Cincinati, OH: North Light Books.

Eriksson, P., & Kovalainen, A. (2008). *Qualitative methods in business research*. London: Sage Publications.

Eroglu, S. A., Machleit, K. A., & Davis, L. M. (2001). Online retail atmospherics: Empirical tests of a cue typology. In J.R. Evans & B. Berman (Eds.), *Retailing 2000: Launching the new millennium* (pp. 144–150). The Sixth Triennial AMS/ACRA Retailing Conference.

Eroglu, S. A., Machleit, K. A., & Davis, L. M. (2003). Empirical testing of a model of online store atmospherics and shopper responses. *Psychology and Marketing, 20* (2), 139-150.

Euromonitor (2009). Euromonitor international, Accessed 20th December 2016, available at http://www.euromonitor.com.

Falk, L.W., Sobal, J., Devine, C.M., Bisogni, C.M., & Connors, M. (2001) Managing healthy eating: Definitions, classifications, and strategies. *Health Education & Behavior* 28, 425–439.

Fellman, Leonard F. (2001). *Merchandising by design developing effective menus and wine lists*. Lebhar-Friedman Books, 3-12.

Fernández-Armesto, F., & Kulshrestha, J. P. (2001). *Food: A history*. Macmillan Publishing Company.

Field, A. (2006). Reliability analysis: Research methods II, Retrieved from: http://www. statisticshell.com/docs/reliability.pdf.

Fiore, A. M., & Kimle, P. A. (1997). Understanding aesthetics for the merchandising and design professional. New York, NY: Fairchild.

Fisher, A. A., Laing, J. E., Stoeckel, J. E., & Townsend, J. W. (1998). *Handbook for family planning operations research design.* New York: Population Council.

Fitzsimons, G. J., Hutchinson, J. W., Alba, J. W., Chartrand, T. L., Huber, J., Kardes, F. R., Menon, G., Raghubir, P., Russo, J. E., Shiv, B., Tavassoli, N. T., & Williams, P. (2002). Non-conscious influences on consumer choice. *Marketing Letters*, *13*, 267–277.

Flowers, P. (2009). Research philosophies: Importance and relevance. *Master of Science Thesis*, Cranfield University.

Furst, T., Connors, M., Sobal, J., Bisogni, C.M. & Falk, L.M. (1996) Food classifications: Levels and categories. *Ecology of Food and Nutrition 39*, 331–355.

Gallup Report, (1987). Through the eyes of the customer. *The Gallup monthly report on eating out 7(3*), 1–9.

Gareth, A. (2011). Restaurant lighting: Lighting could make or break your restaurant. *European Journal of Business and Management, 3*(4), 1-29.

Garnefeld, I., & Steinhoff, L. (2013). Primacy versus recency effects in extended service encounters. *Journal of Service Management, 24(1*), 64-81.

Geissler, G. L. & Rucks, C. T. (2011). The critical influence of customer food perceptions on overall theme park evaluations. *Journal of Management and Marketing Research, 2*(6), 1-15.

Ghana Tourism Authority [GTA], (2015). *List of licensed restaurants in Accra, Ghana.* Accra Office, Archives.

Green, B. G. & Nachtigal, D. (2012). Somatosensory factors in taste perception: effects of active tasting and solution temperature. *Physiology & Behavior*, *107*(4), 488-495.

Grossman, P. R., & Wisenblit, J. Z. (1999). What we know about consumers' color choices. *Journal of Marketing Practice: Applied Marketing Science*, *5*(3), 78-88.

Guéguen, N., & Jacob, C. (2012). The effect of menu labels associated with affect, tradition, and patriotism on sales. *Food Quality and Preference*, *23*(1), 86–88.

Guéguen, N., Jacob, C., & Ardiccioni, R. (2012). Effect of watermarks as visual cues for guiding consumer choice: An experiment with restaurant menus. *International Journal of Hospitality Management*, *31*(2),617–619.

Ha, Y. (2006). The influence of online visual merchandising on consumer emotions: moderating role of consumer involvement (Doctoral dissertation). Available from Hair, J. F., Black, B., Babin, B., Anderson, R. E. and Tatham, R. L. (2010). *Multivariate data analysis: A global perspective*. Pearson Education Inc., NJ.

Ha, Y., & Lennon, S. J. (2010). Online visual merchandising (VMD) cues and consumer pleasure and arousal: Purchasing versus browsing situation. *Psychology and Marketing*, 27(2), 141–165.

Hair, J. F., Black, B., Babin, B., Anderson, R. E., & Tatham, R. L. (2010). *Multivariate data analysis: A global perspective.* New Jersey: Pearson Education Inc. Ohio LINK ETD Center. (Document No. osu1135134346).

