

The Impact of Restaurant Layout on Food Service Delivery

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Article History	Abstract
Original Research Article	<i>Increasing competition within the global restaurant industry has provided customers with a wider range of dining options. In Nigeria, particularly in the Port Harcourt metropolis, the interior and exterior design of restaurants has become an important marketing factor influencing food service delivery. This study examined the impact of restaurant layout on food service delivery. Specifically, it sought to determine how restaurant layout affects food service delivery, assess its influence on customer satisfaction, and examine the extent to which an effective layout can increase customer patronage. The study adopted a survey research design involving 48 staff members of Golden Tulip GRA, Port Harcourt, within Port Harcourt Local Government Area. Data were analyzed using simple percentages, while the hypotheses were tested using the Chi-square statistical technique. The findings revealed that restaurant layout significantly influences food service delivery, contributes to customer satisfaction through service provision, and serves as a marketing tool for attracting customers. The results further indicated that different aspects of restaurant layout jointly influence customers' restaurant choices. Based on these findings, the study recommended that restaurant operators consider broader design factors when developing functional and attractive layouts to improve service delivery. Particular attention should be given to lighting, colour schemes, sound and acoustics, heating, cooling and ventilation, material selection, and outdoor spaces. These design elements should be examined individually and collectively to establish effective principles for restaurant layout planning. The study also concluded that customers' decisions to patronize a restaurant are influenced by a combination of factors, including interior design, food quality, and customer service.</i>
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Copyright © 2026 The Author(s): This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CC BY-NC) which permits unrestricted use, distribution, and reproduction in any medium for non-commercial use provided the original author and source are credited.	
Citation: Ibegbulem, Udodi Marcia & Professor Innime Righteous. (2026). The Impact of Restaurant Layout on Food Service Delivery. UKR Journal of Medicine and Medical Research (UKRJMMR), 2(5), 92-107.	<i>Keywords: Restaurant Layout, Food Service Delivery, Customer Satisfaction, Restaurant Design, Customer Patronage, Restaurant Marketing.</i>

Introduction

Restaurant Layout is the layout or organization of various areas in a restaurant which include dining rooms, kitchens, storage spaces, restrooms, among others. It explains the structure of the restaurant and shows how the different areas work. Planning of an appropriate layout is an important step in the process of setting up a restaurant. A restaurant is a business place where food and drinks are prepared and served to customers for money. Some restaurants also serve take-away and food delivery services. An owner or operator of a restaurant is called a restaurateur, whereas a chef is a skilled culinary professional who is responsible for preparing meals and usually manages the kitchen staff. There is a long tradition of eating outside the home. For instance, it is stated that some dining establishments in

ancient Egypt offered onions, wild fowl and cereals around 512 B.C. (Walker, 2011). Thermopolia, according to Theis (2001), were establishments which offered hot and cold food and drinks in ancient Roman cities such as Pompeii. Similar developments also took place in China in the eleventh century during the Song Dynasty period.

Thermopolia of ancient Rome used to have L-shaped counters with nearby spaces where food and beverages, hot and cold, could be stored. This development was, to a certain degree, due to the lack of cooking equipment in many homes of that era, thus being one of the places where people could get ready-to-eat meals. Besides the provision of food and drinks, these places allowed customers to meet and communicate with one another. Thermopolia were

scattered all over Pompeii and located near the main streets and important public spaces of the city (Theis, 2001). Development of restaurants known today as modern restaurants is usually attributed to the eighteenth century in France. Due to numerous technological advances, industrialization, changes in human needs and lifestyles, restaurants developed into what they are now. Nowadays, there are many types of restaurants which embody different ideas and requirements. A good layout may have a huge impact on the efficiency of a restaurant. It influences the way how money is earned, reputation of a restaurant, its safety and performance. At the same time, creating a friendly and comfortable environment for customers and staff requires special attention. One of the most important things to be considered is the convenience of the circulation and movement through the whole building. A layout should make it easy for customers to enter the restaurant, choose appropriate routes and get to the place where they eat.

Research Design

This study adopted a survey research design. It collects data for the purpose of describing and interpreting the data that was obtained. The research method will be helpful in disclosing the impact of restaurant layout on food service delivery.

Population of the study

Population is the totality of subjects which meet a given set of criterion. The target population of this study consists of guest, staffs and management of Exclusive Mansion Hotel as the case study

Sample Size and Sampling Technique

70 questionnaires were prepared and administered on the study population which include the guest as well as staff of the Golden Tulip GRA, Port Harcourt.

Research Instrument

The research instrument that is been used in this study is a structured questionnaire. Questionnaire are questions formulated by a researcher for the respondents to input their answers or ideas regarding a particular research that is been

conducted. A structured questionnaire usually requires less time to complete and is easy to respond to. Using closed ended questions, opportunity for responded to input irrelevant information will be avoided. The structured questionnaire will be divided into three sections. The first section was designed to elicit information about respondent, while the rest was designed to get information about the research topic. All item was measured using a five-point Likert-type scale (ranging from 1 = strongly disagree to 5 = strongly agree) i.e. 5=S-Agree= very high, 4=Agree=high, 3=Neutral=low, 2=disagree= very low, 1S-disagree=Lowest.

Validity and Reliability of Instrument

To test the validity of the instrument, the draft of the questionnaire will be presented to the researcher's supervisor and useful suggestions were made to improve the quality of the questionnaire before it was administered to the respondents.

Methods of Data Collection

Researcher goes to the above hotel industry outlet stated in the population of the study. Questionnaire will be used to conduct this research. The questionnaire will be administered personally by the researcher and collected once it has been filled by each respondent.

Statistical tools

Statistical tool to be used is simple and percentage table is used for easy data analysis of result gathered from questionnaire that was shared, while chi-square was used for the hypothesis of this study. The formula for chi-square is given below;

$$X = \frac{\sum (FO - FE)^2}{FE}$$

Where X^2 = chi square

$\sum$ = summation

F0 = observed frequency

FE = expected frequency

Table 4.2.1 Distribution of questionnaire returned

Response	Frequency	Percentage%
No of questionnaire distributed	70	70
No of questionnaire returned	48	48

Field work, 2022

Table 1 shows the number of questionnaire returned by the respondents, 48 (48%) out of 70 questionnaire were returned.

