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## Article

# Influence of servicescape on behavioural intentions through mediation and moderation effects: A study on Malaysia's full-service restaurants

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## MARKETING | RESEARCH ARTICLE

# Influence of servicescape on behavioural intentions through mediation and moderation effects: A study on Malaysia's full-service restaurants

Muhammad Asghar Ali<sup>1\*</sup>, Ding Hooi Ting<sup>2</sup>, Lina Salim<sup>2</sup> and Muhammad Ahmad-Ur-Rehman<sup>3</sup>

**Abstract:** Restaurant servicescape domain consists of physical and social aspects. Surprisingly, both aspects have been studied independently. This study aims to investigate the unanimous effects of servicescape on consumer behaviour in a full-service context (Malaysia) through the mediating and moderating effects of customer satisfaction and perceived crowding. Online survey method was used for data collection. 300 respondents completed and returned the questionnaire. Only 200 properly filled responses were subjected to data analysis using the Smart PLS-SEM technique. Based on the results, servicescape (3<sup>rd</sup> order construct) directly influenced eWOM and repurchase intentions. An indirect effect through partial mediation of customer satisfaction was also found. Furthermore, perceived crowding positively moderated the relationship between servicescape and customer satisfaction. Limited number of studies have investigated the holistic effects of



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### PUBLIC INTEREST STATEMENT

The full-service restaurant industry presents an important sector of the Malaysian service industry. Given this sector's contribution to the national exchequer, it is important to understand how the physical and social aspects of Servicescape influence consumer dining experience and post-purchase behavioural intentions. This study investigates the interrelationship between servicescape and behavioural intentions through moderating and mediating effect of perceived crowding and customer satisfaction respectively. The statistical evidence supported a holistic view of Servicescape has important implications on consumer behaviour in the full-service restaurant context (Malaysia). Managers should incorporate social and physical Servicescape to develop their policies and strategies to appease customers. For instance, managers can manipulate restaurant design, layout, ambient conditions, employees and customer's appearance and behaviour to influence other consumer's service evaluation and post-purchase behaviour. Similarly, the level of crowdedness can be maintained using different strategies to make the restaurant a busy space to attract and influence the consumption experience of dinners.

servicescape on consumption evaluation and consumer behaviour. This is the first study on full-service restaurant context, investigating servicescape as a higher-order construct. Full-service restaurants need to be conscious of servicescape elements to maintain an acceptable level of crowding and to positively influence consumer behaviour.

**Subjects:** Hospitality Marketing; Marketing; Services Marketing

**Keywords:** servicescape; perceived crowding; social servicescape; physical servicescape; full-service restaurants; eWOM; re-purchase intentions

## 1. Introduction

Understanding consumer experience is pivotal for the long-term success and survival of many organisations, specifically, those that focus on both hedonic and utilitarian services such as restaurants and hotels. The restaurant industry in Malaysia has witnessed gradual growth in its contribution to the national income due to a significant pool of active consumers with evolving eating habits and increasing preference to dine out. The annual economic statistics report released by the Department of statistics (2019) revealed that the food and beverage services recorded a gross output value of RM82.8 billion in 2017 compared to only RM66.4 billion in 2015; with an annual increment of 11.7%. Such growth and competitiveness were influenced by customer behavioural intentions, with profound effects on financial resources and the long-term survival of the organization (González-Soriano et al., 2020). Therefore, it is important to understand how consumer behavioural intentions (re-purchase and eWOM) are shaped as a result of service experience in a full-service restaurant context in Malaysia.