Hair, J., Money, A., Samouel, P., & Page, M. (2007). *Research methods for business*. New Jersey: John Wiley & Sons, Inc.

Hanks, A. S., Just, D. R., Smith, L. E., & Wansink, B. (2012). Healthy convenience: Nudging students toward healthier choices in the lunchroom. *Journal of Public Health*, *34*(3), 370-376.

Hartwell, H., & Edwards, J. (2013). Descriptive menus and branding in hospital foodservice: A pilot study. *International Journal of Contemporary Hospitality Management*, *21*, 906–916.

Hatch, M. J., & Cunliffe, A. L. (2006). *Organization theory: Modern, symbolic, and postmodern perspectives* (2nd Edition). New York, NEW YORK: Oxford University Press.

Hellmann, P. T. (2006). *Historical gazetteer of the United States*. Routledge.

Hensdill, C. (1998). A guide to menu engineering. *Hotels*, *32*(1), 69–72.

Holmqvist, K., Holsanova, J., Barthelson, M., & Lundqvist, D. (2003). Reading or scanning? A study of newspaper and net paper reading. In: Radach, R., Hyona, J., Deubel, H. (Eds.), *The mind's eye: Cognitive and applied aspects of eye movement research.* Elsevier Science BV; Amsterdam, The Netherlands, pp. 657–670.

Honigman, B. (2013). How millennials are shopping: 20 interesting statistics & figures. *Diakses dari https://medium. com/@ brianhonigman/how-millennials-are-shopping-20-interestingstatistics-figures76fb1231fbb*.

Hopkins, K. A. (2005). American restaurant menu design. *Michigan State University*. Michigan.

Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional versus new alternatives. Structural equation modelling: *A Multidisciplinary Journal*, 6(10, 1-55.

Hwang, J., & Lorenzen, C. L. (2008). Effective nutrition labeling of restaurant menu and pricing of healthy menu. *Journal of Foodservice*, *19*(5), 270-276.

Jain, A., & Healey, G. (2002). *A Multiscale representation including opponent color features for texture recognition* (vol.7), IEEE Trans. Image Processing, pp. 124-128, 1998.

Jang, S., & Namkung, Y. (2007). Does food quality really matter in restaurants? Its impact on customer satisfaction and behavioral intentions. *Journal of Hospitality & Tourism Research*, *31*(3), 387-409.

Jang, S. S., Ha, A., & Silkes, C. A. (2009). Perceived attributes of Asian foods: From the perspective of the American customers. *International Journal of Hospitality Management*, *28*(1), 63-70.

Jang, S., & Namkung, Y. (2009). Perceived quality, emotions, and behavioural intentions: Application of an extended Mehrabian–Russell model to restaurants. *Journal of Business Research, 62(4),* 451-460.

Janssens, W., Wijnen, K., Pelsmacker, P. D., & Kenhove, P. V. (2008). *Marketing research with SPSS*. Harlow, England; New York: Prentice Hall/Financial Times.

Jiang, Z., Chan, J., Tan, B. C. Y., & Chua, W. C. (2010). Effects of interactivity on website involvement and purchase intention. *Journal of the Association for Information Systems, 11*(1), 34-59.

Jones, P., & Mifli, M. (2001). Menu development and analysis in UK restaurant chains. *Tourism and Hospitality Research, 3*(1), 61–71.

Josiam, B. M. & Monteiro, P. A. (2004). Tandori tastes: Perceptions of Indian restaurants in America. *International Journal of Contemporary Hospitality Management, 16*(1), 18-26.

Kaiser, N. (1984). On the spatial correlations of Abell clusters. *The Astrophysical Journal, 284*, L9-L12.

Khothari, C. R. (2004). *Research methodology methods and techniques*. New Delhi: New Age International Publishers.

Kim, J., & Lennon, S. J. (2012). Music and amount of information: do they matter in an online apparel setting? *The International Review of Retail, Distribution and Consumer Research, 22*(1), 55-82.

Kim, W.G., & Moon, Y.J. (2009). Customers' cognitive, emotional and actionable response to the service scape: A test of the moderating effect of the restaurant type. *International Journal of Hospitality Management, 28*(1):144-156.

Kincaid, C. S., & Corsun, D. L. (2003). Are consultants blowing smoke? An empirical test of the impact of menu layout on item sales. *International Journal of Contemporary Hospitality Management*, *15*, 226–231.

Kivelä, J. J., Inbakaran, R., & Reece, J. (1999). Consumer research in the restaurant environment, Part 1: A conceptual model of dining satisfaction and return patronage. *International Journal of Contemporary Hospitality Management*, *11*(5), 205-222.

Kline, R. B. (2005). *Principles and practice of structural equation modeling* (2nd ed.). New York, NY: Guilford Press.

