

Touch points in the restaurant branch

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ABSTRACT

As customer experiences became more important as part of gaining a competitive advantage (Schmitt, 1999), managers should have a proper understanding of this phenomenon. The customer experience is made up of touch points and in general, more touch points are present in services than in manufactured goods (Berry, Wall, & Carbone, 2006). Much research has been conducted in the service industry, although limited attention has been given to the influence of touch points in restaurants. This paper aims at filling this gap in literature by investigating the influence of various touch points on the customer experience in a restaurant setting. Overall, the findings reveal a positive influence of the touch points examined. The study offers a deeper understanding of what influences a customer experience in a restaurant; one that will help restaurant managers and perhaps others employed in the hospitality sector to better design future customer experiences.

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Keywords

Customer experience; Touch points; FAMM-model; Service clues; Touch point elements; Servicescapes; Brand perception

1. INTRODUCTION

Making profit is the ultimate goal for every for-profit-company. There are various manners that lead to making more profit, and with regard to the customer experience, touch points play an important role (Court, Elzinga, Mulder, & Vetvik, 2009). From the 1960s on, academics started to investigate the customer decision process and the experience that goes with it (Bitner, Howard, & Sheth, 1971). More and more research was conducted in the field of customer buying behavior and slowly customer experience and engagement gained attention among the researchers. In 1982 the 'experience aspect' was first introduced by Holbrook and Hirschman and from that moment on a great emphasis was placed on how to involve customers in their buying process.

Pizam (2010) stated that experiences are of essence in the hospitality industry. It forms the link between the tangible and intangible assets of a product or service and the customer satisfaction. He claims that a mediocre quality may nevertheless lead to a memorable experience and result in customer satisfaction, whereas high quality may lead to average customer satisfaction because no memorable experience was created. This shows the increasing importance of experiences, also when choosing a hotel for instance (Neuhofer, Buhalis, & Ladkin, 2013).

Opposite from the industrial sector, the service sector locates its customers in the 'factory'. They are part of the environment where the service is being produced and/or delivered (Berry & Lampo, 2004). This allows them to acquire many more insights and experiences during the whole customer journey than customers from manufactured goods. Especially in restaurants they are able to monitor the entire process. They are aware of everything that happens from the moment they enter until the moment they leave, for example the pace at which the waiters are working, the impression they get from the interior, the smell from the food, sometimes they are even able to see how the food is being prepared! All these little moments that give an impression on how they connect with and perceive the restaurant can be defined as touch points (Lemon & Verhoef, 2016). As one can understand, these touch points form an important aspect of the customer journey.

The service industry has grown over the past years (CBS-Statline, n.d.). This also applies for the hospitality sector. In 2017, the hospitality sector had 3,5% out of the total gross profit among all sectors. Next to this, it ensured 11,07% of the employment. This employment is solely the direct employment at restaurants and/or cafes, not even taking into account the indirect employees that e.g. deliver the nutrition, do administrative tasks, etcetera. This shows the importance of the hospitality sector in The Netherlands.

As restaurants are highly competitive and their entire profit is build on how their guests experience their visit, it is essential for restaurant managers to know how various touch point influence the customer experience (Nasution & Mavondo, 2008). Little attention has been given to exploring the influence of touch points on the customer experience in the restaurant setting and this paper will seek to fill this gap in literature.

Based on the aforementioned importance of the restaurant branch and the gap regarded this subject in literature, the following research question has been developed:

'How do touch points influence the overall customer experience in a restaurant setting?'

The second chapter of this paper provides a literature review on customer experience, touch points and several introduced models related to this subject. Chapter three will introduce the methodology and data used in this study. Then, chapter four discusses the results that came forward from the multiple linear regression analyses. Lastly, these results are discussed and limitations from this research are defined.

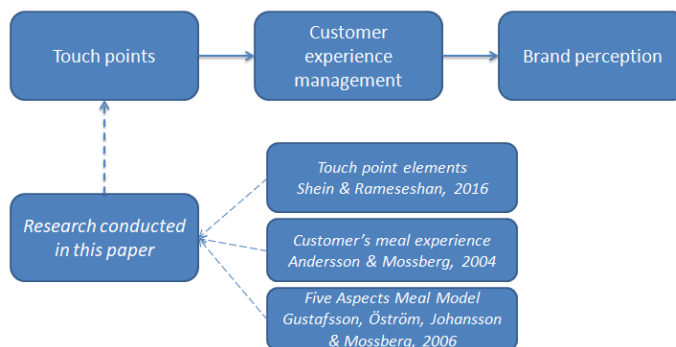


Figure 1 Framework of the presented paper

Figure 1 shows the contribution this paper will have to the existing literature. Based on three models; the touch point elements, customer's meal experience and the Five Aspects Meal model, 5 touch points were identified and this paper seeks to investigate their influence on the overall experience. This will contribute to the touch point's literature, which in turn will support customer experience management and in the end, if put into practice correctly, influence customer's brand perception.

2. THEORETICAL BACKGROUND

In this section, the most relevant and important theoretical frameworks related to the research topic will be introduced. These frameworks provide a deeper understanding of the concepts and form a basis for the survey that has been conducted.

2.1 Customer experience

The experiential aspect of consumption entered the field of consumption and marketing when Holbrook and Hirschman published an article in 1982. Before, marketing was focused on the rational side of buying, based on the information processing model (Ross & Bettman, 1979). This model viewed consumers as logical thinkers who were solving problems in order to make purchasing decisions. However, some researchers recognized the neglect of important phenomena. This is where Holbrook and Hirschman (1982) stepped in and extended the existing literature on consumer behavior. They introduced the term 'experiential view'. This new term in literature regards consumption as 'a primarily subjective state of consciousness with a variety of symbolic meanings, hedonic responses and esthetic criteria' (Holbrook & Hirschman, 1982, p.132).

From this moment on, more and more research was conducted in the direction of customer experiences. It became increasingly important that value was created for customers in the form of experiences. Pine & Gilmore (1998) defined experiences as followed: 'An experience occurs when a company intentionally uses services as the stage and goods as props, to engage individual customers in a way that creates a memorable event' (Pine & Gilmore, 1998, p.98). This phenomenon, where experiences form a new business model, can be seen as the next step in the progression of the economic value.

Managers are aware of this phenomenon and have to adapt to this changing business model. It is essential for them to

understand the customer journey. This journey is designed to help organizations to understand how their customers perceive the organization, how they use the touch points they come across and how they would like the customer experience to be (Nenonen, Rasila, Junnonen, & Kärnä, 2008). It consists of three main phases: pre-purchase, purchase and post-purchase (Lemon & Verhoef, 2016). Customers always start at the pre-purchase phase – when they already have expectations – and end at the post-purchase phase – when they assess the correctness of their expectations. Based on these expectations and assessments, a customer experience is designed. These experiences should be in line with the expectations of the customer, but also with the identity the company wants to stand for (Berry, Carbone, & Haeckel, 2002).

Due to the extensive research in the field of customer experiences, many definitions have come across. Based on these various definitions, one all-inclusive definition can be deduced: A customer experience can be seen as a construct that focuses on the cognitive, affective, behavioral, sensorial and social responses of a customer towards a firm's offering during the customer's entire purchase journey; in which the interactions can be both direct and indirect and are internal and subjective (Gentile, Spiller, & Noci, 2007; Lemon & Verhoef, 2016; Meyer & Schwager, 2007; Schmitt, 1999; Stein & Ramaseshan, 2016).

A distinction can be made between two types. Namely, static customer experiences and dynamic customer experiences (Kranzbühler, Kleijnen, Morgan, & Teerling, 2018). Whereas studies on static customer experiences focus on touch points that occur at one point in time, the focus of dynamic customer experiences studies lies on the evolvement of experiences over time. These two perspectives can be seen as complementary to each other, which is why insights from both studies should be connected to better understand a customer experience from a customer's point of view and how firms are able to manage these experiences.

The next step for firms is to focus on customer experience management. This approach combines the insights from the static and dynamic customer experiences into a framework that will support the management of the customer experience overall (Schmitt, 2010).

2.2 Touch points

Every time a customer gets in touch with the organization, its product or service, they have an experience (Zomerdijs & Voss, 2010). This experience can be via multiple channels, such as in-store, via social media, or word-of-mouth, and can be at various points of time (Pantano & Viassone, 2015). These little moments of contact, better known as touch points, can be seen as tangible or intangible interfaces between the customer and the company (Secomandi & Snelders, 2011). It is interesting to see that these interfaces influence the way the customer evaluates the company and unconsciously uses them as standards to judge service experiences. These judgments can be based on their expectations and previous experiences (Zeithaml, Berry, & Parasuraman, 1993).

Touch points can also be defined as instances of individual direct contact (anything that can be perceived or sensed) either

with the product or service itself, or with any representations of the offering by the company or some third party at distinct points in the experience (Berry et al., 2002; Lemon & Verhoef, 2016; Meyer & Schwager, 2007).

The touch points – or clues – can be subdivided into functional, mechanic and humanic touch points (Haeckel, Carbone, & Berry, 2003). These clues have a critical influence on the perception of the experience as they together shape the total customer experience (Figure 2).