The environmental factors of a restaurant (also known as servicescape) can influence consumer experience and their behavioural intentions (as consumers do not only enjoy the food but also appreciating the restaurant environment). Current trends have witnessed a growing body of research on the outcomes of social servicescape in the hospitality industry which is an expansion from Bitner (1992) concept of physical servicescape. Both concepts emphasise different aspects of the consumption setting. Bitner's servicescape framework emphasized the tangible aspects (human-made features or physical servicescape) of the service experience. Physical servicescape elements (facility esthetic, ambience, lighting, table setting and layout) have been confirmed to positively influence customer appraisal which in turn influences customer satisfaction in the restaurant context (Ryu & Han, 2010, 2011). W. G. W. G. Kim and Moon (2009) also investigated the physical servicescape consisting of multiple dimensions and confirmed that servicescape can positively influence service quality and pleasure leading to revisit intentions. On the other hand, the social servicescape highlights the social facets of consumers' experience during consumption, specifically when the employees and customers concurrently share the consumption space (Line & Hanks, 2019). Based on the literature, social servicescape acts as a predictor of critical constructs such as purchase intentions, word-of-mouth (WOM), satisfaction and attachment (Jang et al., 2015; Line & Hanks, 2019, 2020; Tombs & Kennedy, 2010). An investigation led by Line and Hanks (2019) on the social aspects of the full-service hotel proposed employee servicescape and customer servicescape as a second-order construct apart from confirming the presence of other (consumers and employees) which positively influences customer satisfaction, word-of-mouth (WOM) and electronic-word-of-mouth (eWOM). The aforementioned studies did not include the physical aspects of servicescape forming a huge gap in the analysis. Hence, we argue that the restaurants should consider both the aspects of servicescape, as tangibles and social servicescape denote the complete representation of a restaurant. Hence, limited empirical studies have been performed on the holistic effects (in a single nomological model) of servicescape on consumer consumption experience and post-purchase behaviour (full-service restaurant context) (Choi & Kandampully, 2019; Mari & Poggesi, 2013; Nilsson & Ballantyne, 2014; Tubillejas-Andrés et al.,

2020). Therefore, this study proposed servicescape as a higher-order construct (supported by first-order and second-order dimensions of a restaurant's physical and human elements).

Customer satisfaction is often defined as “a post-choice evaluative judgment of a specific transaction”(Jahanshahi et al., 2011). Another study defined “satisfaction as a subjective evaluation that is contingent upon the customer's emotions, perceptions, and cognition” (Hallowell, 1996). The effects of customer satisfaction on consumer behavioural intention are also well documented (Abdullah et al., 2018; Park et al., 2019). The Stimulus Organism Response model (S-O-R) was employed in this study. Previous literature has utilized the S-O-R to investigate the indirect effects of servicescape on consumer behaviour through emotions (Bae et al., 2018; Tubillejas-Andrés et al., 2020; Urich & Benkenstein, 2012). According to the literature, an organism is not limited to emotions alone but is also affected by a broader term which includes cognitive aspects of the consumer. It is generally believed that emotions are short-lived and can have a limited effect on consumer's future purchase behaviour. Therefore, the cognitive aspect (satisfaction) needs to be considered. Customer satisfaction has been proven to be a critical component in organisational marketing strategies, where past studies delineated customer satisfaction as an essential connection to bridge the gap between company offerings and customer behavioural outcomes (Bae et al., 2018; Priyo et al., 2019; Rita et al., 2019). However, there is a paucity of studies investigating the mediating mechanism of customer satisfaction (considering emotional and cognitive aspects) in explaining the indirect effects of servicescape on consumer behaviour.

Lastly, the existing models of servicescape have neglected the effects of crowding. Crowdedness is considered as a type of external information source. Social conformity theory posits that the mere presence of other consumers can affect consumer attitude and behaviour. Although crowdedness has been studied in the past decade, it indicated mixed results on consumer behaviour. Some studies focused on the negative aspects of crowding such as anger, disgust, anxiety and intentions to spend less time and money (Bae et al., 2018; Huang et al., 2018; Machleit et al., 2000). Perceived crowding is also reported to affect the stress level as different level of crowding arises at different level of stress (Baker & Wakefield, 2012). Meanwhile, Li and Lee (2009) posited crowding can create positive emotions, excitement and positive purchase behaviour. Based on the literature review, the role of perceived crowding (human crowding) has been overlooked in the context of a restaurant. For instance, a full-service Malaysian restaurant is a place where consumers visit for hedonic and utilitarian consumptions. Although consumers do not interact with other customers, the mere presence of other consumers can create a sense of community and belongingness. Consumers perceive crowdedness as a sign of popularity and preference, hence, they feel more comfortable being part of the group. Similarly, although the role of physical servicescape in explaining consumer behaviour is well documented, different level of crowdedness can either positively or negatively affect consumer service evaluation. Therefore, this study also aims to identify the moderating effects of perceived crowding in explaining the effects of physical and social servicescape on consumer satisfaction. We postulate that restaurant servicescape (social and physical) affecting consumer service evaluation and post-purchase behaviour will be higher with a high level of crowdedness.