Kolodinsky, J., Reynolds, T. W., Cannella, M., Timmons, D., & Bromberg, D. (2009). US consumer demand for restaurant calorie information: Targeting demographic and behavioral segments in labeling initiatives. *American Journal of Health Promotion*, *24*(1), 11-14.

Köster, E. P. (2009). Diversity in the determinants of food choice: A psychological perspective. *Food quality and preference*, *20*(2), 70-82.

Kotschevar, L. H., & Withrow, D. (2008). *Study Guide to Accompany Management by Menu, 4e*. John Wiley & Sons.

Kotschevar, L. H., (2008). *Management by menu.* Withrow, D. (Ed.) 4th ed. Hoboken: John Wiley.

Kovacevic A. (2000). *Gastronomija savremenoj* organizaciji rada, Beograd.

Kwong, L. Y. L. (2005). The application of menu engineering and design in Asian restaurants. *International Journal of Hospitality Management*, *24*(1), 91–106.

Latham, (2007). Sampling: What is it? Quantitative Research Methods, Retrieved from: http://webpages.acs.ttu.edu/rlatham/Coursework/5377 Quant)/SamplingMethodology Paper.pdf (Accessed on 9th December 2016)

Lee, H. H., Kim, J., & Fiore, A. M. (2010). Affective and Cognitive Online Shopping Experience. *Clothing & Textiles Research Journal*, *28*(2), 140-154.

Levy, P. S., & Lemeshow, S. (2008). *Sampling of populations: Methods and applications*. New York: Wiley & Sons.

Liu, P. J., Roberto, C. A., Liu, L. J., & Brownell, K. D. (2012). A test of different menu labeling presentations. *Appetite*, *59*, 770–777

Liu, Y., & Jang, S. S. (2009). The effects of dining atmospherics: An extended Mehrabian-Russell model. *International Journal of Hospitality Management 28*, 494–503

Livingston, J.S., 1978. Menu design: For effective merchandising. *Cornell Hotel and Restaurant Administration Quarterly 19* (3), 38–46.

Lockyer, T. (2006). Would a restaurant menu item by any other name taste as sweet? *FUI Hospitality Review*, *24*(1), 21–31.

Lohse, G. (1997). Consumer eye movement patterns on yellow pages advertising. *Journal of Advertising*, *26*, 61-73.

Ludwig, S., De Ruyter, K., Friedman, M., Brüggen, E. C., Wetzels, M., & Pfann, G. (2013). More than words: The influence of affective content and linguistic style matches in online reviews on conversion rates. *Journal of Marketing*, 77(1), 87–103.

Lundberg, D. & Walker, J., (1993). *The restaurant: From concept to operation* (3rd ed.). New York, NY: Wiley.

Mackison, D., Wrieden, W. L., & Anderson, A. S. (2010). Validity and reliability testing of a short questionnaire developed to assess consumers' use, understanding and perception of food labels. *European Journal of Clinical Nutrition*, *64*(2), 210.

Malhotra, N. K. (2004). Marketing research: An applied orientation (4th ed.): Pearson Education.

Martin, M. (2009). *Typographic design patterns and best practices.* http://www.smashingmagazine.com/2009/08/20/typographic-design-survey-best-practicesfrom-the-best-blogs(Accessed on December 2016)

McCall, M., & Lynn, A. (2008). The effects of restaurant menu item descriptions on perceptions of quality, price and purchase intention. *Journal of Foodservice Business Research, 11,* 439–445.

Mehrabian, A., & Russell, J. A. (1974). An approach to environmental psychology. Cambridge, MA: MIT Press

Mhlanga, O., Hattingh, Z. & Moolman, H. J. (2015). Expectations and experiences of customers in formal full service restaurants in Port Elizabeth. *African Journal for Physical, Health Education, Recreation and Dance, 19*(4), 1109-1120.

Mhlophe, B. (2015). Antecedents of consumer purchase intentions towards organic food produces: A case study of the Johannesburg Municipality. *University of the Witwatersrand*, Johannesburg, South Africa.

Miles, J. N. V., & Shevlin, M. (1998). Effects of sample size, model specification and factor loadings on the GFI in confirmatory factor analysis. *Elsevier Science Limited,* UK.

Mills, J. E., & Thomas, L. (2008). Assessing customer expectations of information provided on restaurant menus: A confirmatory factor analysis approach. *Journal of Hospitality & Tourism Research, 32*(1).

Mohsin, A. (2008). Tourist attitudes and destination marketing, the case of Australia's Northern Territory and Malaysia. *Tourism Management, 26*(5), 723-732.