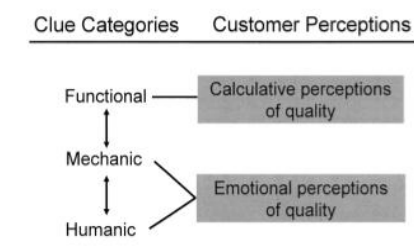


Figure 2 Clue influences on Customer Perception (Source: Berry et al., 2002)

Functional clues are concerned with the technical quality of the offering. They are supportive at the core of any service because they tackle the problem that is the reason for the customer to go to the market. Next to this, mechanic clues can be viewed as anything that is related to the sensory presentation of the service offered. It focuses on the environment and the sensory aspects that go with it, such as sights, smells, sounds, tastes and textures. Together, they form the first impression the customer has of the store and are therefore the 'tangible' representation of the service. Lastly, the humanic clues can be perceived as the category that focuses on the appearance and behavior of service providers, or employees. It turns out that the more important and personal the interaction between the customer and the service provider is, the more determining the humanic effects are. The interaction enables providers to bond with their customers. This leads to respect and esteem, which might exceed customer's expectations and build trust and loyalty (Berry et al., 2006). After all, the main focus of customer experience management is to build customer loyalty and strengthen customer relationships (Frow & Payne, 2007).

For the remaining part of this section, three different articles will be discussed that contributed to the distinction of types of touch points. These articles form the basis for the questions designed for the survey conducted in the light of this research.

2.2.1. Seven touch point elements

Stein and Ramaseshan (2016) conducted a research on identifying touch point elements of a customer experience. This research showed that a distinction can be made between seven different elements: atmospheric, technological, communicative, process, employee-customer interaction, customer-customer interaction and product interaction elements. These seven elements provide a clear understanding of touch points that occur during the different phases of a customer journey. In table 1 the definitions of the several elements can be found.

Table 1 Definitions of the touch point elements (Source: Stein & Ramaseshan, 2016)

| Touch point elements | Definition |
|-------------------------------|--|
| Atmospheric | The physical characteristics and surrounding customers observe when interacting with any part of the retailer. |
| Technological | A customer's direct interaction with any form of technology during an encounter with a retailer. |
| Communicative | One-way communication from the retailer to the customer, including both promotional and informative messages. |
| Process | The actions or steps customers need to take in order to achieve a particular outcome with a retailer. |
| Employee-customer interaction | The direct and indirect interactions customers have with employees when interacting with any part of the retailer. |
| Customer-customer interaction | The direct and indirect interactions customers have with other customers when interacting with any part of the retailer. |
| Product interaction | The direct or indirect interactions customers have with the core tangible or intangible product offered by the retailer. |

The atmospheric element, or physical characteristics, is present during all stages of the customer journey and for companies the main focus is on the layout of the company, but also the lighting, music and scents. It is the first thing customers encounter when interacting with the firm; the first impression is based on the look of the company and other sensory aspects. This physical environment where services are provided and where customers interact is also known as servicescapes (Bitner, 1992). Bitner has shown that the environment has its influence on the behavior of customers and employees, which is why it is important to keep this in mind when designing the service experience.

The second element is related to the extent to which customers use technology. Technology has shown to play an important role during the customer experience; it is becoming more evident in our current society as well in retailing, both online and physical (Stein & Ramaseshan, 2015, p. 13). The usage of technology as part of the experience can either have a beneficial as a disadvantageous effect depending on the result of the usage. Into account should be taken facilitated technology by the firm itself, such as mobile systems to take orders in a restaurant, and unaffiliated technology that the firm does not directly have an influence on. Social media and online review sites are a good example of this case.

The communicative element deals with the communication from the company towards the customer. The research showed that a big influence in the search and evaluation stages comes from promotional messages sent to customers by the firm. This can be via several communication channels, including social media since recent years.

The process element is related to the steps required to get towards a desired outcome. It showed to have a big influence on the shaping of the perceptions and on the evaluation of encounters while it occurs at multiple stages of the customer experience. 'Employee-customer interaction' aims at describing the interactions customers have with employees. Direct contact between customers and employees was even found to be critical when making purchasing decisions. Customers appreciated the knowledge and expertise of the employees as they helped them to make a decision. However, this interaction is not limited to in-store contact as employees also may communicate through other channels such as phone or mail. The customer-customer element is concerned with the interactions that customers have with other customers. This element is especially important during the pre-purchase phase as customers rely on reviews from other customers and on word-of-mouth. The last element is related to the core product itself, or, 'the core tangible or intangible product offered by the retailer'. The customer can get in touch with the product in various manners. He or she might encounter the product through social media or in-store.

Overall, the seven distinct elements provide a better understanding of the type of touch points that occur during a customer experience.

2.2.2. Customer's meal experience

Andersson and Mossberg (2004) conducted a research to assess the importance of various aspects and to examine the degree to which restaurants provide need satisfaction for customers. For their research, respondents were asked to state the maximum amount of money they were willing to pay for a given situation. First, six questions related to the actual situation were posed, after which the same questions were about an ideal situation. The outcomes were compared and a conclusion was formed. For the presented research interest lies at the five aspects used in the interview to examine what aspects influence a customer's meal experience.

5 Different aspects are taken into consideration; service, fine cuisine, restaurant interior, good company and other customers. The first aspect is related to the service of the personnel, the second one to the cuisine. The food can be basic and plain or spectacular extraordinary and everything in between. The third aspect takes into account the restaurant's interior or physical environment. Then, they look at the dining company sitting at the same table, and lastly, the behavior of other guests that might have its affect on the customer experience.

2.2.3. Five Aspects Meal Model (FAMM)

A restaurant is a specific area where a meal is being consumed. For this specific area, certain aspects will have an influence on how the customer perceives his or her experience. These aspects are described in the Five Aspects Meal Model (Gustafsson, Öström, Johansson, & Mossberg 2006). The model describes the importance of five different aspects on customer satisfaction when serving a meal. The following aspects occur: the room, the meeting, the product, the management control system and the atmosphere (Figure 3).

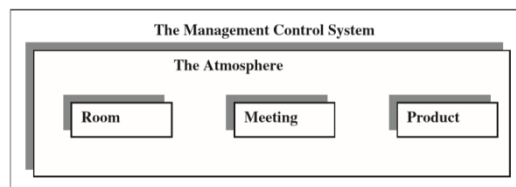


Figure 3 FAMM-model
(Source: Gustafsson *et al*, 2006)

The 'room' expresses the environment in which the guest is dining. It concerns the lighting, sounds, colors and textiles used to decorate the room. It is the first thing the guests notice when entering the restaurant. The second aspect, the 'meeting', is related to the interaction between customer and waiter, but also between customers and waiters among each other. The waiters have a great influence on the customer's experience as they are responsible for a pleasant stay. The 'product' consists of the food and beverages served in the restaurant and these are also the core product of the company. The 'management control system' refers to the entire controlling system, linked to laws and regulations related to the handling of food, but also logistics and economic aspects. The last aspect is a combination of all the aforementioned aspects. The 'atmosphere' links them all together and is divided into two main categories: the sensory part and the environment. The sensory part is concerned with the subjective experience of the customer during the visit and by the environment the room itself is meant.

All of these aspects together provide a framework on how to design service experiences in a way that will enhance customer satisfaction.

2.3 Brand perception

The aim of this paper is to provide an overview of touch points that influence the experience in a restaurant. This will help restaurant managers to better design a customer experience. The experience customers have with a brand, together with the image they have formed of the brand will shape their brand perception (Van Gelder, 2004). Brand perception can thus be defined as 'perceptions about a brand as reflected by the brand associations held in consumer memory' (Keller, 1993, p. 3), or 'brand image'. Whereas brand associations are images and symbols associated with the brand that distinguishes the brand from others. Therefore, brand image is related to the consumer's perception of the brand. On the other side of the

same coin, the brand expression or identity can be found. This is related to how the company defined and manifested its brand (Van Gelder, 2004). The brand expression can be divided into three sub-groups, namely the brand's positioning, its identity and personality. These three concepts together are used to influence the customer's brand perception (Van Gelder, 2004). It is critical that the brand's image and identity are consistent as they together form the ingredients for a strong brand (Nandan, 2005). When these two are balanced, brand loyalty will be build and maintained. This can be explained as brand loyalty is caused by the understanding and agreement with the company's message. The more the brand identity and brand image are aligned, the clearer this message, the better the understanding, the higher the loyalty (Nandan, 2005).

In addition, the brand image can also be defined as the sum of total impressions which together form the brand personality (Herzog, 1963). The brand personality in turn will determine to what extent customers see themselves in that brand. As the brand personality fits better to a customer, they feel more comfortable with the brand and brand loyalty will increase (Plummer, 2000).

In summary, the research conducted in this paper will enable restaurant managers to obtain a better insight in the influence of various touch points. They can use this outcome to better design their next customer experience, which in turn will change the brand perception of the customer and might lead to improved results at the bottom line.

3. METHODOLOGY

In order to investigate the influence of touch points on customer experiences in a restaurant setting, a qualitative data collection approach was used. More specifically, a survey was conducted to collect data through an analysis of recalled restaurant visits of respondents. This section discusses the process of designing the survey, an explanation of how the respondents were recruited, an overview of what the survey looked like and a short introduction on the analysis of the data.