In short, the objectives of this study include (1) to investigate the unanimous effects of servicescape (physical, employees and customers) on consumer's behaviour and satisfaction in full-service restaurant context (Malaysia), (2) to determine the association between satisfaction and behavioural intentions (re-purchase and eWOM), (3) to identify the mediating effects of customer satisfaction between the relationship of servicescape and behavioural intentions (re-purchase and eWOM) and, (4) to test the moderating role of perceived crowding in explaining the effects of servicescape (physical, employee and customers) on satisfaction.

### **1.1. Study contributions**

The findings from this study are expected to contribute to the existing domain of servicescape. Firstly, we proposed servicescape to be a higher-order construct consisting of physical Servicescape, employee servicescape and customer servicescape in Malaysia's full-service restaurant context.

Hair et al. (2013) have recommended employing a higher-order construct in the case of complex models with multiple dimensions. Higher-order modelling leads to more parsimony and reduces model complexity, as it can be extended to multiple layers (Hair et al., 2013). Therefore, the identification of servicescape as a third-order construct with direct effects on customer satisfaction, repurchase intentions and eWOM is a useful contribution to the existing body of knowledge.

Secondly, the moderating effect of crowding between the relationship of servicescape and customer satisfaction was determined. Contrary to the previous studies which focused on the negative aspects of crowding, this study highlighted the positive role of crowding in the full-service restaurant context. Whereby, the effects of servicescape on customer satisfaction were heightened due to crowding (employees and other customers). The moderating role of crowding is an important theoretical contribution to the S-O-R model with practical implications. Though crowding has different connotations in different contexts, we stand to argue that crowding is an important cue when selecting a restaurant. In a collectivist society, crowding provides a reliable cue of good restaurant attributes to tangible aspects namely human-made features of service experience and the social experience. In particular, diners also look forward to building networks and establish a good rapport in full-service restaurants, therefore, crowding can add further insights into establishing a link between servicescape and satisfaction.

Lastly, the mediating effects of customer satisfaction between the relationship of servicescape and behavioural intentions (re-purchase intentions and eWOM) were also investigated. A proper understanding of the roles of the mediating effects (satisfaction) can add insights into connecting servicescape to behavioural intention. Several studies (Alhothali et al., 2021; Ong & Yap, 2017) acknowledged the mediating role to influence the servicescape functions and impact behaviour. Similarly, a proper understanding of the mediating effects of customer satisfaction in a full-service restaurant context adds important insights to the existing body of knowledge.

## 2. Theoretical literature review

### 2.1. S-O-R model: Servicescape, satisfaction and post-consumption behaviour

Servicescape is defined as an experience during the service encounter to obtain a particular and desirable consumer behavioural outcome (Harris & Ezeh, 2008; Hoffman et al., 2003). Servicescape in consumer behaviour is derived from the S-O-R model (Bitner, 1992; Russell & Mehrabian, 1974). Studies that examined customer engagement concluded that it is important to identify stimulus (S) variables that influenced organism (O) and change responses (R) in-service settings. The stimulus is the environment's characteristics that inspire the customer's feelings (Roschk et al., 2017). The three different emotional states namely pleasure, arousal and dominance are derived from the original model. Past studies have also delineated customer satisfaction as an essential connection to bridge the gap between company offerings and customer behavioural outcomes. Therefore, in this study, customer satisfaction was investigated as an organism, whereby the repurchase intentions and eWOM were considered as consumer behavioural outcomes (R).

Several studies on servicescape have extended from hedonic to utilitarian value, focusing on only the physical aspects (Kwortnik, 2008; Wakefield & Blodgett, 2016). Recently, however, some researchers called for a comprehensive understanding of servicescape's physical and social dimensions (Wakefield & Blodgett, 2016). Having said that, there is the significant importance of social element at service encounter as part of the servicescape (Tombs & McColl-Kennedy, 2003). Social servicescape triggered emotional and psychological responses to the consumption experience (Bustamante & Rubio, 2017). According to Bitner (1992), the three multifaceted first-order constructs proposed for the physical dimension of servicescape (full-service restaurant context) include ambience, facility esthetic and layout.