4.3 Background information about respondents

Table 4.3.1: showing gender of respondents

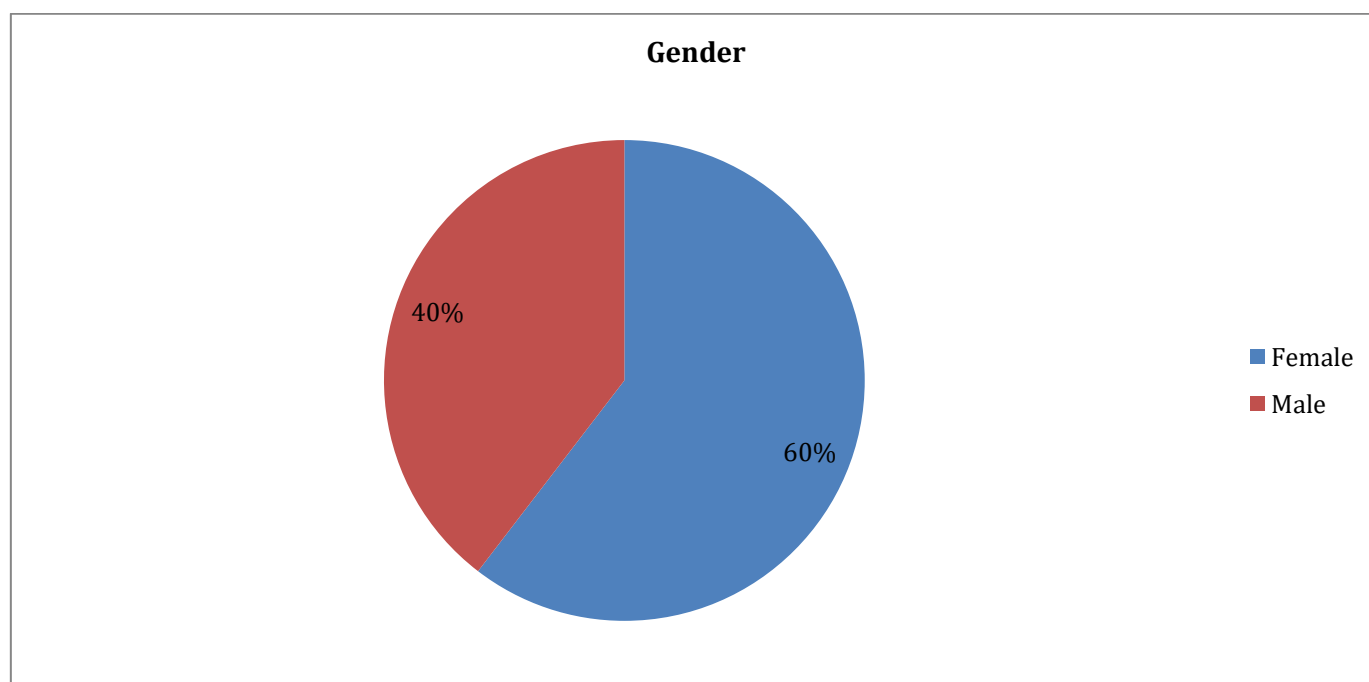
The researcher considered it necessary to examine the gender distribution of respondents participating in the study to determine whether gender-related differences might influence their perceptions, experiences, and responses to the research questions. Information on respondents' gender was also collected to provide a clearer understanding of the

demographic characteristics of the study participants and the representation of males and females within the organization. This information could further assist the researcher in assessing the extent of gender balance among

employees and identifying possible disparities in workforce representation. The findings concerning the gender distribution of respondents are presented in the table below.

Respondents	Frequency	Percent	Valid percent	Cumulative percent
Female	29	60.41	60.41	60.41
Male	19	39.58	39.58	100.0
Total	48	100.0		

Field work, 2022



Source

Table 4.3.1 above depicts that 60.41% and 39.58% of respondents of female and male respectively answered the questionnaires distributed.

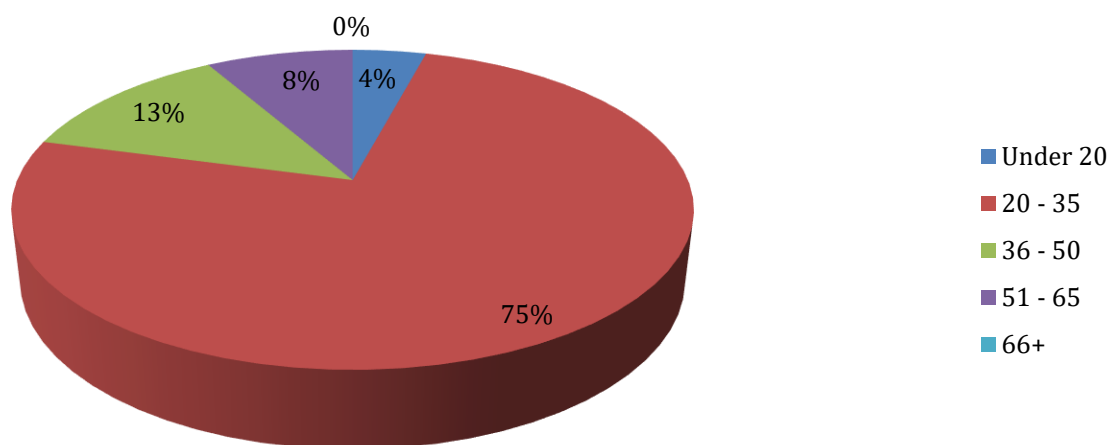
Table 4.3.2: Age Distribution

In this study, age of the respondents was considered to be important in finding the influence of employees on the impact of restaurant layout on food service delivery using Golden Tulip GRA, Port Harcourt.

Respondents	Frequency	Percent	Valid percent	Cumulative percent
Under 20	2	4.16	4.16	4.16
20 – 35	36	75	75	79.16
36– 50	6	12.5	12.5	91.66
51 – 65	4	8.33	8.33	100.00
66+	0	0.0	0.0	
Total	48	100	100	

Field work, 2022

Age



Source

The large number of participants that participated in the study are the ones who aged between 20 – 35 years who constituted 75% then followed by 36– 50 with 13%, 51 – 65 which made up 8% of respondents and lastly with under 20 which made 4% of all employees who respond to questionnaires.