3.1 Research strategy

The gap found in theory when reviewing the literature was that there is a lack of literature that provides an overview of the influence that touch points have on the customer experience in a restaurant setting. At the moment, many papers are written about the customer experience in the hospitality sector. They talk about the influence of customer experience on loyalty and worth-of-mouth (Cetin & Dincer, 2014) and the impact of an experience on brand image and customer loyalty (Jin, Lee, & Huffman, 2012). For the touch points' literature, the main focus is placed on the understanding and identification of touch points (Stein & Ramaseshan, 2016; Lemon & Verhoef, 2016). In order to provide insight into how various touch points influence the overall experience of customers in a restaurant setting a survey was conducted. This survey was constructed to collect data on past experiences of restaurant's customers.

In chapter two, various models and theories were presented that formed the base for the questions designed for this survey.

3.2. Research process

Prior to the start of the study, an extensive literature review has been conducted. This literature review was related to 'customer experience' in general and 'touch points' in particular to gain a better understanding of the concepts.

Against this theoretical background, survey questions were designed. These questions were based on the touch point elements defined by Shein and Ramaseshan (2016), on the

customer's meal experience (Andersson & Mossberg, 2004) and on the aspects from the Five Aspects Meal Model (Gustafsson et al., 2006). These theories were used to define independent variables to determine their influence on the dependent variable, being 'the overall experience'. The independent variables used in the survey were: the service of the personnel, the behavior of other guests, the taste of the main dish, the restaurant's interior and overall waiting times.

These variables can be seen at various related studies (Andersson & Mossberg, 2004; Stein & Ramaseshan, 2015). A positive relation between the independent variables and the dependent variable was assumed. When people are more satisfied about different aspects of their experience, their opinion of the overall experience will also be more positive. This can be checked by using a Likert-scale that ranks from very positive to very negative.

When designing the research questions, specific marketing terminology was avoided to ensure clarity for the respondents.

Before publishing the survey it was assured that the questions were clear. This was done through a pre-test among a small number of informants. These informants were from different educational levels, age groups and genders to make sure that the questions were clear for a broad public. Based on their feedback, flaws and limitations could be determined and revised prior to implementing the survey.

3.3 Selection of sample informants

To determine the influence of the independent variables on the overall experience, multiple customer experiences were explored. The online survey enabled data collection from respondents in various age groups and genders, and therefore provided a representation of a wide group of experiences. The survey was distributed via online channels. It was shared via Whatsapp, Facebook and LinkedIn; next to this, acquaintances were asked to further share the link so that a wider public was reached and more responses could be collected. The respondents had the option between a Dutch and an English version, which also increased the number of respondents. For the analysis, however, the answers were all recoded into English. This was done as this paper is fully in English, it reduced the number of analyses that had to be carried out and it increased the validity as the sample size grew tremendously this way.

In the end, the survey had been answered by 165 respondents. However, for the sake of this research the answers of 152 respondents were taken into account. The test- and preview answers were eliminated as people might not have thought seriously about their answers.

3.4 Data collection

The purpose of the survey was to collect data that could be analyzed in order to determine the relationship between the independent and the dependent variables. This data collection was done through a survey that consisted of, in total, 11 questions (Appendix 2).

After reading a short introduction, in which the respondents were thanked for their time, the purpose of the study and the time needed to answer the questions was mentioned, the respondents had the chance to choose for the Dutch version or for the English version. Both versions had the same questions incorporated. The survey started off with some general questions to make the respondents feel more comfortable. Questions such as whether they like to go out for dinner, their favorite type of food and when their last dinner out was, were asked.

Then the main part of the survey consisted of six questions related to the core research. Five questions were related to the independent variables; the interior, the taste of the main dish, the personnel's service, the behavior of other guests and the overall waiting times. The sixth question was about the overall experience. Some of the respondents started with this sixth question, whereas other finished with this question. This has been done to test whether the order of the questions would influence the responses (Appendix 1).

For each variable the customer's opinion was measured by providing them with a 7-point Likert scale ranging from 'very positive' to 'very negative'. Also, after each question, the respondents had the opportunity to fill in a comment for extra explanation and/or feedback that would make their statement clearer.

Once they finished this part of the survey, they got to the last part, which was about their age and gender. After this, they were thanked again for their time and were encouraged to fill in the survey again if they had visited another restaurant as well recently.

The average duration of the survey was approximately 3 minutes.

3.5 Data analysis

The focus of this paper is to determine the influence of several touch points on the overall customer experience. This is investigated through the analysis of answers collected via the survey. The answers were analyzed with the help of SPSS; a data analysis program. In SPSS a multiple linear regression analysis was carried out to get to a clear overview. The multiple linear regression is an extension of the simple linear regression. While simple regression focuses on the influence that one independent variable has on the dependent variable; multiple regression incorporates the role of multiple independent variables to predict the variance in one dependent variable (Nathans, Oswald, & Nimon, 2012). Based on the standard equation for a multiple linear regression, a regression model was developed:

$$\text{OverallExp} = b_0 + B_1 \cdot \text{Personnel} + B_2 \cdot \text{OtherGuests} + B_3 \cdot \text{MainDish} + B_4 \cdot \text{Interior} + B_5 \cdot \text{WaitingTimes}$$

Whereas b_0 is the intercept – the value for Y when all independent variables have a value of 0 - and the B values are based on the unstandardized B coefficients. The scores that respondents gave their independent variables can be entered in order to predict the score of their overall experience.

The aim of the analysis was to determine the influence of the five independent variables on the dependent variable. However, the dependent variable (overall experience) showed to be somewhat skewed to the right as many people were positive about their last restaurant visit. This is why a robustness check was performed to determine credibility of the outcome. Also, an experiment was conducted to determine the influence the order of posing questions.

When one wants to perform a multiple linear regression analysis, some assumptions should be considered and tested before performing the analysis. These five assumptions will be shortly introduced and explained.

1. **Linearity:** The first assumption that is related to the multiple regression is considering the linear relationship between the independent and the dependent variable. This assumption can be tested by looking at a scatterplot where

the independent and dependent variable are included. Due to the Likert-scale used in the survey this assumption cannot be checked. The scatterplot will not show any relationship between the two variables. However, it is allowed to perceive Likert-scale responses from 5-point scales on as continuous variables, which is why the regression was carried out nonetheless (Rhemtulla, Brosseau-Liard, & Savalei, 2012).

2. **Normality:** The second assumption deals with the distribution of the data. In order to have a valid outcome, data should be normally distributed. This can be checked by looking at the skewness value. When a normal distribution is present, this value should be ± 1 (George & Mallery, 1999).
3. **Multi-collinearity:** This term is used to define the presence of linear relationships among independent variables (Silvey, 1968). No multiple relations should be present between variables. Variance increase factor (VIF) and Tolerance are checked to test this assumption. A is that if $VIF < 10$ and $Tolerance > 0,1$, there is no multi-collinearity among the variables and this assumption is not violated (Miles, 2014).
4. **Homoscedasticity:** 'Homoscedasticity means that the variance of errors is the same across all levels of the IV' (Osborne & Waters, 2002, p. 4). A look should be taken at a scatterplot in which standardized predicted value and standardized residual are shown. If the scatterplot shows a pattern, this assumption is violated. If the points are randomly distributed, this assumption is met (Osborne & Waters, 2002).
5. **Outliers:** The last assumption ensures the absence of outliers, influential cases. This assumption can be tested by looking at Cook's distance. Cases with a Cook's value above 1 should be removed (Cook & Weisberg, 1982).

4. RESULTS

A multiple linear regression analysis was performed to examine the influence of various independent variables on the overall experience. Before carrying out this analysis, a univariate analysis was performed to get an insight in the distribution of the gender and age of the respondents (Appendix 3). 152 Respondents filled in the survey out of which more than 70% were female.

Most respondents were between 15 and 24 years old. Besides this, the distribution of the age is somewhat equally distributed. The groups 25-34 and 45-54 have the same number of respondents (26) and there is not much difference between 35-44 and 55-64 (13vs16). The average age lies between 25 and 34.

4.1. Multiple Linear Regression

Before carrying out this multiple regression, the assumptions necessary for the multiple linear regression were examined. These showed that the data was not normally distributed as it showed a skewness of 2,097 (Appendix 4). However, this assumption will be controlled for by doing a robustness check. No multi-collinearity was found between the independent variables (Appendix 5: $VIF < 1,364$, $Tolerance > 0,733$) and the variance of the residuals showed to be constant as no pattern can be seen in the scatterplot (Appendix 9). After examining Cook's distance, it can be said that there are no outliers present that might individually influence the outcome (Cook's $< 0,47$). The only assumption violated was related to the normal distribution, this will be checked by doing a robustness check, so for now, a multiple regression can be performed.

The results of the multiple linear regression indicated that the model explained approximately 53% of the variance (Appendix 6) and that the model was a significant predictor of the overall experience, $F(5,126) = 29,895$, $p < 0,001$ (Appendix 7). While four independent variables contributed significantly to the model (Personnel, $B = 0,294$, $p < 0,001$; OtherGuests, $B = 0,105$, $p = 0,048$; MainDish, $B = 0,329$, $p < 0,001$; WaitingTimes, $B = 0,11$, $p = 0,014$), one did not (Interior, $B = 0,085$, $p = 0,116$) (Appendix 5). This does not imply that the interior does not influence the overall experience at all, but in combination with the other variables it does not contribute to the model.