Mulaik, S. A., James, L. R., Van Alstin, J., Bennet, N., Lind, S. & Stilwell, C. D. (1989). Evaluation of goodness-of-fit indices for structural equation models. *Psychological Bulletin,* 105, 430-455.

Murcott, A. (1998). Food choice, the social sciences and 'The nation's diet research programme. *The Nation's Diet: The Social Science of Food Choice,* Longman, London, 1-22.

National Restaurant Association (2007). 2006 U.S. industry and Market outlock. Retrieved from http://www.restaurant.org/

Neuman, L. (2007*). Basics of social research: Qualitative and quantitative approaches* (2nd Ed.). New York: Pearson Education.

Nicholas, C. (2012). Choices from identical options. *Psychological Science, 6* (1): 50-5.

Ninemeier, J. D., & Hayes, D. K., (2003). *Menu planning, design, and evaluation: Managing for appeal and profit.* McCutchan Publishing Corporation, Richmond, CA.

O'Mahony, B., & Hall, J. (2007). An exploratory analysis of the factors that influence food choice among young women. *International Journal of Hospitality & Tourism Administration*, *8*(2), 51–72.

O'Grady, V. J., & O'Grady, V. K. (2008). *The information design handbook*. How Books.

Olivová, K. (2011). Intention to buy organic food among consumers in the Czech Republic, Master's Thesis, Department of Economics and Business Administration, Agder University, 1-157, Retrieved from: http://brage.bibsys.no/xmlui/bitstream/handle/11250/135628/BE-501

Olsen, W. K., Warde, A. & Martins, L. (2000)- Social differentiation and the market for eating out in UK. *International Journal of Hospitality. 19*(2), 173-190

Ozdemir, B. & Caliskan, O. (2014). A review of literature on restaurant menus: specifying the managerial issues. *International Journal of Gastronomy and Food Science*.

Ozdemir, B. (2012). A review on menu performance investigation and some menus: specifying the managerial issues. *International Journal of Gastronomy and Food Science*.

Pallant, J. (2007). *SPSS survival manual: A step-by-step guide to data analysis using SPSS for Windows (Version 15)* (3rd ed.). Maidenhead, England; New York: McGraw Hill/Open University Press.

Panitz, B. (2000). Reading between the lines: the psychology of menu design. Restaurants USA, 22–27.

Park, J., & Stoel, L. (2005). Effect of brand familiarity, experience and information on online apparel purchase. *International Journal of Retail & Distribution Management*, *33*(2), 148-160.

Park, J., Stoel, L., & Lennon, S. J. (2005). Cognitive, affective and conative responses to visual simulation: The effects of rotation in online product presentation. *Journal of Consumer Behaviour*, *7*(1), 72-87.

Pavesic, D.V.,(2011). Restaurant menu design. Retrieved from: http://rrgconsulting.com/psychology of restaurant menu design.htm.

Payne-Palacio, J., & Theis, M. (2009). *Introduction to foodservice* (11th ed.). Upper Saddle River, NJ: Pearson Prentice Hall. Psychology of Restaurant Menu Design.htm.

Pouladzadeh, P., Shirmohammadi, S., & Al-Maghrabi, R. (2014). Measuring calorie and nutrition from food image. *IEEE Transactions on Instrumentation and Measurement*, *63*(8), 1947-1956.

Prescott, J., Young, O., O'Neill, L., Yau, N. J. N., & Stevens, R. (2002). Motives for food choice: A comparison of consumers from Japan, Taiwan, Malaysia, and New Zealand. *Food Quality and Preference*, *13*, 489–495.

Pulos, E., & Leng, K. (2010). Evaluation of a voluntary menu-labeling program in full-service restaurants. *American Journal of Public Health*, *100*, 1035–1039.

Rahman, M. S. (2012). Dynamics of consumers' perception, demographic characteristics and consumers' behaviour towards selection of a restaurant: an exploratory study on Dhaka city consumers. *Business Strategy Series*, *13*(2), 75-88.

Reed, A. E., Mikels, J. A. & Simon, K. I. (2000). Older adults place lower value on choice relative to young adults. *Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, *64*(4), 443-446.

Reynolds, D., Merritt, E. A., & Pinckney, S. (2005). Understanding menu psychology: An empirical investigation of menu design and customer response. *International Journal of Hospitality & Tourism Administration*, *6*(1), 1–9.

Ribeiro Soriano, D. (2002). Customers' expectations factors in restaurants: The situation in Spain. *International Journal of Quality & Reliability Management*, *19*(8/9), 1055-1067.

Richard, M. O. (2005). Modeling the impact of internet atmospherics on surfer behavior. *Journal of Business Research, 58* (12), 1632-1642.