These data imply that most people who make up the staff to organisations at the moment are persons in their mid-aged,

characterised with lots of activities while the least are the elderly who do not have much time to do other things. The results suggest that the firm has a skilled personnel member.

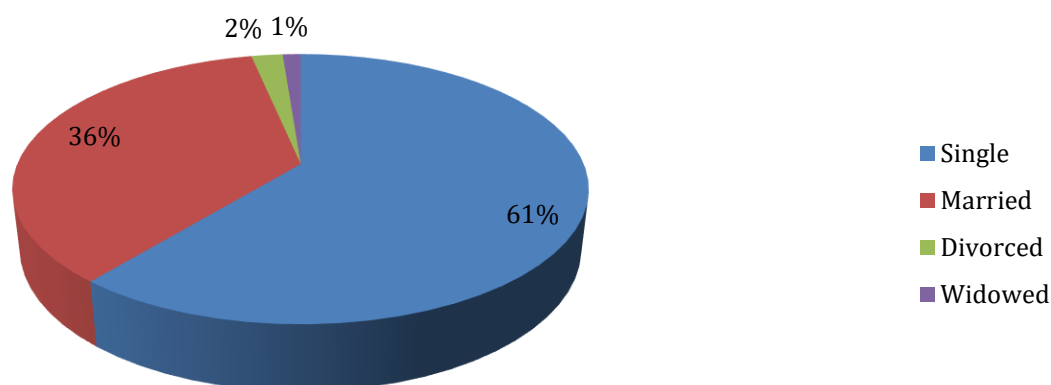
Table 4.3.3: Marital Status

The researcher intended to find out the marital status of the respondents as this would enable ascertain how well versed with the organization's operations the respondents were.

Respondents	Frequency	Percent	Valid percent	Cumulative percent
Single	29	60.41	60.41	60.41
Married	17	35.41	35.41	95.82
Divorced	1	2.08	2.08	97.9
Widowed	1	2.04	2.04	100
Total	48	100.0	100.0	

Field work, 2022

Marital Status



Source

Table 4.3.3 shows that about 29 respondents who made up 61% are single, 17 respondents who made up 36.% are married, a respondent who made up 2.% is divorced, while a respondent who made up of 1% is widowed.

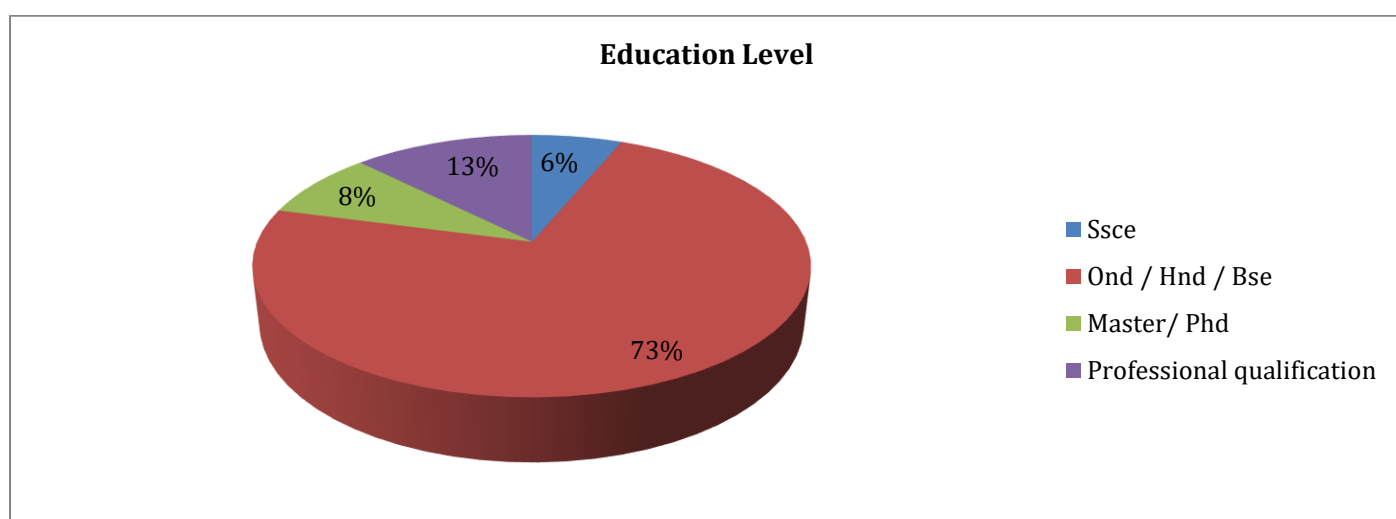
Table 4.3.4: Respondent's Education Level.

The success of any institution is determined by the competencies of its human resource base. The educational

level of the people largely impacts the character of the replies and the knowledge of the stakes involved. Workers' performance at work and consequently their production will be very high by the combination of numerous ways notably current technology.

Qualification	Frequency	Percent	Valid percent	Cumulative percent
Ssce	3	6.25	6.25	6.25
Ond / Hnd / Bse	35	72.91	72.91	79.16
Master/ Phd	4	8.33	8.33	87.49
Professional qualification	6	12.5	12.5	100
Total	48	100.0	100.0	

Field work, 2022



Source

The study comprised a large number of participants who acquired a Ssce (6%), followed by Ond/Hnd/Bse (73%), Master/Phd (8%) and those with professional from qualified boards were only (6%). Therefore table 4.3.4 shows that the majorities of the respondents are Ond/Hnd/Bse holder and with professional from qualified boards level who have high thinking capacity to give the best and required information of this study.