Based on the standardized B values the independent variables can also be ranked according to their importance (Nathans et al., 2012). From most to least important the following order can be found: main dish, personnel, waiting times, other guests and lastly, interior. Striking is that main dish and personnel score much higher than the others (Personnel (B) = 0,333 to WaitingTimes (B) = 0,155). This can also be seen when looking at the correlations that main dish and personnel have with the dependent variable (Appendix 8). Even though the standardized B values allow a ranking order, it should be considered that the IV's have some collinearity amongst them even though the assumption was not violated (Zientek & Thompson, 2006). This means that they still somewhat influence each other, which affects the unstandardized B values.

The final predictive model was:

$$Y = -0,079 + 0,294 \cdot \text{Personnel} + 0,105 \cdot \text{OtherGuests} + 0,329 \cdot \text{MainDish} + 0,085 \cdot \text{Interior} + 0,11 \cdot \text{WaitingTimes}$$

4.2 Robustness check

As our data showed to be somewhat skewed to the right, a robustness check was performed to ensure the validity of our outcome. This check was performed by carrying out a second multiple linear regression analysis.

The data was transformed (Ov_Exp_4) in a way that changed the distribution so that a normal distribution could be assumed (Appendix 11: Skewness = 0,81). The other assumptions were tested again to ensure that none of them were violated. All assumptions were met, so the regression analysis could be carried out.

The results of the second regression indicated that 45% of the variance could be explained by the model (Appendix 13). Also, the model showed to be, again, a significant predictor of the overall experience, $F(5, 126) = 21,628$, $p < 0,001$ (Appendix 14). This allows us to assume that the first model is indeed a significant predictor. Next, a closer look was taken at the beta coefficients to determine any changes in the importance or contribution of the independent values (Appendix 12). Whereas in the first regression the significance of the behavior of other guests was debatable given the skewed data set (Sig = 0,048), now the p-value decreased to 0,027. This implies that their behavior is certainly contributing significantly to the model.

The final predictive model of the robustness check was:

$$Y = 0,42 + 0,197 \cdot \text{Personnel} + 0,098 \cdot \text{OtherGuests} + 0,214 \cdot \text{MainDish} + 0,058 \cdot \text{Interior} + 0,1 \cdot \text{WaitingTimes}$$

A closer look can also be taken at the change in the contribution and the importance of the independent variables. It can be seen that the contribution of all independent variables decreased (Appendix 12), while the importance of the behavior of other guests and the overall waiting times increased. This means that these variables became more important within the model.

To conclude, our transformed data with a normal distribution showed to have the same overall outcome as the initial data. Both are significant predictors of the dependent variables, for both the analyses the independent variables seem to have a significant contribution to the model – except for the restaurant's interior- and the order of importance remained the same.

This comparison has shown that the initial, non-recoded data can be used for further investigation.

4.3 Experiment

An experiment was executed to determine the influence of the order of posing questions. Some of the respondents started by ranking their overall experience, while others first had to rank the independent variables. This was done randomly. The two groups were compared based on their means and regression equations. First, the group that started of ranking their overall experience will be examined (group A). The overall mean of this group was 1,92; indicating that the average ranking of the overall experience was about positive (Appendix 18). The model showed to be a significant predictor of the model $F(5, 56) = 8,090$, $p < 0,001$ (Appendix 19) which explained about 38% of the variance of the model (Appendix 20). Their predictive model is as followed:

$$Y = 0,364 + 0,286 \cdot \text{Personnel} + 0,8 \cdot \text{OtherGuests} \cdot 0,255 \cdot \text{MainDish} + 0,057 \cdot \text{Interior} + 0,015 \cdot \text{WaitingTimes}$$

The only two independent variables contributing significantly to the model are the service of the personnel and the taste of the main dish (Appendix 21). However, as the sample size is about 50% of the initial sample size; these outcomes are not very much reliable. Also, a normal distribution cannot be assumed (Appendix 21: Skewness = 1,87) Therefore this analysis and the following will only be used to determine the differences in the ranking of the overall experience and the importance of the independent variables.

The second group (B) can be defined by starting off with ranking their independent variables. With a mean of 2,2, it can be said that this group is slightly less positive than the previous group (Appendix 24). However, the difference is very small and thus an independent t-test was performed to examine whether this difference is significant or not. The test showed that the means do not significantly differ from each other (Appendix 23: Sig. (2-tailed) = 0,059). About 64% of the variance in the model can be accounted for (Appendix 26). Also, this model showed as well to be a significant predictor of the overall experience: $F(5, 64) = 24,022$, $p < 0,001$ (Appendix 25). The predictive model is as followed:

$$Y = -,36 + 0,28 \cdot \text{Personnel} + 0,109 \cdot \text{OtherGuests} + 0,339 \cdot \text{MainDish} + 0,119 \cdot \text{Interior} + 0,223 \cdot \text{WaitingTimes}$$

When we compare these two groups many differences can be identified. One of the very few similarities, though, is that they are both significant predictors of the model. However, group B had a much higher percentage that accounted for the variance of the model (A: 38% vs B: 64%). When comparing the predictive models, one can see that four out of five independent variables contribute differently. Their contribution to the overall experience increased or decreased even though the correlations between the independent variables and the dependent variable remained the same. Lastly, the importance of the independent variables differed from group A to group B. For group A the

order is as followed: service of the personnel, taste of the main dish, the behavior of other guests, the restaurant's interior and then the waiting times. For group B the order is quite different: it starts off with the main dish, then the overall waiting times, the service of the personnel, the interior and it ends with the behavior of other guests.

These differences imply that for future research the consequences of the order of posing questions should be further examined.

5. DISCUSSION

Whenever customers visit a restaurant, they will encounter touch points that influence their experience. These touch points are moments of contact between the customer and the company and are largely present in the service sector, and therefore in restaurant settings. The aim of this paper was to examine the influence of various touch points on the overall customer experience in a restaurant setting. A survey was conducted that provided insights in the overall restaurant experiences of customers. These customers also ranked the impression of five different independent variables -touch points-; the service of the personnel, the behavior of other guests, the taste of the main dish, the restaurant's interior and the overall waiting times. Their responses were used to carry out a multiple linear regression analysis that provided a predictive model and that showed the contribution of the independent variables and the relative importance of the five touch points.

The results of the multiple regression indicated that 53% of the variance in the model could be accounted for. Also, the model turned out to be a significant predictor of the overall experience, even when the data is somewhat skewed to the right (checked for by performing a second regression analysis). The final predictive model looks as follow:

$$Y = -0,079 + 0,294 \cdot \text{Personnel} + 0,105 \cdot \text{OtherGuests} + 0,329 \cdot \text{MainDish} + 0,085 \cdot \text{Interior} + 0,11 \cdot \text{WaitingTimes}$$

Although the restaurant's interior makes no significant contribution to the model, it is still incorporated in the model as it still has an influence on the overall experience, just not combined with the other independent variables. The contribution of the behavior of other guests turned out to be on the edge of significance ($p = 0,048$). However, for the second analysis this p-value dropped to 0,027. This implies that the contribution of the behavior of other guests is certainly significant.

Lastly, based on the standardized beta coefficients, it can be stated that the service of the personnel and the taste of the main dish provide the biggest contribution to the overall experience and are much more important than the other three independent variables.

Thus, the research question 'How do touch points influence the overall customer experience in a restaurant?' can now be answered while looking at the output SPSS gave for the initial analysis. The touch points referred to in the research question can be further defined as the service of the personnel, the behavior of other guests, the taste of the main dish, the interior of the restaurant and the overall waiting times. In appendix 5 the 'coefficients'-table can be found. This table shows the unstandardized B coefficients. This coefficient explains the increase in Y for 1 unit of X. So, for example, as the value for personnel increases from 3 to 4, the overall experience value will increase with 0,294. All independent variables have a

positive B value, which implies a positive relationship between the independent variable and the dependent variable.

So, how do touch points influence the overall customer experience in a restaurant? All touch points examined in this paper seem to have a positive influence on the overall experience. While the service of the personnel and the taste of the main dish have the biggest contribution, the restaurant's interior does not contribute significantly in combination with this set of independent variables and in the end, it can also be stated with certainty that the behavior of guests contributed significantly to the model.