Moreover, first-order dimensions of perceived similarity, physical appearance, suitable behaviour (relevant to employees) together with perceived similarity and physical appearance (relevant to

the customer) was proposed based on the research by (Line & Hanks, 2020). Having said that, both consumers and employees are committed to social servicescape (Rosenbaum & Massiah, 2011). Social components determine the experience directly through interactions between other customers and employees during service encounter (Bustamante & Rubio, 2017). Moreover, the mere presence of other consumers and employees also influence customers' perception and service evaluation. Therefore, we suggest a higher-order multidimensional construct for servicescape consisting of three second-order dimensions known as the physical servicescape, customer servicescape and employee servicescape. When a consumer enters a restaurant to dine, his/her service evaluation is not just based on a single factor, i.e. physical factors but also includes unanimous influence of multiple stimuli on the cognition to form a single holistic perception (Lin, 2004; Lin & Mattila, 2010). This notion is also known as the Gestalt approach which refers to the "entire entity dominates the perception of its parts"(Lin & Worthley, 2012).

Other than the S-O-R model, the social identity theory (Tajfel, 1982), expectation disconfirmation theory (Lewin, 1938) and Social facilitation theory (Zajonc, 1965) was also acknowledged to support the relationship between the proposed framework.

### 3. Empirical literature review and hypothesis development

#### 3.1. Perceived servicescape and customer satisfaction

The term physical environment created by Kotler (1973), consists of the surroundings that promote specific emotional influences on consumers' purchasing behaviour. Past studies have also examined the physical environment labelled under various names, human-made, physical environment, and these studies exclude the social or natural environment. Other terms that are used are DINESERV, DINESCAPE, TANGSERV (Ali et al., 2016; Baker et al., 1994; Bitner, 1992; Kim et al., 2009; Liu & Jang, 2009; Raajpoot, 2002). In addition to these high-order constructions, specific dimensions of physical servicescape have also been identified, including the four important human-made environmental factors identified by Bitner (1992), spatial layout, ambient conditions, functionality and sign, symbol & artefacts. Berman and West (1995) demonstrated that the physical environment can be divided into two variables namely internal and external environments. Having said that, facility aesthetics/design factors, layout/seating, comfort and ambient conditions are essential components of the physical environment also known as physical servicescape (Watts, 2019). These factors were mostly studied in retailing because of their strategic significance. According to Mehrabian and Russell (1974) 's S-O-R model in the restaurant industry, the physical environment is characterised to influence consumer behaviour. Apart from the restaurant industry, S-O-R is also widely used to visualize the effects of the physical environment on consumer emotions and to identify their behaviour.

In this study, the term physical servicescape consists of three standard dimensions: (1) facility aesthetic/design, (2) layout (3) ambient conditions (music, temperature, comfort etc.). Extant studies demonstrated that the physical environment/physical servicescape can significantly affect consumer attitude and behaviour (Hanks & Line, 2018; Mari & Poggesi, 2013; Vigolo et al., 2020) apart from revealing that the consumer's dining experience and post-purchase behaviour toward the restaurant are directly affected by the physical servicescape. Furthermore, during any dining experience, the restaurant space along with its physical and social aspects that are shared by consumers can affect other patrons and their consumption. The food experience in any consumption environment related to other people's characteristics and behaviour represent the aspect of social servicescape (Hanks et al., 2017).

According to several studies, social servicescape affects consumer emotions and their actions or their avoidance behaviour. Furthermore, consumer attitude, experience satisfaction and attitudinal or loyalty to behaviour can also be predicted by social servicescape (J. E. Kim & Kim, 2012). Social servicescape is an independent motivating factor influencing customer satisfaction and repurchase intentions (Johnstone & Todd, 2012). In this study, servicescape is studied as a third-order

construct consisting of three second-order factors namely employee Servicescape, customer servicescape and physical servicescape. Meanwhile, the customer servicescape in this study comprised of two first-order dimensions known as perceived similarity and physical appearance. The perceived similarity is defined as “the degree to which a customer feels that he is similar to and can identify with the other customers in the service environment” (Brocato et al., 2012). Social identity theory delineates that belongingness to a group is a vital component of individual self-identity (Tajfel, 1982). Generally, people only desire to engage with others they identify as similar to themselves. Similarly, in a full-service restaurant context, the theory can be interpreted based on consumer’s preference to dine in the presence of other consumers who are analogous with themselves. Such a consumption environment leads to consumers feeling comfortable, compatible and consider at home (Brocato et al., 2012; Hanks & Line, 2018; Hanks et al., 2017).