Roberto, C. A., Larsen, P. D., Agnew, M. H., Baik, J., & Brownell, K. D., (2010). Evaluating the impact of menu labeling on food choices and intake. American *Journal of Public Health,* 100, 312–318

Rozin, P., Fischler, C., Shields, C., & Masson, E. (2006). Attitudes towards large numbers of choices in the food domain: A cross-cultural study of five countries in Europe and the USA. *Appetite*, *46*(3), 304-308.

Ryu, K., & Zhong, Y. (2012). Antecedents and consequences of customers' menu choice in an authentic Chinese restaurant context. *Journal of Hospitality Marketing & Management,* 21, 852–871.

Ryu, K., Han, H., & Kim, T. (2008). The relationships among overall quick casual restaurant image, perceived value, customer satisfaction, and behavioural intentions. *International Journal of Hospitality Management,* 27, 459–469.

Sarantakos, S. (2005). *Social Research.* Hong Kong: Macmillan Press Limited.

Sarathy, P. S., & Patro, S. K. (2013). The role of opinion leaders in high-involvement purchases: an empirical investigation. *South Asian Journal of Management*, *20*(2), 127.

Saunders, M., Lewis, P., & Thornhill, A. (2012). *Research methods for business students* (6th ed.). Essex: Person Education.

Scanlon, N.L. (1999). *Marketing by Menu* (3rd ed.). New York, NY: John Wiley & Sons, Inc. p. 114

Schumacker, R. E., & Lomax, R. G. (2004). *A beginner's guide to structural equation modeling* (2nd ed.). Mahwah, NJ: Lawrence Erlbaum Associates.

Seaberg, A. G. (1991). *Menu design: merchandising and marketing* (4th ed.). New York, NY: Van 132 Nostrand Reinhold. P 5-22

Shaw, E. H. (2012). Marketing strategy: From the origin of the concept to the development of a conceptual framework. *Journal of Historical Research in Marketing*, *4*(1), 30-55.

Sheridan, M. (2001). Essential reading: Designing menus to suit a restaurant. *Restaurants & Institutions*, *111*(22), 87.

Sherman, E., Mathur, A., & Smith, R. B. (1997). Store environment and consumer purchase behavior: Mediating role of consumer emotions. *Psychology and Marketing*, *14*(4), 361-378.

Shoemaker, S., Dawson, M., & Johnson, W. (2005). How to increase menu prices without altering your customers. *International Journal of Contemporary Hospitality Management*, *17*, 553–568.

Singh, S. (2006). Impact of color on marketing. *Management decision*, *44*(6), 783-789.

Smart, L.R. & Bisogni, C.A. (2001) Personal food systems of college hockey players. *Appetite* 37, 57–70.

Sobol, M. G., & Barry, T. E. (1980). Item positioning for profits: Menu boards at bonanza international. *The Institute of Management Sciences*, *10*(1), 55–60.

Songsore, J. (2008). Environmental and structural inequalities in the Greater Accra, *The Journal of the International Institute,* Fall, Vol. 16 No 1 "Inside the Modern City Issue" University of Michigan, Ann Arbor

Spang, R. L. (2000). *The invention of the restaurant, Paris and modern gastronomic culture.* Harvard University Press.

Sriwongrat, C. (2008). Consumers' choice factors of an upscale ethnic restaurant, Lincoln University.

Stone, T. L., Adams, S., & Morioka, N. (2008). *Color design workbook: A real world guide to using color in graphic design*. Rockport Pub.

Sulek, J. M., & Hensley, R. L. (2004). The relative importance of food, atmosphere, and fairness of wait: The case of a full-service restaurant. *Cornell Hotel & Restaurant Administration Quarterly*, *45*(3), 235-247.

Swahn, J., Ostrom, A., Larsson, U., & Gustafsson, I. B. (2010). Sensory and semantic language model for red apples. *Journal of sensory studies*, *25*(4), 591-615.

Swanson, R. A. & Holton, E. F. III. (2005). *Research in organizations: Foundations and methods of inquiry*. San Francisco: Berrett-Koehler.

Sysco Food Services of Columbia, LLC. (2011). Menu design: Designing a menu for profitability. Retrieved from: http://www.syscosc.com/ toolbox/ tools/Menu%20Design.pdf.

Tabachnick, B. G. & Fidell, L. S. (2007). *Using multivariate statistics* (5th ed.). New York: Allyn and Bacon.

Tausczik, Y. R., & Pennebaker, J. W. (2010). The psychological meaning of words: LIWC and computerized text analysis methods. *Journal of language and social psychology*, *29*(1), 24-54.

Thomas, L., & Mills, J. E. (2006). Consumer knowledge and expectations of restaurant menus and their governing legislation: A qualitative assessment. *Journal of Foodservice*, *17*(1), 6–22.