6. RECOMMENDATIONS

The conducted research contributed to the existing literature by examining the influence of various touch points on the customer experience in a restaurant setting. A lot of research has already been conducted on the customer experience in the hospitality sector; however, limited attention has been given to the influence of touch points on the customer experience in a restaurant setting. This implied the necessity for further research in the direction of customer experience and more specifically, the influence of touch points for this matter. This paper tried to provide an introductory base in the field of touch points present in restaurants. As shown in figure 1 the present research was based on the models proposed by Stein and Ramaseshan (2016), Andersson and Mossberg (2004) and Gustafsson, Öström, Johansson and Mossberg (2006). Their models formed the basis for determining the five independent variables – touch points – and laid the groundwork for the research. By examining these independent variables a contribution was delivered to the literature of touch points and therefore, indirectly, to that of customer experience management. It is of essence for companies to understand customer's experiences and their journey (Lemon & Verhoef, 2016). As previous research has shown that a proper customer experience will contribute to customer loyalty (Pullman & Gross, 2004), determine customer's confidence in a company (Flanagan, Johnston, & Talbot, 2005) and in the end will influence customer satisfaction (Liljander & Strandvik, 1997). Identification of the influence of touch points will therefore assist a firm to increase their customer satisfaction along with its profits. With the help of the research conducted in this paper, managers can now focus on designing better future customer experiences. These newly designed customer experiences will also have their influence on the perception of the brand by the customer and has therefore the ability of aligning the brand perception and brand expression in order to increase customer loyalty which will lead to improved results at the bottom line. Despite the extensive literature available on customer experiences and touch points in the service sector, a need for further research rises to fully understand the impact of touch points in the hospitality sector, and more specifically, restaurants. It is of importance that future research should consider both theory and practice as restaurants are working with humans, which are never fully predictable. First, a customer journey map should be compiled, including general touch points present in a restaurant. Interesting would be to see which touch points occur in each restaurant setting so that a more extensive and all-inclusive research can be performed. This also allows the touch points to be described and examined at a more detailed level. The touch points investigated in this paper are rather superficial to provide an introduction of the topic, but as more research is conducted in this field, these touch points should be more elaborated. An example is the touch point 'the restaurant's interior'. This touch point could be further subdivided into the accessories used to decorate the

space, the layout of the restaurant (how many tables are located in the restaurant? / how close are the tables to one another?), the hygiene, the usages of candles and other forms of lighting, and so forth. This implies a need for more extensive research as this might likely influence the outcome of a regression analysis. Lastly, theoretical models proposed in papers should be supported by case studies to compare the theoretical model to the actual output.

7. LIMITATIONS

As research is being conducted, limitations arise. Thus, looking back at the research conducted, some choices had to be made that limited or influenced the outcome.

Four main limitations can be distinguished, first of all, the superficiality of the independent variables. Due to time restrictions, a decision was made to focus on five generally defined touch points. However, this might have influenced the outcome as we only asked respondents to rank, for example, their overall impression of the restaurant's interior while this can be further subdivided into different aspects. Subsequently, the restaurant setting is not narrowed down to a specific event, diner, lunch, or any other occasion. This might make a difference, as for different settings, different touch points might increase in importance (Andersson & Mossberg, 2004). The third limitation is related to the analysis of the data. For the sake of an increased sample size, the Dutch responses were transformed into English responses. In general, this should not cause any problem since exactly the same questions were asked; however, the Dutch respondents might have interpreted

questions differently from the English respondents due to another translation of words or because of any other reason. This should be considered when looking at the results. Lastly, the majority of the respondents were in the age group of 15-24. This might have influenced the outcome as well, since it is plausible that people in another age group might value the touch points differently. This last phenomenon, the influence of the restaurant setting and the impact of increasingly detailed touch points might be starting points for future research as it would be interesting how these differences might influence the outcome.

Finally, even though a robustness check was employed, the outcome must be treated with care. Although the robustness check confirmed the significant prediction of the initial analysis, attention should be paid to the fact that the contribution of all independent variables decreased, while the importance of the behavior of other guests and overall waiting times increased. This implies a need for further investigation to account for the rightly skewed data from the initial analysis. Also, an experiment was conducted to determine the influence of the order of posing questions. When comparing the means of both groups, the result indicated that no significant difference could be found. However, when comparing the regression equations, one sees the clear difference in the contribution of the independent variables. Wondering where these differences come from, a complementary study should be set up to clarify the influence of the order in which questions are posed.

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9. APPENDIX

Appendix 1 Survey flow

| | |
|---|--|
| Branch: New Branch | |
| If | |
| If ---Nederlands op de volgende pagina--- Thanks for taking time to fill in this survey! This survey... Survey in English Is Selected | |
| Standard: English introduction (5 Questions) | |
| BlockRandomizer: 2 - Evenly Present Elements | |
| Standard: English survey (10 Questions) | |
| Standard: English - overall experience (1 Question) | |
| Standard: Engels algemeen (3 Questions) | |
| EndSurvey: | |

Appendix 2 Survey questions

---Nederlands op de volgende pagina---

Thanks for taking time to fill in this survey!

This survey is conducted on behalf of the University of Twente and will help me to find out how certain aspects during a restaurant visit will influence your experience. By answering some questions I will be able to give recommendations to restaurant managers and you might have a better experience next time!

The time needed to fill in this survey will be less than 5 minutes.

There is no right or wrong answer; it is about your (anonymous) experience.

P.s. Have you visited multiple restaurants recently? Feel free to fill in the survey multiple times!

- Survey in English (1)
- Door naar de Nederlandse enquête (2)

Do you like to go out for dinner?

- Definitely yes (1)
- No (2)
- No answer (3)

What's your favorite type of food?

- Dutch (1)
- Mexican (2)
- Italian (3)
- Sushi (4)
- Chinees (5)
- Greek (6)
- Something else (7)

When was the last time you went out for dinner?

- Januari 2019 (1)
- Februari 2019 (2)
- March 2019 (3)
- April 2019 (4)
- May 2019 (5)
- Somewhere in 2018 (6)
- Somewhere in 2019 (7)
- Don't remember exactly (8)

1/7 What was your impression about the personnel's service during your last visit?

- Very positive (1)
- Positive (2)
- Slightly positive (3)
- Neutral (4)
- Slightly negative (5)
- Negative (6)
- Very negative (7)

- Does not apply (8)

Comments, examples

2/7 How did the behavior of other guests influence your experience?

- Very positive (1)
- Positive (2)
- Slightly positive (3)
- Neutral (4)
- Slightly negative (5)
- Negative (6)
- Very negative (7)
- Does not apply (8)

Comments, examples

3/7 What was your impression about the taste of the main dish?

- Very positive (1)
- Positive (2)
- Slightly positive (3)
- Neutral (4)
- Slightly negative (5)
- Negative (6)
- Very negative (7)
- Does not apply (8)

Comments, examples

4/7 What was your overall impression about the restaurant's interior?

- Very positive (1)
- Positive (2)
- Slightly positive (3)
- Neutral (4)
- Slightly negative (5)
- Negative (6)
- Very negative (7)
- Does not apply (8)

Comments, examples

5/7 What was your impression about the overall waiting times?

- Very positive (1)
- Positive (2)
- Slightly positive (3)
- Neutral (4)
- Slightly negative (5)
- Negative (6)
- Very negative (7)
- Does not apply (8)

Comments, examples

How was your overall experience with your last restaurant visit?

- Very positive (1)
- Positive (2)
- Slightly positive (3)
- Neutral (4)
- Slightly negative (5)
- Negative (6)
- Very negative (7)
- Does not apply (8)

6/7 What is your gender?

- ☐ Male (1)
- ☐ Female (2)
- ☐ Other (3)
- ☐ I prefer not to answer (4)

7/7 What is your age?

- ☐ 15-24 (1)
- ☐ 25-34 (2)
- ☐ 35-44 (3)
- ☐ 45-54 (4)
- ☐ 55-64 (5)
- ☐ 65-74 (6)
- ☐ 75+ (7)
- ☐ I prefer not to answer (8)

Q40

Other comments?

Graphs and Tables related to SPSS output

Appendix 3 Distribution of the data

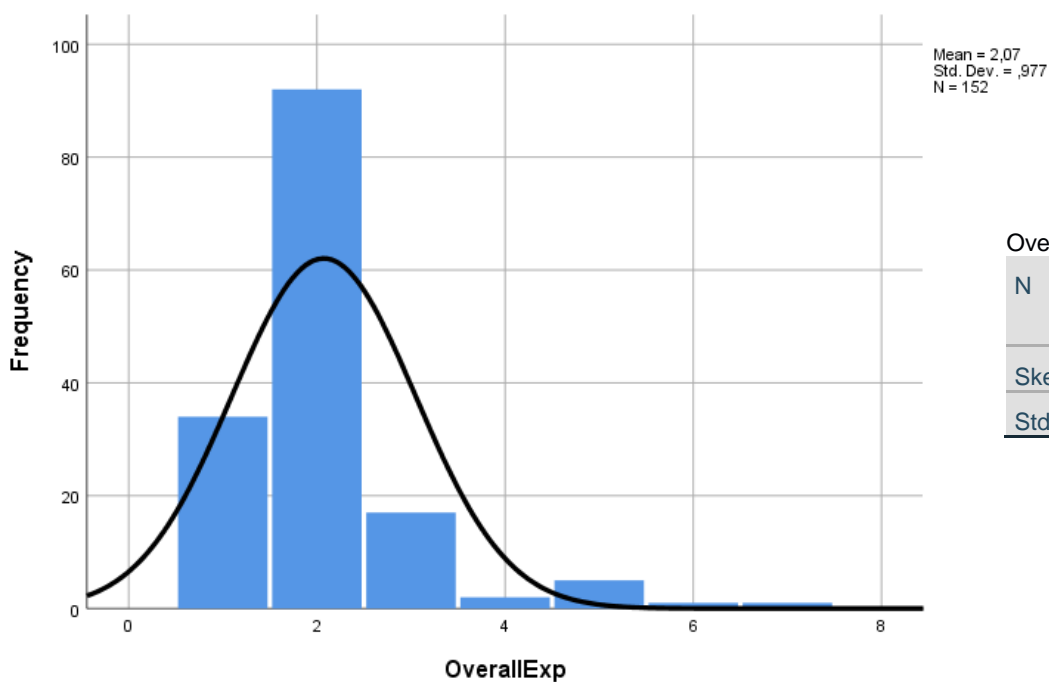
Age * Gender Cross tabulation

Count

| | | Gender | | |
|-------|-------|--------|--------|-------|
| | | Male | Female | Total |
| Age | 15-24 | 18 | 47 | 65 |
| | 25-34 | 7 | 19 | 26 |
| | 35-44 | 4 | 9 | 13 |
| | 45-54 | 7 | 19 | 26 |
| | 55-64 | 6 | 10 | 16 |
| | 65-74 | 2 | 2 | 4 |
| Total | | 44 | 106 | 150 |