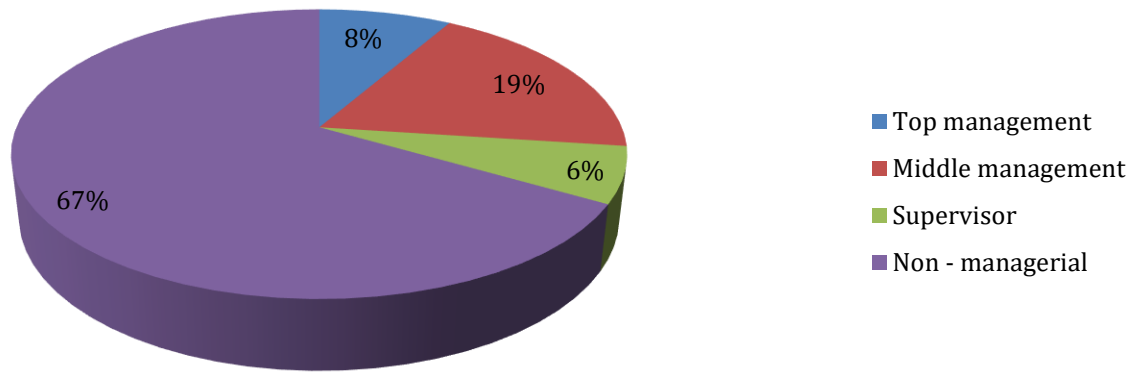
Table 4.3.5 Position held in organization Level.

In this study, position of the respondents was considered to be important in finding the influence of employees on the impact of restaurant layout on food service delivery using Golden Tulip GRA, Port Harcourt.

Position level	Frequency	Percent	Valid percent	Cumulative percent
Top management	4	8.33	8.33	8.33
Middle management	9	18.75	18.75	27.08
Supervisor	3	6.25	6.25	33.33
Non - managerial	32	66.66	66.66	100
Total	48	100.0	100.0	

Field work, 2022

Position held in organization Level



Source

The study comprised a large number of non-managerial participants (67%), followed by middle management (19%), top management (8%) and supervisors (6%). Therefore table 4.3.5 shows that the majority of the respondents are of non-managerial middle management level that have high thinking capacity to give the best and required information of this study.

Table 4.3.6 Restaurant is referred to as an establishment which prepares, make and serve food, drinks to customers, and earns money in return.

Variable	Frequency	Percentage%
Strongly disagree	-	-
Disagree	2	4.16
Neutral	5	10.41
Agree	20	41.66
Strongly agree	21	43.75
Total	48	100

Field work,2022

From the table 4.3.6 above, none of the respondents strongly disagree with the researcher view point stated above, 4.16% Of the respondents disagree with the researcher view, 10.41% of the respondents are neutral with the researcher view, 41.66% of the respondents agree with the researcher view, while 43.75% of the respondents strongly agree with the researcher point of view stated.

Table 4.3.7 Good restaurant layout is a marketing tool for attracting customers.

Variable	Frequency	Percentage%
Strongly disagree	1	2.08
Disagree	1	2.08
Neutral	3	6.25
Agree	23	47.91
Strongly agree	20	41.66
Total	48	100

Field work,2022

From the table 4.3.7 above, 2.08% of the respondents strongly disagree with the researcher view point stated above, 2.08% Of the respondents disagree with the researcher view, 6.25% of the respondents are neutral with the researcher view, 47.91% of the respondents agree with the researcher view, while 41.66% of the respondents strongly agree with the researcher point of view stated.

Table 4.3.8 An important aspect of a restaurant layout is ensuring proper circulation and movement of the restaurant staff as well as the guests in the restaurant.

Variable	Frequency	Percentage%
Strongly disagree	5	10.41
Disagree	5	10.41
Neutral	1	2.08
Agree	26	54.16
Strongly agree	11	22.91
Total	48	100

Field work, 2022

From the table 4.3.8 above, 10.41% of the respondents strongly disagree with the researcher view point stated above, 10.41% Of the respondents disagree with the researcher view, 2.08% of the respondents are neutral with the researcher view, 54.16% of the respondents agree with the researcher view, while 22.91% of the respondents strongly agree with the researcher point of view stated.

Table 4.3.9 there is the need for restaurant management to ensure that, steps are taken to improve on the layout design of restaurants to achieve customer satisfaction.

Variable	Frequency	Percentage%
Strongly disagree	7	14.58
Disagree	5	10.41
Neutral	3	6.25
Agree	15	31.25
Strongly agree	18	37.5
Total	48	100

Field work,2022

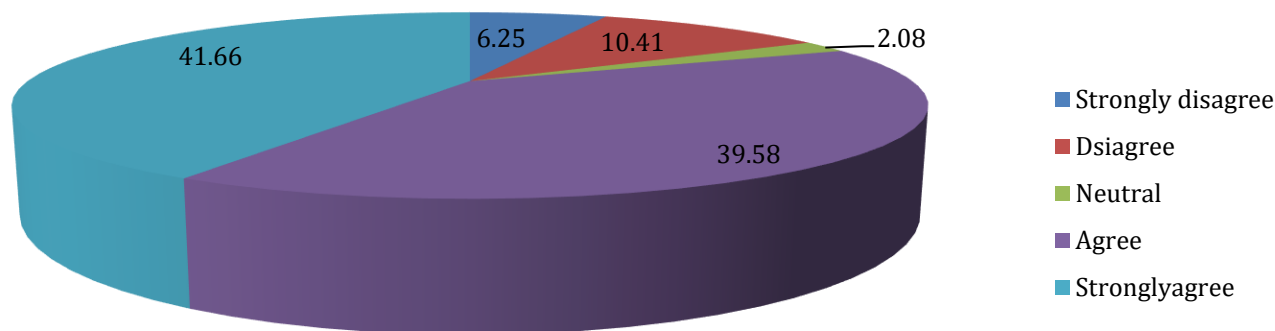
From the table 4.3.9 above, 14.58% of the respondents strongly disagree with the researcher view point stated above, 10.41% Of the respondents disagree with the researcher view, 6.25% of the respondents are neutral with the researcher view, 31.25% of the respondents agree with the researcher view, while 37.5% of the respondents strongly agree with the researcher point of view stated.