Tinne, W. S. (2012). Factors Affecting Selection of Upscale Restaurants in Dhaka City. *ASA. University Review*, *6*(1), 127-138.

Turgeon, L. & Pastinelli, M. (2002). Eat the world: Postcolonial encounters in Quebec City's ethnic restaurants. *Journal of American Folklore*, *115*(456), 247-268.

Ullman, J. B. (2007). Structural equation modeling. In B. G. Tabachnick & L. S. Fidell (Eds.), *Using multivariate statistics* (5th ed., pp. 676-780). Boston: Pearson/Allyn & Bacon.

United States Department of Agriculture [USDA] Foreign Agricultural Service (2008). *Production, supply and distribution online. Disponível em: www. fas. usda. gov/psd*.

United States National Restaurant Association [NRA], (2007). Menu marketing and management: competency guide. *National Restaurant Association Educational Foundation, Chicago*. Upper Saddle River: Person Prentice Hall.

Vanderlee, L. & Hammond, D. (2013). Does nutrition information on menus impact food choice? Comparisons across two hospital cafeterias. Public Health Nutrition: *School of Public Health and Health Systems,* University of Waterloo Canada.

Walker, J. R. (2008). *Exploring the hospitality industry* (2nd ed.). Delhi, India: Pearson Education India.

Waller, K. (2001). *Improving food and beverage performance.* Elsevier Butterworth-Heinemann, Oxford, UK.

Wansink, B., & Love, K. (2014). Slim by design: Menu strategies for promoting high-margin, healthy foods. *International Journal of Hospitality Management*, *42*, 137-143.

Wansink, B., Van Ittersum, K., & Painter, J. E. (2005). How descriptive food names bias sensory perceptions in restaurants. *Food Quality and Preference*, *16*, 393–400.

Wedel, M., Pieters, R. (2008). A review of eye-tracking research in marketing. In: Malhotra, Naresh K. (Ed.), *Review of Marketing Research,* vol. 4. Emerald Group Publishing Limited, pp. 123–146.

Weiss, R. D. (2003). The relationship between restaurant attribute satisfaction and return intent in theme restaurants *Master thesis*, University of Nevada, 1414561.

Yang, S. S. (2012). Eye movements on restaurant menus: A revisitation on gaze motion and consumer scanpaths. *International Journal of Hospitality Management*, *31*, 1021–1029.

Yang, S. S., Kimes, S. E., & Sessarego, M. M. (2012). Menu price presentation influences on consumer purchase behaviour in restaurants. *International Journal of Hospitality Management.28,*157-160

Yoon, H. J., & George, T. (2012). Nutritional information disclosure on the menu: Focusing on the roles of menu context, nutritional knowledge, and motivation. *International Journal of Hospitality Management*, 31, 1187–1194.

Yue, C., & Tong, C. (2009). Organic or local? Investigating consumer preference for fresh produce using a choice experiment with real economic incentives. *Hort Science*, *44*(2), 366-371.

Yuksel, A. & Yuksel, F. (2002). Measurement of tourist satisfaction with restaurant services: A segment-based approach. *Journal of Vacation Marketing*, *1*(9), 52-68.

Zikmund, W. G. (2003). *Business research methods* (7th ed.): Mason, OH: Thomson/South-Western.

Zikmund, W., Babin, B., Carr, J. & Griffin, M. (2010). *Business research methods*. (8th Edition.). South-Western: Cengage Learning.

Zwicky, A.D. & Zwicky, A.M. (1980). America's national dish: The style of restaurant menus. *American Speech*, *55*(2), 83-92.

APPENDICES

APPENDIX A

Original Model Fit for Data Gathered

Table 4: Coding of Socio-demographic Data

Item	Codes
Gender	
Male	1
Female	2
Age Group	
<20years	1
21-29 Years	2
30-39 Years	3
40-49 Years	4
50-59 Years	5
>60 Years	6
Occupation	
Business Consultancy	1
Banking and Finance	2
Medical	3
Media and Communication	4
Legal	5
Others	6
Marital Status	
Married	1
Divorced	2
Single	3
Separated	4
Widowed	5
Educational Level	
Primary	1
Secondary	2
Training College	3

Polytechnic/University	4
Postgraduate	5
Religion	
Christianity	1
Muslim	2
Traditional	3
Others	4
Monthly Income	
< Gh¢ 500	1
Gh¢ 600-800	2
Gh¢ 900-1100	3
Gh¢ 1200-1400	4
> Gh¢ 1500	5
Continent	
African	1
European	2
American	3
Asian	4