Overall Experience

Appendix 4 OvExp Frequency Histogram + Statistics



Statistics

| OverallExp | | |
|------------------------|---------|-------|
| N | Valid | 152 |
| | Missing | 0 |
| Skewness | | 2,097 |
| Std. Error of Skewness | | ,197 |

Appendix 5 OvExp Coefficients

| | | Coefficients ^a | | | | | | |
|-------|----------------|-----------------------------|------------|---------------------------|-------|------|-------------------------|-------|
| | | Unstandardized Coefficients | | Standardized Coefficients | | | Collinearity Statistics | |
| Model | | B | Std. Error | Beta | t | Sig. | Tolerance | VIF |
| 1 | (Constant) | -,079 | ,215 | | -,366 | ,715 | | |
| | 1.Personnel | ,294 | ,061 | ,333 | 4,855 | ,000 | ,772 | 1,296 |
| | 2.OtherGuests | ,105 | ,053 | ,128 | 1,994 | ,048 | ,885 | 1,130 |
| | 3.Maindish | ,329 | ,061 | ,381 | 5,412 | ,000 | ,733 | 1,364 |
| | 4.Interior | ,085 | ,053 | ,111 | 1,585 | ,116 | ,738 | 1,355 |
| | 5.Waitingtimes | ,110 | ,044 | ,155 | 2,500 | ,014 | ,940 | 1,064 |

a. Dependent Variable: OverallExp

Appendix 6 OvExp Model Summary

| Model Summary ^b | | | | |
|----------------------------|-------------------|----------|-------------------|----------------------------|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | ,737 ^a | ,543 | ,524 | ,644 |

a. Predictors: (Constant), 5.Waitingtimes, 4.Interior, 2.OtherGuests, 1.Personnel, 3.Maindish

b. Dependent Variable: OverallExp

Appendix 7 OvExp ANOVA

| ANOVA ^a | | | | | | |
|--------------------|------------|----------------|-----|-------------|--------|-------------------|
| Model | | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 62,067 | 5 | 12,413 | 29,895 | ,000 ^b |
| | Residual | 52,319 | 126 | ,415 | | |
| | Total | 114,386 | 131 | | | |

a. Dependent Variable: OverallExp

b. Predictors: (Constant), 5.Waitingtimes, 4.Interior, 2.OtherGuests, 1.Personnel, 3.Maindish

Appendix 8 OvExp Correlations

Correlations

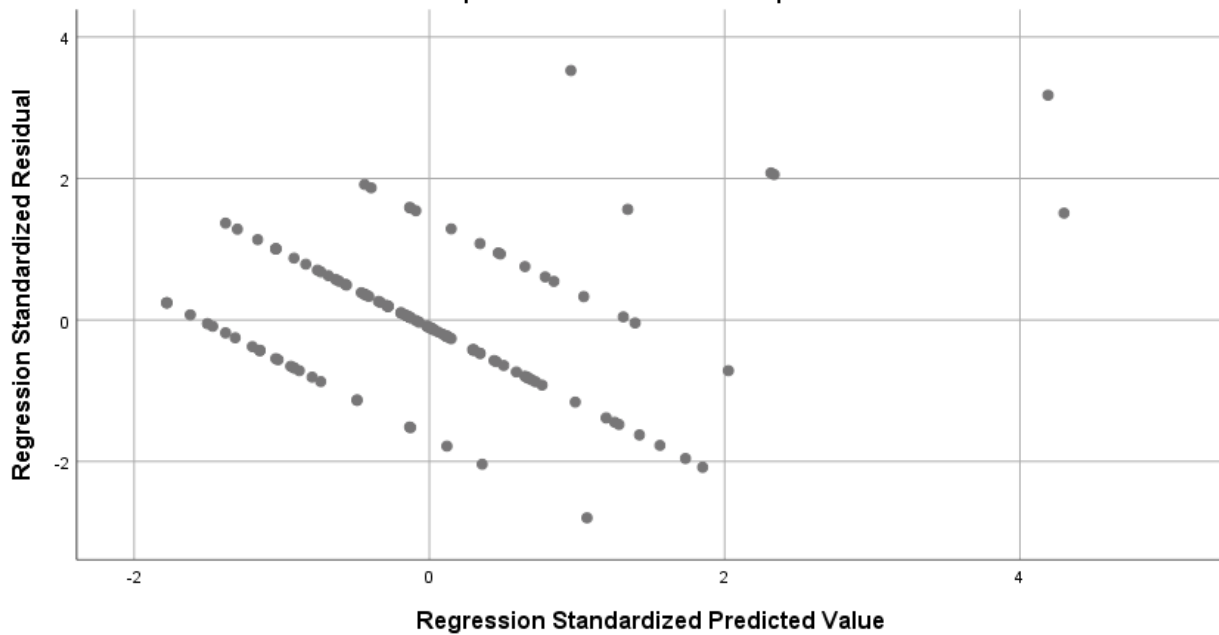
Pearson Correlation

| | OverallExp | 1.Personnel | 2.OtherGuests | 3.Maindish | 4.Interior | 5.Waitingtimes |
|----------------|------------|-------------|---------------|------------|------------|----------------|
| OverallExp | 1,000 | ,572 | ,316 | ,575 | ,430 | ,291 |
| 1.Personnel | ,572 | 1,000 | ,297 | ,342 | ,298 | ,240 |
| 2.OtherGuests | ,316 | ,297 | 1,000 | ,119 | ,231 | ,120 |
| 3.Maindish | ,575 | ,342 | ,119 | 1,000 | ,469 | ,083 |
| 4.Interior | ,430 | ,298 | ,231 | ,469 | 1,000 | ,074 |
| 5.Waitingtimes | ,291 | ,240 | ,120 | ,083 | ,074 | 1,000 |