Table 4.3.10 Restaurant layout can increase patronage within the hotel

Variable	Frequency	Percentage%
Strongly disagree	3	6.25
Disagree	5	10.41
Neutral	1	2.08
Agree	19	39.58
Strongly agree	20	41.66
Total	48	100

Field work,2022

Restaurant layout can increase patronage within the hotel



Source

From this graph above, it shows the responsiveness of the respondents which 6.25% of the respondents strongly disagree with the researcher view point stated above, 10.41% of the respondents disagree with the researcher view, 2.08% of the respondents are neutral with the researcher view, 39.58% of the respondents agree with the researcher view, while 41.66% of the respondents strongly agree with the researcher point of view stated.

Table 4.3.11 *Paying attention to colour details, furnishing, music and ambience of the environment is one of the areas restaurant management should focus on when designing restaurant layout.*

Variable	Frequency	Percentage%
Strongly disagree	1	2.08
Disagree	2	4.16
Neutral	3	6.25
Agree	20	41.66
Strongly agree	22	45.83
Total	48	100

Field work 2022

From the table 4.3.11 above, 2.08% of the respondents strongly disagree with the researcher view point stated above, 4.16% of the respondents disagree with the researcher view, 6.25% of the respondents are neutral with the researcher view, 41.66% of the respondents agree with the researcher view, while 45.83% of the respondents strongly agree with the researcher point of view stated.

Table 4.3.12 *Energy saving, good cuisine, intimacy and good restaurant displayed will motivate the customer.*

Variable	Frequency	Percentage%
Strongly disagree	-	-
Disagree	2	4.16
Neutral	4	8.33
Agree	22	45.83
Strongly agree	20	41.66
Total	48	100

Field work, 2022

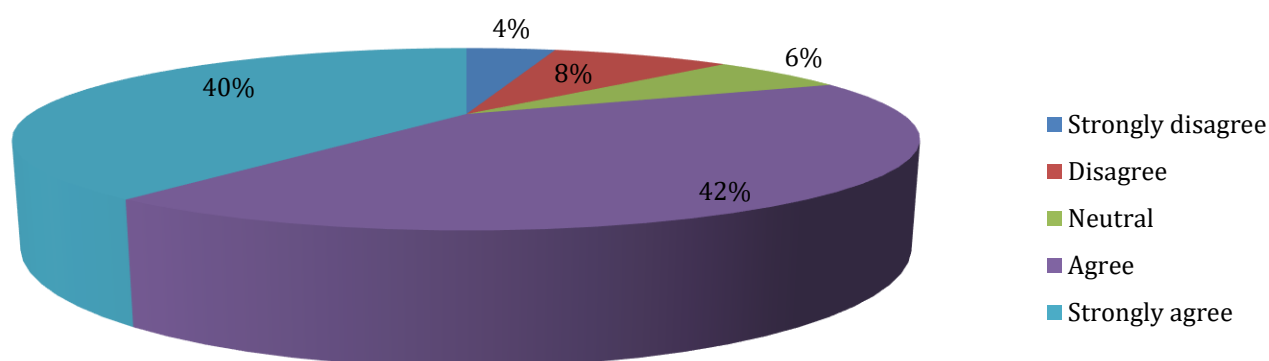
From the table 4.3.12 above, none of the respondents strongly disagree with the researcher view point stated above, 4.16% Of the respondents disagree with the researcher view, 8.33% of the respondents are neutral with the researcher view, 45.83% of the respondents agree with the researcher view, while 41.66% of the respondents strongly agree with the researcher point of view stated.

Table 4.3.13 Layout design for any restaurant has impact on foodservice delivery

Variable	Frequency	Percentage%
Strongly disagree	2	4.16
Disagree	4	8.33
Neutral	3	6.25
Agree	20	41.66
Strongly agree	19	39.58
Total	48	100

Field work 2022

Layout design for any restaurant has effect on foodservice delivery



Source

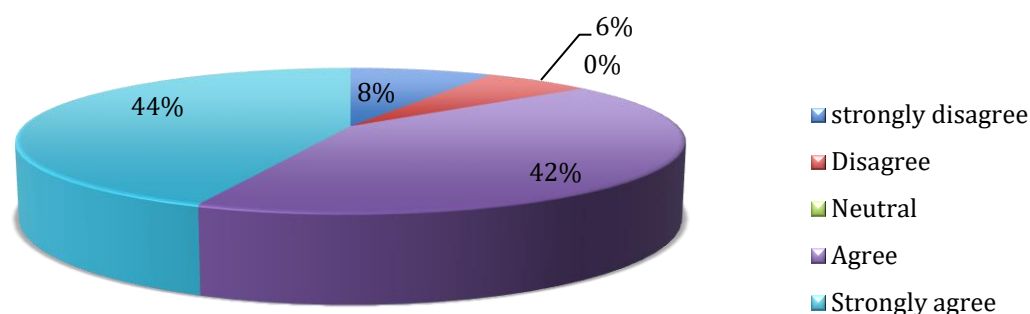
From this graph above, its show the responsiveness of the respondents which 4.0% of the respondents strongly disagree with the researcher view point stated above, 8.0%% Of the respondents disagree with the researcher view, 8% of the respondents are neutral with the researcher view, 42% of the respondents agree with the researcher view, while 40% of the respondents strongly agree with the researcher point of view stated.

Table 4.3.14 Restaurant layout plays a crucial part in the overall food service delivery.

Variable	Frequency	Percentage%
Strongly disagree	4	8.33
Disagree	3	6.25
Neutral	-	-
Agree	20	41.66
Strongly agree	21	43.75
Total	48	100

Field work, 2022

Restaurant layout plays a crucial part in the overall food service delivery.



From this graph above, its show the responsiveness of the respondents which 8% of the respondents strongly disagree with the researcher view point stated above, 6% Of the respondents disagree with the researcher view, none of the respondents are neutral with the researcher view, 42% of the respondents agree with the researcher view, while 44% of the respondents strongly agree with the researcher point of view stated.

Table 4.3.15 Restaurant layout plays a role in ensuring customer satisfaction through service delivery.