As for the presence of employees, customers will feel more comfortable interacting with those perceived as similar to themselves (Paparoidamis et al., 2019), especially when they believe that such similarities could help employees anticipate and understand their desires, needs and preferences. Therefore, this sense of similarity perception at service will generate satisfaction and willingness to pay.

Physical appearance is another dimension of customer servicescape and is defined as “the physical characteristics and overall look (i.e., the attributes) of other customers in the service environment (i.e., the object) as perceived by individual customers” (Brocato et al., 2012). Pizam and Tasci (2019) delineated that consumers’ physical appearance and similarity can affect other customers’ satisfaction and post-purchase behaviour by creating a sense of affiliation, community and attachment. The consumer’s dining experience satisfaction is also affected by employee appearance and attractiveness. Whereby, customer service evaluation is influenced by employee and customer interaction (Bitner, 1992). Having said that, appropriateness of employee behaviour can positively influence consumer attitude and behaviour. Hence, we hypothesized:

H1. Servicescape has a positive impact on customer satisfaction in the full-service restaurant industry in Malaysia.

### **3.2. Servicescape, eWOM and re-purchase intentions**

Zeithaml et al. (1996) stated that behavioural intentions “signal whether customers will remain with or switch to another company”. Similarly, behavioural intentions are described as “a stated likelihood to engage in a behaviour” (Oliver et al., 1997). Behavioural intentions are considered to consist of revisit and WOM intentions (Konuk, 2019). This study focuses on consumer repurchase intentions and eWOM (as behavioural intentions). Intention represents a person’s motivation (within his or her conscious plan or decision) to exert an effort to perform a behaviour (Ajzen, 1985). Hence, purchase intention is an important factor that determines consumer purchase behaviour because intentions precede behaviour (Ajzen, 2011, 2015). In short, consumers are more likely to purchase a product or service which has gained their positive perception (and less likely to buy a product or service for which they hold negative views).

Recent studies explained the direct and indirect effects of servicescape on behavioural intentions. For instance, Line and Hanks (2020) confirmed that physical and social servicescape can influence consumer’s service evaluation and post-purchase behaviour (re-purchase and WOM intentions) in a casual restaurant context. Hanks and Line (2018) also highlighted the importance of social aspects of servicescape for consumption evaluation by confirming the positive influence of social servicescape over consumer attitude and loyalty, which in turn affects eWOM and re-purchase intentions. Moreover, based on the S-O-R model, consumers are directly influenced by the environmental stimuli and environmental evaluation. The presence of other customers and employees along with their behaviour and physical appearance are reported to influence



consumer attitude (Hanks & Line, 2018). Moreover, confirmed that product involvement can also positively influence eWOM intention. Similarly, environmental factors have also been confirmed to generate purchase intentions (Ledikwe et al., 2020; Sherman et al., 1997). Durna et al. (2015) confirmed that physical servicescape elements can positively affect eWOM intentions. At the same time, Lucas (2003) confirmed that different servicescape components like ambient conditions, aesthetic appeal and spatial layout. Similarly, in a fitness centre, servicescape's physical and natural dimensions can positively affect consumer behaviour (Ong & Yap, 2017). There is substantial evidence showing that aesthetic appeal, layout and functionality, and the financial security of a store can predict consumers' positive behavioural reactions (Harris & Goode, 2010).

Moreover, the relationship between customer satisfaction and behavioural intentions dimensions (WOM and re-purchase intentions) is also well documented in the restaurant context and other hospitality service sectors. For instance, W. G. Kim and Moon (2009) discovered an association between satisfaction, repurchase intentions and WOM in a university foodservice setting. While Ryu et al. (2012) identified the relationship between satisfaction, WOM and repurchase behaviour in an upscale ethnic restaurant. Hanks and Line (2018) also investigated consumer behaviour in a full-service hotel consumption context and revealed that servicescape can affect satisfaction and behavioural dimensions (WOM, eWOM and repurchase intentions). Similar to the aforementioned literature, we investigated two dimensions of consumer behaviour, ie re-purchase intentions and WOM dimension but substituted WOM (offline) with eWOM as a dependent variable due to the following reasons. Firstly, consumers in Malaysia generally love sharing their views on the dining experience in the form of online reviews to show their status and belongingness to other viewers. Secondly, according to the information in the Bureau of Statistics Malaysia, almost 90% of Malaysian consumers visit online reviews before deciding on any final purchase of a product or service. However, eWOM is more preferable compared to WOM because of its wider scope, easy accessibility, variety of information and independent source. Companies are also investing huge amounts to manage their online presence because eWOM is a more critical source of information compared to simple WOM in Malaysia. Hence it is more important to investigate eWOM instead of WOM in the Malaysian context. Based on the above discussion, the following hypotheses were drawn.