Appendix 9 OvExp Scatterplot

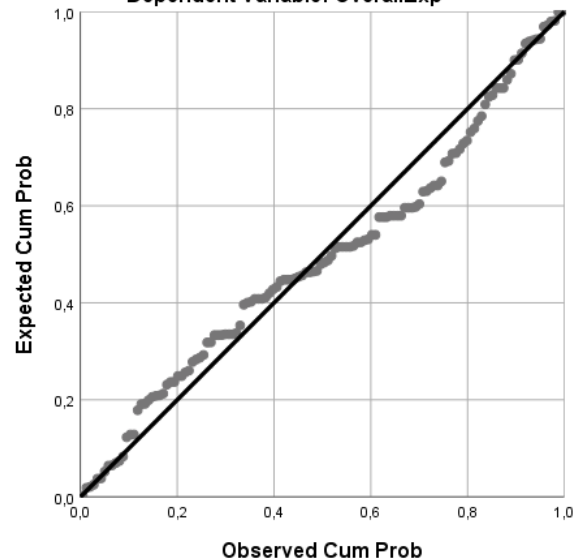
Scatterplot

Dependent Variable: OverallExp



Normal P-P Plot of Regression Standardized Residual

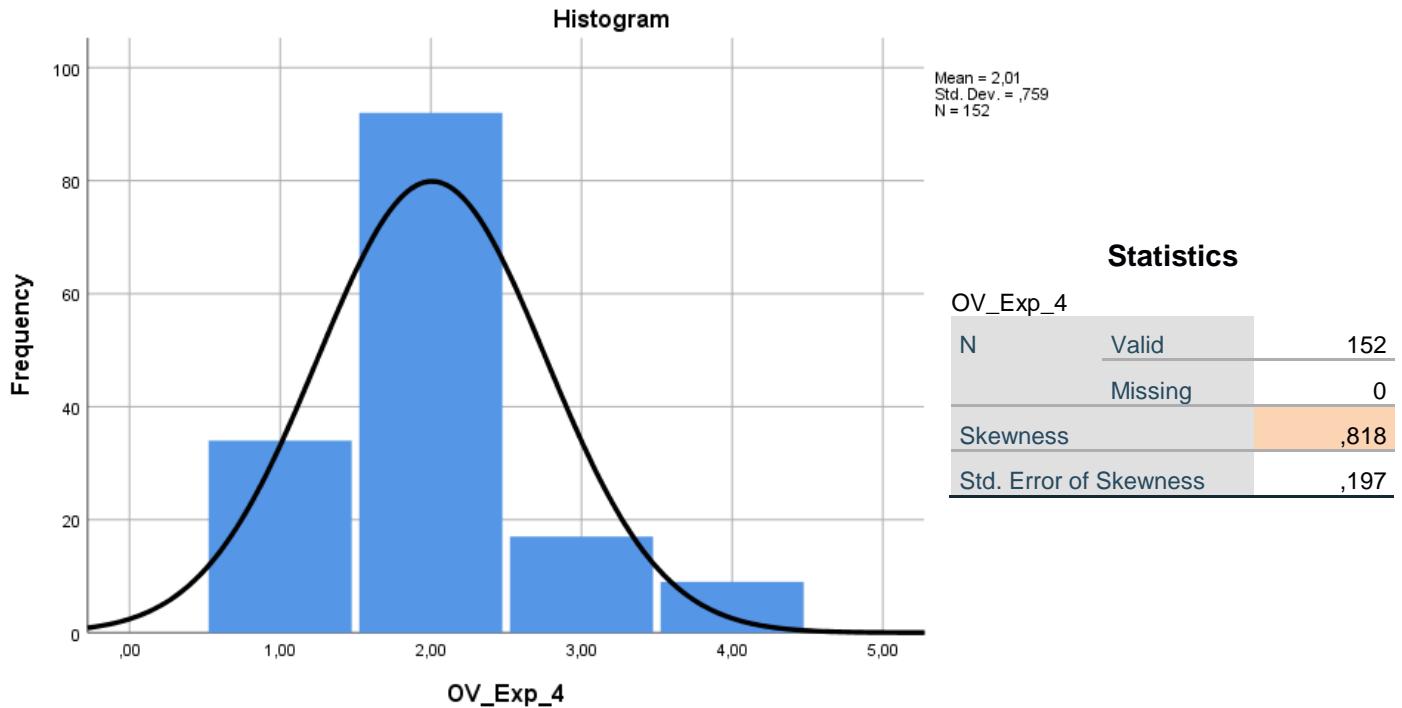
Dependent Variable: OverallExp



Appendix 10 OvExp P-plot

Robustness check

Appendix 11 Ov_Exp_4 Frequency Histogram + Statistics



Appendix 12 Ov_Exp_4 Coefficients

| Coefficients ^a | | | | | | | | |
|---------------------------|----------------|-----------------------------|------------|---------------------------|-------|------|-------------------------|-------|
| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | Collinearity Statistics | |
| | | B | Std. Error | Beta | | | Tolerance | VIF |
| 1 | (Constant) | ,420 | ,178 | | 2,353 | ,020 | | |
| | 1.Personnel | ,197 | ,050 | ,291 | 3,916 | ,000 | ,772 | 1,296 |
| | 2.OtherGuests | ,098 | ,044 | ,156 | 2,243 | ,027 | ,885 | 1,130 |
| | 3.Maindish | ,214 | ,051 | ,324 | 4,241 | ,000 | ,733 | 1,364 |
| | 4.Interior | ,058 | ,044 | ,099 | 1,301 | ,196 | ,738 | 1,355 |
| | 5.Waitingtimes | ,100 | ,036 | ,186 | 2,759 | ,007 | ,940 | 1,064 |

a. Dependent Variable: Ov_Exp_4

Appendix 13 Ov_Exp_4 Model Summary

| Model Summary ^b | | | | | |
|----------------------------|-------------------|----------|-------------------|----------------------------|---------------|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
| 1 | ,680 ^a | ,462 | ,441 | ,53490 | ,608 |

a. Predictors: (Constant), 5.Waitingtimes, 4.Interior, 2.OtherGuests, 1.Personnel, 3.Maindish

b. Dependent Variable: Ov_Exp_4

Appendix 14 Ov_Exp_4 ANOVA

| ANOVA ^a | | | | | | |
|--------------------|------------|----------------|-----|-------------|--------|-------------------|
| Model | | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 30,941 | 5 | 6,188 | 21,628 | ,000 ^b |
| | Residual | 36,051 | 126 | ,286 | | |
| | Total | 66,992 | 131 | | | |

a. Dependent Variable: Ov_Exp_4

b. Predictors: (Constant), 5.Waitingtimes, 4.Interior, 2.OtherGuests, 1.Personnel, 3.Maindish

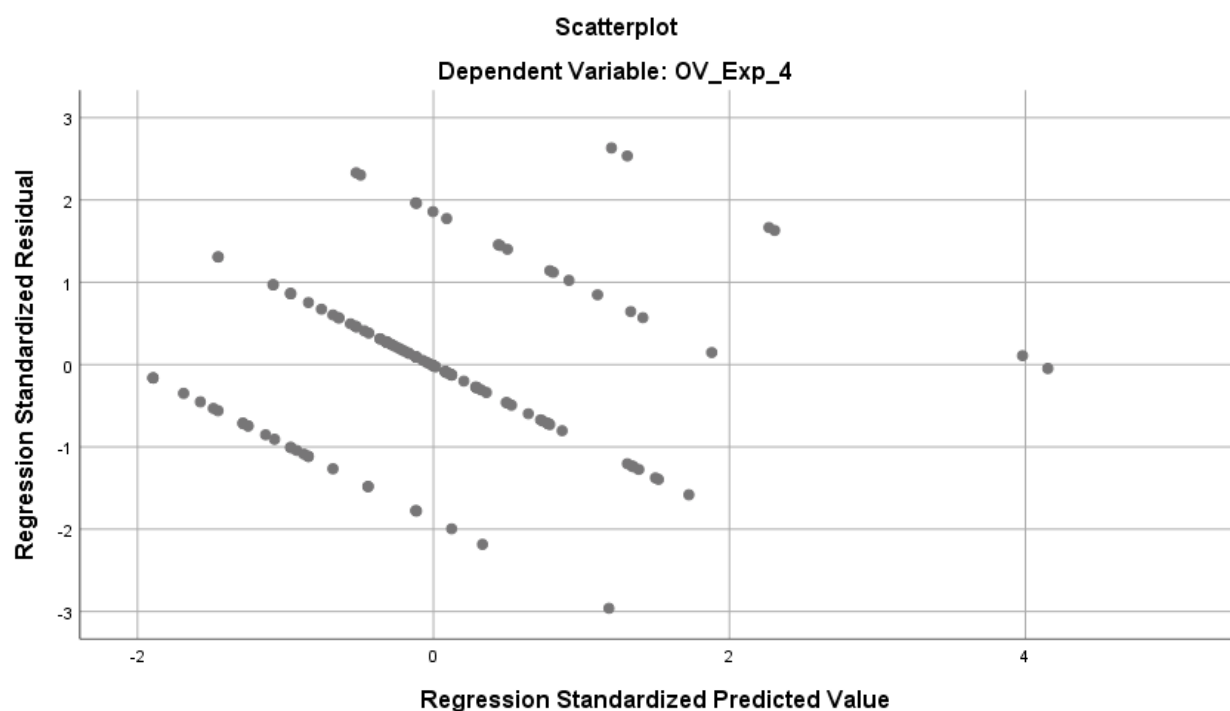
Appendix 15 Ov_Exp_4 Correlations

Correlations

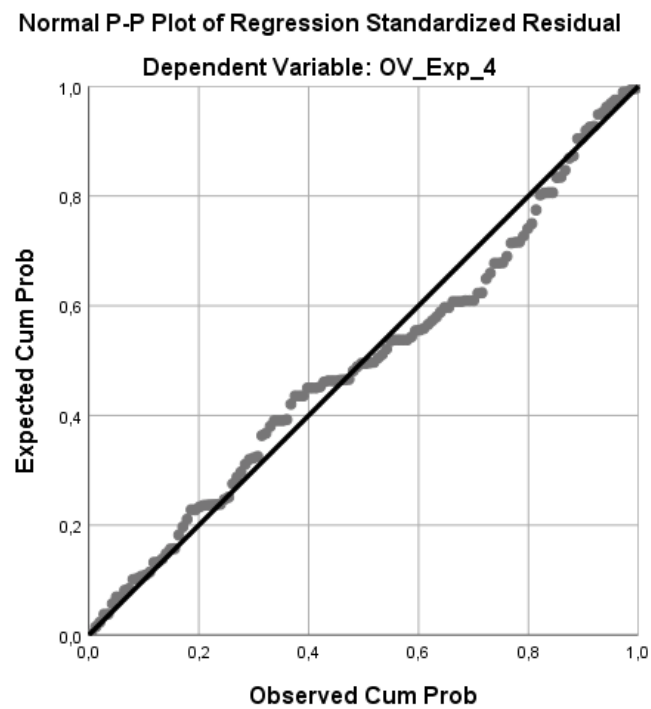
Pearson Correlation

| | Ov_Exp_4 | 1.Personnel | 2.OtherGuests | 3.Maindish | 4.Interior | 5.Waitingtimes |
|----------------|----------|-------------|---------------|------------|------------|----------------|
| Ov_Exp_4 | 1,000 | ,522 | ,326 | ,504 | ,387 | ,309 |
| 1.Personnel | ,522 | 1,000 | ,297 | ,342 | ,298 | ,240 |
| 2.OtherGuests | ,326 | ,297 | 1,000 | ,119 | ,231 | ,120 |
| 3.Maindish | ,504 | ,342 | ,119 | 1,000 | ,469 | ,083 |
| 4.Interior | ,387 | ,298 | ,231 | ,469 | 1,000 | ,074 |
| 5.Waitingtimes | ,309 | ,240 | ,120 | ,083 | ,074 | 1,000 |