Source: Fieldwork, 2017

APPENDICE B

Restaurant Customers' Questionnaire

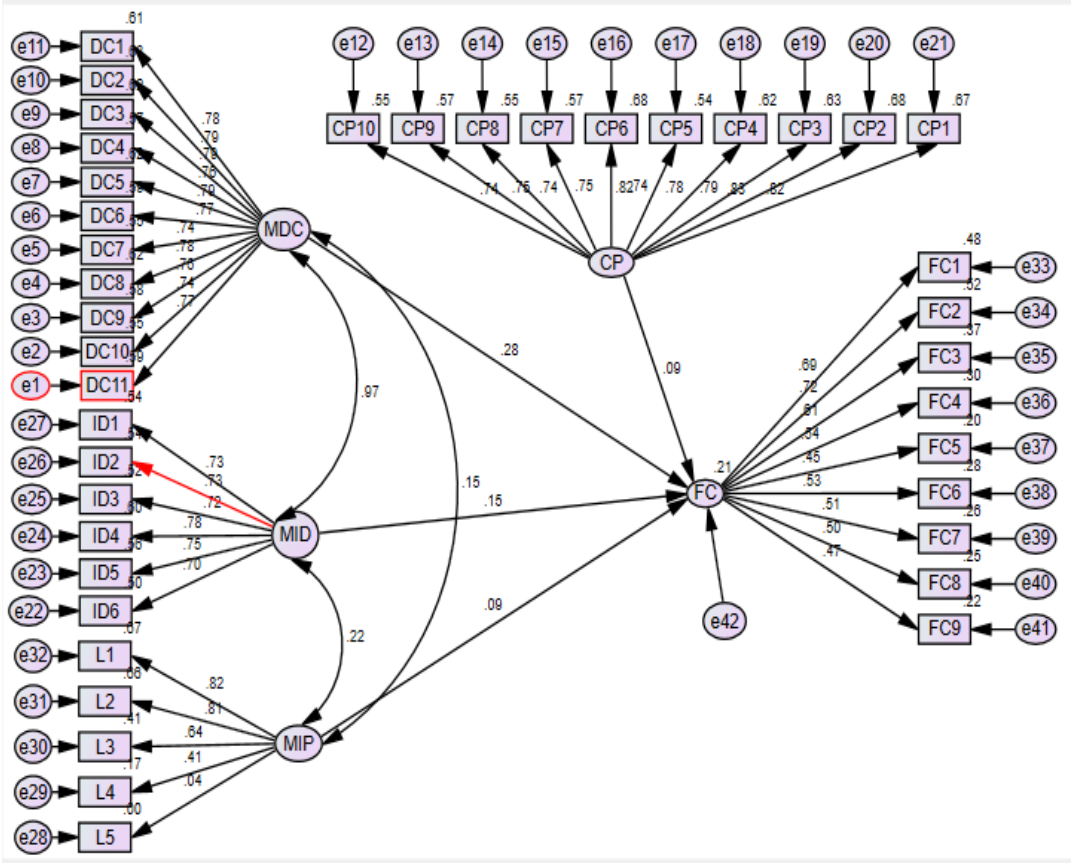
Table 5: Coding of the Study variables

Variables	Items	Codes
Menu Design Attributes		
Menu Design Characteristics (MDC)	MDC1-MDC11	All codes ranged from 1 to 5: Strongly Disagree = 1 Disagree = 2 Neutral = 3 Agree = 4 Strongly Agree = 5
Menu Item Description (MID)	MID1-MID6	
Menu Item Position (MIP)	Upper left	1
	Upper middle	2
	Upper right	3
	Middle left	4
	Middle	5
	Middle left	6
	Bottom left	7
	Bottom middle	8
	Bottom right	9
Customers' perception of menu design	CP1-CP10	All codes ranged from 1 to 5: Strongly Disagree = 1 Disagree = 2 Neutral = 3 Agree = 4 Strongly Agree = 5
Food Item Choice	FC1-FC11	All codes ranged from 1 to 3: Not at all = 1 To some extent = 2 To a large extent = 3

Source: Fieldwork, 2017

APPENDIX C

Original model fit for the study



Source: Fieldwork, 2017.

APPENDIX D

UNIVERSITY OF CAPE COAST

DEPARTMENT OF HOSPITALITY & TOURISM

MENU DESIGN AND FOOD CHOICE OF CUSTOMERS IN UPSCALE RESTAURANTS IN ACCRA METROPOLIS

Dear Sir/Madam

QUESTIONNAIRE FOR RESTAURANT CUSTOMERS

The aim of this study is to examine the effects of menu design on customers' choice of food in upscale restaurants in the Accra Metropolis. Your responses to the under-listed questions are vital for the outcome of the study. I would therefore be most grateful if you could take part in this study. This is purely an academic exercise. Your anonymity and the confidentiality of your responses are highly assured.

Thanks for your time in advance.