Variable	Frequency	Percentage%
Strongly disagree	3	6.25
Disagree	7	14.58
Neutral	2	4.16
Agree	20	41.66
Strongly agree	16	33.33
Total	48	100

Field work, 2022

From the table 4.3.15above, 6.25% of the respondents strongly disagree with the researcher view point stated above, 14.58% Of the respondents disagree with the researcher view, 4.16% of the respondents are neutral with the researcher view, 41.66% of the respondents agree with the researcher view, while 33.33% of the respondents strongly agree with the researcher point of view stated.

Table 4.3.16 Layout designs are gained from a correctly planned and designed organization for both guests and staffs.

Variable	Frequency	Percentage%
Strongly disagree	2	4.16
Disagree	1	2.08
Neutral	-	
Agree	30	62.5
Strongly agree	15	31.25
Total	48	100

Field work, 2022

From the table 4.3.16 above, 4.16% of the respondents strongly disagree with the researcher view point stated above, 2.08% Of the respondents disagree with the researcher view, none of the respondents are neutral with the researcher view, 62.5% of the respondents agree with the researcher view, while 31.25% of the respondents strongly agree with the researcher point of view stated.

Table 4.3.17 The layout of the restaurant has significant impact on the customer satisfaction.

Variable	Frequency	Percentage%
Strongly disagree	2	4.16
Disagree	1	2.08
Neutral	2	4.16
Agree	25	52.08
Strongly agree	20	41.66
Total	48	100

Field work 2022

From the table 4.3.17 above, 4.16% of the respondents strongly disagree with the researcher view point stated above, 2.08% Of the respondents disagree with the researcher view, 4.16 of the respondents are neutral with the researcher view, 52.08% of the respondents agree with the researcher view, while 41.66% of the respondents strongly agree with the researcher point of view stated.

Table 4.3.18: Before the designing process of a restaurant starts, there are factors that are necessary to be determined. These factors are service style and number of the customers.

Variable	Frequency	Percentage%
Strongly disagree	3	6.25
Disagree	2	4.16
Neutral	1	2.08
Agree	31	64.58
Strongly agree	11	22.91
Total	48	100

Field work, 2022

From the table 4.3.18 above, 6.25% of the respondents strongly disagree with the researcher view point stated above, 4.16% Of the respondents disagree with the researcher view, 2.08 of the respondents are neutral with the researcher view, 64.58% of the respondents agree with the researcher view, while 22.92% of the respondents strongly agree with the researcher point of view stated.

Table 4.3.19 Layout designs are jointly important to customers in their choice of restaurant.

Variable	Frequency	Percentage%
Strongly disagree	5	10.41
Disagree	2	4.16
Neutral	3	6.25
Agree	13	27.08
Strongly agree	25	52.08
Total	48	100

Field work, 2022

From the table 4.3.19 above, 10.08% of the respondents strongly disagree with the researcher view point stated above, 4.16% Of the respondents disagree with the researcher view, 6.25 of the respondents are neutral with the researcher view, 27.08% of the respondents agree with the researcher view, while 52.08% of the respondents strongly agree with the researcher point of view stated.

Table 4.3.20 Poor design can cause catastrophe for both guests and workers in the restaurant.

Variable	Frequency	Percentage%
Strongly disagree	4	8.33
Disagree	5	10.41
Neutral	6	12.5
Agree	10	20.83
Strongly agree	23	47.91
Total	48	100

Field work, 2022

From the table 4.3.20 above, 8.33% of the respondents strongly disagree with the researcher view point stated above, 10.41% Of the respondents disagree with the researcher view, 12.5 of the respondents are neutral with the researcher view, 20.83% of the respondents agree with the researcher view, while 47.91% of the respondents strongly agree with the researcher point of view stated.

Table 4.3.21 Volume and type of services, Amount of spaces and placements, Number of customers, Suitable circulation area and flow pattern, Proximity and direction of the spaces, Economical use of space and Minimize handling too loaded service are very important in restaurant layout.

Variable	Frequency	Percentage%
Strongly disagree	2	4.16
Disagree	1	2.08
Neutral	5	10.41
Agree	17	35.41
Strongly agree	23	47.91
Total	48	100

Field work, 2022

From the table 4.3.21 above, 4.16% of the respondents strongly disagree with the researcher view point stated above, 2.08% Of the respondents disagree with the researcher view, 10.41 of the respondents are neutral with the researcher view, 35.41% of the respondents agree with the researcher view, while 47.91% of the respondents strongly agree with the researcher point of view stated.

Table 4.3.22 Restaurant layout contributes to the food service delivery to the customer.

Variable	Frequency	Percentage%
Strongly disagree	4	8.33
Disagree	1	2.08
Neutral	-	
Agree	24	50
Strongly agree	19	39.58
Total	48	100

Field work, 2022

From the table 4.3.22 above, 8.33% of the respondents strongly disagree with the researcher view point stated above, 2.08 % Of the respondents disagree with the researcher view, 0% of the respondents are neutral with the researcher view, 50% of the respondents agree with the researcher view, while 39.58% of the respondents strongly agree with the researcher point of view stated.

4.4 Test of hypothesis

The hypothesis test will be carried out using the chi- square test.

$$\text{Which states } X^2 = \frac{\sum (O-E)^2}{E}$$

The Mean of each item is computed thus:

$$X = \frac{\sum FX}{N}$$

Where X= Means of the scores

X = Scores

F = Frequency

Σ = Summation

N = Number of respondents

The testing of hypothesis using Chi-Square which is stated as thus:

Where O= Observed frequency

E = Expected frequency

X = Chi-square

Σ = Summation

Where Expected frequency = No of responses Observed frequency = No of respondent.

Decision Rules

If the calculated value of $X = 0.05$ is greater than the tabulated value of $X = 0.05$, the study will reject the null hypothesis (H_0) and accept the alternative hypothesis (H_1) and if the calculated value of $X = 0.05$ is less than the tabulated value of $X = 0.05$, the study will accept the null hypothesis (H_0) and reject the alternative hypothesis (H_1).

Table 4.3.13: Layout design for any restaurant has impact on foodservice delivery

Variable	Frequency	Percentage%
Strongly disagree	2	4.16
Disagree	4	8.33
Neutral	3	6.25
Agree	20	41.66
Strongly agree	19	39.58
Total	48	100

Field work, 2022

From the table 4.3.13 above

Ho: Restaurant layout does not have significant impact on food service delivery.