Appendix 16 Ov_Exp_4 Scatterplot

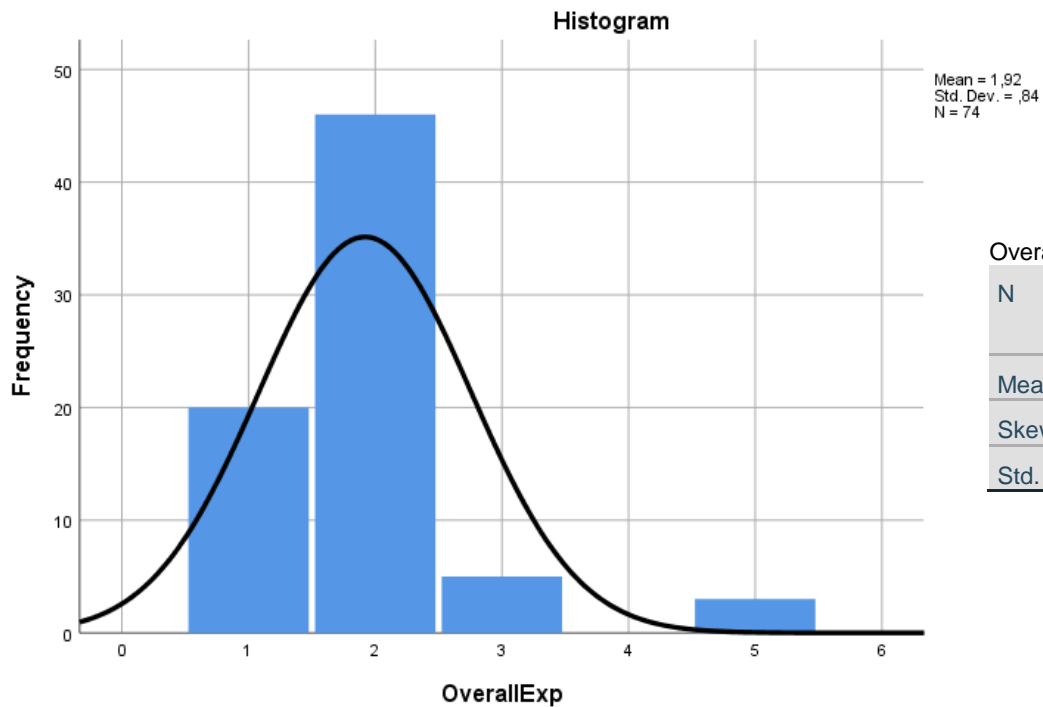


Appendix 17 Ov_Exp_4 P-plot



Experiment – Group A

Appendix 18 Group A Frequency Histogram + Statistics



Statistics

| OverallExp | | |
|------------------------|---------|-------|
| N | Valid | 74 |
| | Missing | 0 |
| Mean | | 1,92 |
| Skewness | | 1,866 |
| Std. Error of Skewness | | ,279 |

Appendix 19 Group A ANOVA

| ANOVA ^a | | | | | | |
|--------------------|------------|----------------|----|-------------|-------|-------------------|
| Model | | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 15,348 | 5 | 3,070 | 8,090 | ,000 ^b |
| | Residual | 21,248 | 56 | ,379 | | |
| | Total | 36,597 | 61 | | | |

a. Dependent Variable: OverallExp

b. Predictors: (Constant), 5.Waitingtimes, 1.Personnel, 2.OtherGuests, 4.Interior, 3.Maindish

Appendix 20 Group A Model Summary

| Model Summary ^b | | | | |
|----------------------------|-------------------|----------|-------------------|----------------------------|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | ,648 ^a | ,419 | ,368 | ,616 |

a. Predictors: (Constant), 5.Waitingtimes, 1.Personnel, 2.OtherGuests, 4.Interior, 3.Maindish

b. Dependent Variable: OverallExp

Appendix 21 Group A Coefficients

| Coefficients ^a | | | | | | |
|---------------------------|----------------|-----------------------------|------------|---------------------------|-------|------|
| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | ,364 | ,311 | | 1,171 | ,247 |
| | 1.Personnel | ,286 | ,081 | ,413 | 3,542 | ,001 |
| | 2.OtherGuests | ,080 | ,084 | ,107 | ,947 | ,348 |
| | 3.Maindish | ,255 | ,124 | ,242 | 2,055 | ,045 |
| | 4.Interior | ,057 | ,081 | ,082 | ,709 | ,481 |
| | 5.Waitingtimes | ,015 | ,061 | ,027 | ,253 | ,801 |

a. Dependent Variable: OverallExp

Appendix 22 Independent samples test – Levene’s test for Equality of Variances

Independent Samples Test

Levene's Test for Equality of Variances: Sig.

| | | |
|------------|-------------------------|------|
| OverallExp | Equal variances assumed | ,108 |
|------------|-------------------------|------|

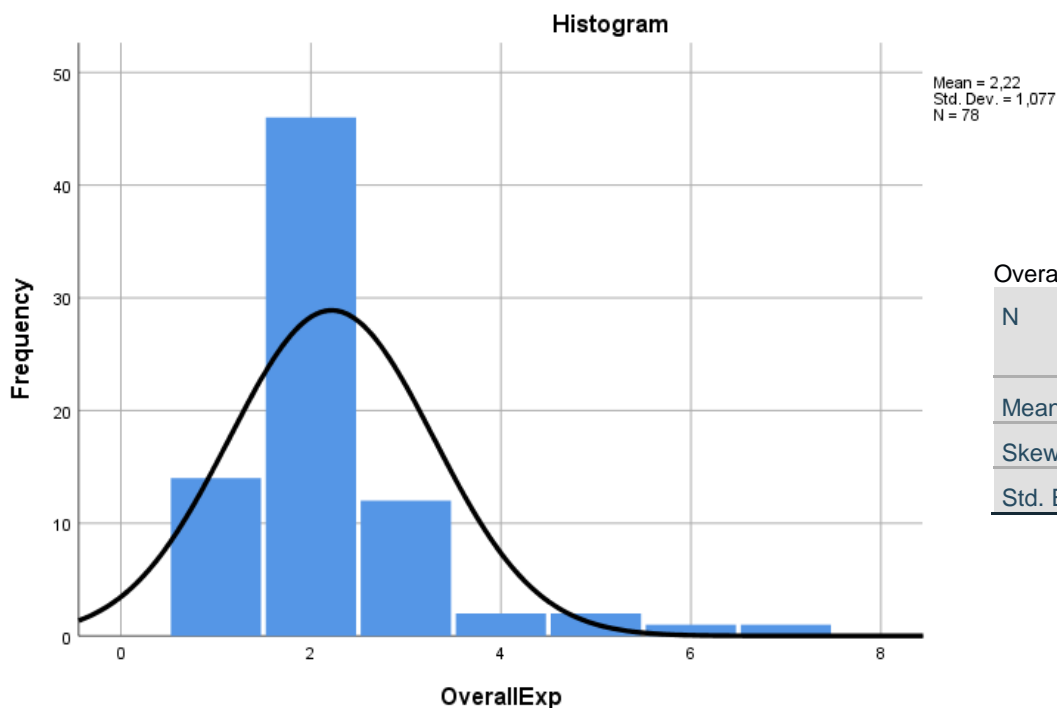
Appendix 23 Independent samples test – t-test for equality of means

t-test for Equality of Means: Sig. (2-tailed)

| | | |
|------------|-----------------------------|------|
| OverallExp | Equal variances assumed | ,059 |
| | Equal variances not assumed | ,058 |

Experiment – Group B

Appendix 24 Group B Frequency Histogram + Statistics



Statistics

| | | |
|------------------------|---------|-------|
| OverallExp | | |
| N | Valid | 78 |
| | Missing | 0 |
| Mean | | 2,22 |
| Skewness | | 2,111 |
| Std. Error of Skewness | | ,272 |

Appendix 25 Group B ANOVA

| ANOVA ^a | | | | | | |
|--------------------|------------|----------------|----|-------------|--------|-------------------|
| Model | | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 49,059 | 5 | 9,812 | 24,022 | ,000 ^b |
| | Residual | 26,141 | 64 | ,408 | | |
| | Total | 75,200 | 69 | | | |

a. Dependent Variable: OverallExp

b. Predictors: (Constant), 5.Waitingtimes, 3.Maindish, 2.OtherGuests, 4.Interior, 1.Personnel

Appendix 26 Group B Model Summary

| Model Summary ^b | | | | |
|----------------------------|-------------------|----------|-------------------|----------------------------|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | ,808 ^a | ,652 | ,625 | ,639 |

a. Predictors: (Constant), 5.Waitingtimes, 3.Maindish, 2.OtherGuests, 4.Interior, 1.Personnel

b. Dependent Variable: OverallExp

Appendix 27 Group B Coefficients

| Coefficients ^a | | | | | | |
|---------------------------|----------------|-----------------------------|------------|---------------------------|--------|------|
| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | -,360 | ,289 | | -1,249 | ,216 |
| | 1.Personnel | ,280 | ,094 | ,270 | 2,966 | ,004 |
| | 2.OtherGuests | ,109 | ,067 | ,126 | 1,626 | ,109 |
| | 3.Maindish | ,339 | ,072 | ,426 | 4,691 | ,000 |
| | 4.Interior | ,119 | ,069 | ,151 | 1,714 | ,091 |
| | 5.Waitingtimes | ,223 | ,065 | ,280 | 3,413 | ,001 |

a. Dependent Variable: OverallExp