MODULE I: CUSTOMERS' PERCEPTION OF MENU DESIGN

The following are statements on **customers' perception of menu design** in upscale restaurants, please indicate your level of agreement on each of the statements on a scale of 1-5, where 1 = Strongly Disagree (SD); 2 = Disagree (DA); 3 = Neutral (N); 4 = Agree (A); 5 = Strongly Agree (SD).

The menu in this restaurant is:

No.	Statement	SD	D	N	A	SA
1.	Colourful.					
2.	Visually appealing					
3.	Descriptive					
4.	Inspiring					
5.	Less voluminous					
6.	Readable					
7.	Understandable					
8.	Thematic					
9.	Informative					
10.	Communicative					

MODULEII: MENU DESIGN ATTRIBUTES

A) The following are statements on **Menu Design Characteristics (MDC)** in upscale restaurants, kindly indicate your level of agreement with each of them on a scale of 1-5, where 1 = Strongly Disagree (SD); 2 = Disagree (DA); 3 = Neutral (N); 4 = Agree (A); 5 = Strongly Agree (SD).

No.	Statements	SD	D	N	A	SA
1.	The menu is visually appealing and influences my choice of food items.					
2.	The choice of colour of the menu reflects the overall restaurant concept.					
3.	The colour used enhanced the legibility of the menu.					
4.	The typeface on the menu is clear.					
5.	Illustrations and graphics on the menu are well presented.					
6.	The concept of the restaurant is reflected on the menu cover.					
7.	The type of paper used for the menu complements the concept of the restaurant.					
8.	The paper used for the menu is of good quality.					
9.	The paper texture of the menu enhances the design.					
10.	The font colour and size used on the menu make it more readable.					
11.	The font size and colour make the menu simple and of high standard.					

B) The following statements on **Menu Item Description (MID)** in upscale restaurants, kindly indicate your level of agreement with each of them on a scale of 1-5, where 1 = Strongly Disagree (SD); 2 = Disagree (DA); 3 = Neutral (N); 4 = Agree (A); 5 = Strongly Agree (SD).

No.	Statements	SD	D	N	A	SA
1.	The description of the menu items influences my choice of food.					
2.	The information on the menu is minimal and does not distract me in food selection.					
3.	The names of the dishes match with the theme of the restaurant.					
4.	The descriptions on the menu are simple and easy to understand.					
5.	The categories of dishes on the menu can be identified easily					
6.	The information on the menu are well structured and organized.					

MODULE III: REASONS FOR FOOD CHOICE

The following statements are factors that describe the reasons of customers' **menu item food choice**. Please indicate the extent to which you identify each item, where 1 = Not at all; 2 = To some extent; 3 = To a large extent.

To what extent did the following factors influence your choice of food?

No.	**Statements**	**Not at all**	**To some extent**	**To a large extent**
1.	The presentation and legibility of the menu.			
2.	The positioning of the food item.			
2.	A dish that could not be prepared at home.			
3.	A dish representing a healthy option.			
4.	A dish that features local produce.			
5.	The price of the dish.			
6.	A favourite dish.			
7.	The accompaniment that comes with the dish.			
8.	The core ingredient of the dish.			
9.	The method of preparation.			
10.	Avoidance of certain foods.			

MODULE IV: SOCIO-DEMOGRAPHICS

Please tick and provide details where appropriate:

1) Gender:

a.) Male ☐ b.) Female ☐

Age group:

a.) 20-25 ☐ b.) 26-45 ☐ c.) 46-65 ☐ d.) 66 and above ☐

2) Occupation……..

2) Marital status:

a.) Married ☐ b.)Divorced ☐ c.) Single ☐

d.)Separated ☐ e.)Widowed ☐

3) Educational level:

a) Primary ☐ b) Secondary ☐ c) Training college ☐

d) Polytechnic/University ☐ e) Postgraduate ☐

4) Religion:

a) Christian ☐ b) Muslim ☐ c) Traditionalists ☐

d) Others ☐

5) Monthly income:

a.) < Gh¢ 500 ☐ b.) Gh¢ 600-800 ☐ c.) Gh¢ 900-1100 ☐

d.) Gh¢ 1200-1400 ☐ e.) >Gh¢1500 ☐

For the researcher only:

C) This is to assess **Menu Item Position (MIP)** of the food items chosen by the respondents. Kindly mention the food items you chose.

MENU ITEMS ORDERED FROM THE MENU	**LOCATION/POSITION OF CHOSEN MENU ITEMS**								
Food item and no.	**Upper right**	**Upper middle**	**Upper left**	**middle**	**Middle left**	**Middle right**	**Bottom middle**	**Bottom left**	**Bottom right**
1.									
2.									
3.									
4.									
5.									
6.									
7.									
8.									
9.									
10.									