Hi: Restaurant layout has significant impact on food service delivery.

Variables	(Observed Frequency)	(Expected frequency)	(O-E)	(O-E) ²	$\frac{(O-E)^2}{E}$
Strongly disagree	2	9.6	-7.6	57.76	6.017
Disagree	4	9.6	-5.6	31.36	3.267
Neutral	3	9.6	-6.6	43.56	4.537
Agree	20	9.6	10.4	108.16	11.267
Strongly agree	19	9.6	9.4	88.36	9.204
X ²	48	48			34.292

$$X^2 = 34.29$$

Level of significance 5% = 0.05

Calculated $X^2 = 34.29$

Tabulated $X^2 = 26.29$

Degree of freedom $df = (r-1)(c-1)$, where r = row

C = column number

$$(5-1)(5-1) = (4) \times (4) = 16$$

Since the X^2 calculated is greater than X^2 tabulated at 0.05 significance level and $df = 16$;

$$X^2 \text{ calculated } 34.29 > X^2 \text{ tabulated } 26.29$$

The null hypothesis is rejected and the alternative hypothesis H_1 is accepted.

From the stated hypothesis

Conclusions

The aim of this paper is to examine the effect of restaurant layout on food service delivery process. Five sections constitute this research paper. Results revealed the relationship between restaurant layout and food service delivery process, proving how a well-planned and designed layout improves service process and leads to customer satisfaction through efficient food service delivery process. Furthermore, results indicate the need to keep in mind different aspects during designing the restaurant layout. These aspects include the nature of the restaurant, requirements of the restaurant operation process, and important considerations in choosing layout.

Restaurant layout planning provides significant advantages for customers and restaurant staff. The current study acknowledges the importance of restaurant layout in designing, which plays a similar role as that of the interior decoration component of restaurant designing. A functional and aesthetically designed layout increases the efficiency of services delivery process, enhances customer experience, increases patronage rate, and adds revenue generation. Therefore, the owner of a restaurant must pay proper attention to the restaurant layout in order to achieve better results in the business process.

Recommendation for Further Study

From previous studies regarding effects of restaurant interior layout on food services delivery, it is obvious that it would not be incorrect to extend our research to cover wider areas to get a complete design for better food service delivery in restaurants. Various aspects of the perfect restaurant layout design for food service delivery could include lighting, color selection, sound/acoustic design, heating/cooling/ventilation design, materials design, outdoor space design, etc., which should be studied in

sequence. We will discuss each of these aspects separately in the following sections. This paper aims to explore all the important design aspects for designing effective restaurant layouts.

References

1. John R. Walker. (2011). *The Restaurant : From Concept to Operation*. Hoboken, New Jersey: John Wiley & Sons, Inc.
2. Daramola, I., & Daramola, B. (2011). *Research Methods in Social Science and Management*. Lagos: Owonike Rainbow Press Ltd.
3. Zarei, N. (2007). *Exploring the Service Factors Evidence from Restaurants on Eastern Mediteranean University Campus*. Gazimağusa, North Cyprus: Eastern Mediterranean University.
4. Yüksel, A., & Yüksel, F. (2002). Measurement of Tourist Satisfaction with Restaurant Services. *Journal of vacation marketing*, vol 9, No 1 , 52-68.
5. Joseph F Durocher. Regina S, B. (2010). *Successful Restaurant Design*. Hoboken, New Jersey: Jhon Wiley & Sons, Inc.
6. Potak, B. (2004). *Form and Space Relationship of the Houses in the Twentieth-Century*. Gazimağusa: Eastern Mediterranean University.
7. Faravar, N. (2010). *Aesthetics and Users Preferences of Formal Aesthetic*. Gazimağusa, North Cyprus: Eastern Mediterranean University.
8. Knackstedt, M. (2012). *The Interior Design Business Handbook: A Complete Guide to Profitability*. Hoboken, New Jersey: Jhon Wiley & sons.
9. Kubba, S. (2010). *LEED Practices, Certification, and Accreditation Handbook*. United States of America: Library of congress.
10. Berkman, G. (2004). *Analysis of Design and use of Entrance in the Domestic Architecture of cyprus*. Gazimağusa: Eastern Mediterranean University.
11. R.K.Arora. (2007). *Food Service and Catering Management*. New Delhi, India: Kul Bhushan Corporation.
12. Peter Jones, P. M. (2006). *The Management of Foodservice Operations*. London: Thomson Learning.
13. Clayton W. Barrows, T. P. (2009). *Introduction to Management in the Hospitality Industry*. Hoboken, New Jersey: John Wiley & sons.

14. Ben Fink, K. F. (2009). *Remarkable Service: A Guide to Winning and Keeping Customers for Servers, Managers and restaurant owners*. Hoboken, New Jersey: John Wiley & Sons.
15. Brichfield, J. (2008). *Design And Layout of Food Service Facilities*. New jersey: Jhon Wiley & Sons, Inc, Hoboken.
16. David Beriss, D. S. (2007). *The Restaurants Book: Ethnographies of Where we Eat*. New York, United State: Berg.
17. David Kent Ballast, F. (2010). *Interior Design Reference Manual: Everything You Need to Know to Pass the NCIDQ Exam*. United States of America: professional publication inc (PPI).
18. Evan, R. M. (1948). *An Introduction to Colour*. New York: John Wiley & Sons, Inc.
19. Faravar, N. (2010). *Aesthetics and Users Preferences of Formal Aesthetic*. Gazimağusa, North Cyprus: Eastern Mediterranean University.
20. Koapacz, J. (2004). *Colour in Three_Dimentional Design*. New York: McGraw_Hill.
21. Lee, R. (2006). *Everything Guide To Starting And Running A Restaurant: Secrets to a successful business*. U.S.A: F+W Media.
22. Neufert, E. P. (2002). (456) Neufert. Tehran: Melli library of Tehran.
23. R.K.Arora. (2007). *Food Service and Catering Management*. New Delhi, India: Kul Bhushan Corporation.
24. Andaleeb, S. S., & Conway C. (2006). Customer satisfaction in the restaurant industry: an examination of the transaction-specific model. *Journal of Services Marketing*, 20 (1), 3-11.
25. Ariffin, H.F., Bibon, M.F., & Raja, A. (2011). Restaurant's atmospheric elements: What the customer wants. *Journal of Asian Behavioral Studies*, 1 (2), 33-43.
26. Baker, D., & Crompton, J. (2000). Quality, satisfaction, and behavioral intentions. *Annals of Tourism Research*, 27(3), 785-804.
27. Chang, D. (2000). The impact of restaurant noise on customers' dining experience in Kowloon, Hong Kong. *International Journal of Hospitality & Tourism Systems*. 3(1), 80-85.
28. Liu, Y. & Jang, S. (2009). Perceptions of Chinese restaurants in the U. S.: What affects customer satisfaction and behavioral intention? *International Journal of Hospitality Management*, 28, 338-348.
29. Wall E.A., Berry, L.L. (2007). The combined impacts of the physical environment and employee behavior on customer perception of restaurant service quality. *Cornell Hotel Restaurant Adm Q* 48: 59-69
30. Tam, J. L. M. (2000). The impacts of service quality perceived value and customer satisfaction the frontier, Sage, Thousand Oaks, CA.
31. Baker, D., & Crompton, J. (2000). Quality, satisfaction, and behavioral intentions. *Annals of Tourism Research*, 27(3), 785-804.
32. Zeithaml, V. & Bitner, M. J. (2003). *Services Marketing: Integrating customer focus across the firm*. 3rd edition. New York: McGraw-Hill.
33. Sulek, J. M. & Hensley, R. L. (2004). The relative importance of food, atmosphere and fairness of wait. *The Cornell Hotel and Restaurant Administration Quarterly*, 45 (3), 235-247.
34. Leal, R. P., & Pereira, Z. L. (2003). Service recovery at a financial institution. *International Journal of Consumer Research*, 14(3), 495-507
35. Stewart, Hayden; Morrison, Rosanna Mentzer. "New Regulations Will Inform Consumers About Calories in Restaurant Foods". USDA ERS. Archived from the original on 5 September 2021. Retrieved 27 August 2021.
36. Todd, Jessica E.; Mancino, Lisa; Lin, Biing-Hwan. "The Impact of Food Away From Home on Adult Diet Quality – Report Summary". USDA ERS. Archived from the original on 7 September 2021. Retrieved 27 August 2021.
37. Smith, A. F. (2012). *Fast Food and Junk Food: An Encyclopedia of What We Love to Eat*. Santa Barbara, California: Library of Congress Cataloging.
38. Kotler, P. (2003) Atmospherics as a marketing tool. *Journal of Retailing*, 49(4), 2003-2004.
39. Teresita V.dela Cruz, G. C. (2007). *Learning & Living in the 21st Century*. Philippine: Rex.
40. Weijian, S. (2009). *2009 Classical Design of Restaurant*. China: Fujian Science & Technology Publishing House.
41. URL 1: Ricotti, E. S. (2006). *Espr-Archeologia.It. Thermopolia and inns*: <http://www.espr-archeologia.it/articles/59/Thermopolia-and-inns>.

42. URL 2: Anon. (2012, February 12). Wikipedia, the free encyclopedia. May 8, 2012, Sobrino de Botín: http://en.wikipedia.org/wiki/Sobrino_de_Bot%C3%ADn.
43. URL 3: Anon. (2012, May 7). Types of Restaurant. May 26, 2012 wikipedia: http://en.wikipedia.org/wiki/Restaurant_type.
44. URL 4: Anon. (2011, 3 23). Best House Design. Retrieved 3 29, 2012, from www.besthousedesign.com:2011/03/23/artistic-modern-restaurant-design-influenced-modern-architecture-mexico-la-condesa-restaurant-designed-michael-hsu-office-architecture/.
45. URL 5: Pinho, R. (2009). Fast Food Restaurant – KFC / PK Arkitektar. 3 27, 2012 <http://www.archdaily.com/33672/fast-food-restaurant-kfc-pk-arkitektar/>.
46. URL 6: Mealey, L. (N.D). About.com. 1 5, 2012 restaurant.About.com: <http://restaurants.about.com/od/glossaryofterms/a/Concepts.htm>.
47. URL 7: Fathi-Poor, K. (2011, 3 31). Chic Tip. Retrieved 3 29, 2012, from www.chictip.com:
48. ISO/TS 22002-2:2013 Prerequisite programmes on food safety — Part 2: Catering”. Iso.org. ISO.
49. Food Service Industry”. USDA Economic Research Service. Retrieved 27 August 2021.
50. Food Service Industry Market Segment”. USDA ERS. Retrieved 27 August 2021.
51. Global Palates 2015”. Restaurant.org. Retrieved 27 August 2021.
52. New research finds Americans embrace global cuisine”. Restaurant.org. Retrieved 27 August 2021.
53. Hamburger, John. “Sysco and US Foods: The Aftermath”. Foodservice News. Retrieved 27 August 2021.
54. Food Service Industry -Recent Issues”. USDA ERS. Retrieved 27 August 2021.
55. Theis, J. (2001). West and Wood's Introduction to Food Service. New Jersey, USA: Prentice Hall.
56. Umbrell, C. (2003). Gold star service, American-Gas, 85(4), 14-16.
57. Corky Binggeli, P. G. (2011). *Interior Graphic Standards*. New Jersey: John Wiley & sons.
58. Brichfield, J. (2008). *Design And Layout of Food Service Facilities*. N
59. Ardahan, G. (2012) Personal Interview, EMU, Gazimağusa.
60. Christine, M. Elizabeth, A. (2007). *Designing Commercial Interiors*. New Jersey: John Wiley & Sons.
61. Corky Binggeli, P. G. (2011). *Interior Graphic Standards*. New Jersey: John Wiley & sons.
62. Daft, R. L (2008) “Organization Theory and Design” USA: Joe Sabatini.
63. <http://www.chictip.com/hotels/restaurant-design-modmarket-by-roth-sheppard-architects>.
64. <https://hotels.ng/hotel/1240448-exclusive-mansion>
65. Zhai, D. (2008). Restaurant & Bar. China: APIDA.