H2. Servicescape has a positive impact on eWOM in the full-service restaurant industry in Malaysia.

H3. Servicescape has a positive impact on repurchase intentions in the full-service restaurant industry in Malaysia.

### **3.3. Customer satisfaction, repurchase intentions and eWOM**

Customer satisfaction is often defined as “a post-choice evaluative judgment of a specific transaction”(Jahanshahi et al., 2011). While another study defined “Satisfaction is a subjective evaluation that is contingent upon the customer’s emotions, perceptions, and cognition” (Hallowell, 1996). Based on expectancy disconfirmation theory by Lewin (1938), consumer compares his/her service experience with prior expectations. If the perceived service experience is higher than the expectation, the consumer will be satisfied with the dining experience. Conversely, if the perceived experience is not up to the expectation, it will result in dissatisfaction (Namkung & Jang, 2007). There is a strong relationship between consumer satisfaction, WOM and purchase intentions (Choi & Kandampully, 2019). Nowadays, it is common that consumers share their positive or negative experience with other consumers on social media platforms in the form of online reviews (Li, Xie & Zhang, 2020; Park et al., 2019). Therefore, we hypothesized that:

H4: Satisfaction has a significant and positive effect on customer repurchase intention in the full-service restaurant industry of Malaysia.

H5: Customer satisfaction has a significant and positive effect on customer intentions to write online reviews in Malaysia's full-service industry.

### **3.4. Moderation effects of perceived crowdedness**

Perceived crowdedness is defined "as a subjective assessment of concentration (of people or other things) within a specified situation" (O'Guinn et al., 2015). Due to the difference in focus, the notion of crowdedness is categorised into two forms namely perceived spatial and perceived social crowding (Machleit et al., 1994). Perceived social crowding, which is the main focus of this study refers to the "subjective assessment of the social density (i.e., the number of people) within a specified situation."

When reviewing the relationship between the servicescape of physical and social services (with perceptions and behaviour of the consumer), brand image (Erkmen & Hancer, 2019), restaurant type, price (Ryu & Han, 2010), the importance of the occasion (Robson et al., 2011) and customer status (Hanks et al., 2017) are considered as the many different potential moderators. Within a collectivist society, we argue that it would be interesting to study the moderating effects of crowding on the customer experience in the restaurant context during their dining.

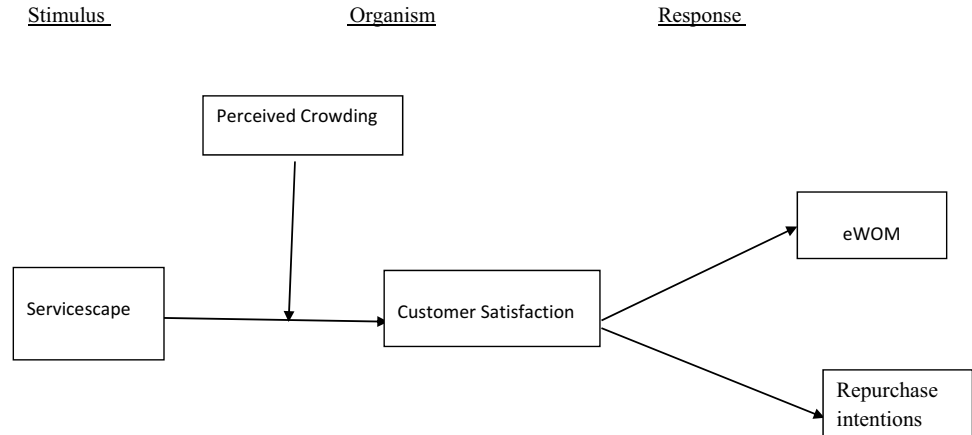
Based on previous studies, crowded environments can influence customers satisfaction. Some stated that crowdedness is always considered harmful, i.e., overcrowding effects can lead to negative results (stress, avoidance behaviour, negative experience), however in some cases, crowding is expected on a sports event, music festival, restaurants, concerts etc. and has a positive impact on consumer behaviour. Therefore, we argue that crowdedness is context-specific—depends upon the study context including expectations of customers, type of event, activity and evaluation of customer service satisfaction to either negatively or positively affect the customer (Tse et al., 2002). Due to the inconsistency in the effects of crowding, it is critical to investigate the moderating effects of crowding between servicescape and customer satisfaction in the restaurant context. It is speculated that when there is a crowd in a restaurant, a positive impact of customer servicescape is expected on satisfaction level. Crowding can increase the feeling of belongingness and help mitigate loneliness or isolation among consumers during work or dining (Fu et al., 2016). Customers enjoy an environment with peers, even though they do not communicate directly with them (social facilitation theory). Similarly, the consumer-seeking community is expected and to appreciate the sense of community in a consumption environment. Thus, we hypothesized that:

H6: Crowdedness can positively moderate the effects of servicescape on customer satisfaction.

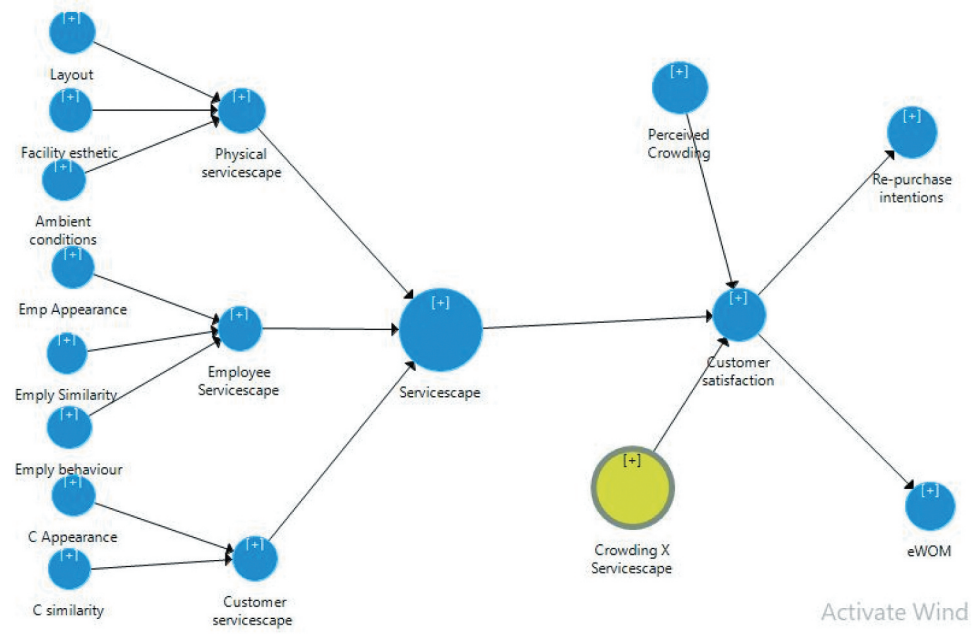
### **3.5. Mediation effects of customer satisfaction**

Based on the literature, there exists a significant relationship between satisfaction and behavioural intentions (repurchase and positive WOM) (Ryu & Han, 2011). For example, Hanks et al. (2017) and Hanks and Line (2018) demonstrated that satisfaction is a significant predictor of behavioural outcome in restaurant contexts. Furthermore, Kwun et al. (2013) revealed a strong association between satisfaction, repurchase intentions and WOM in university foodservice setting and ethnic restaurants. Meanwhile, in the hospitality context, a clear link between satisfaction, repurchase intentions and eWOM were observed. The effect of satisfaction on loyalty in a hotel context was demonstrated by Jani and Han (2014) and DiPietro and Peterson (2017). As for a private club member, satisfaction plays an essential role in generating WOM and loyalty (Gregory et al., 2016). Similarly, there is evidence that satisfaction generates positive eWOM through postings of positive reviews on forums, blogs, social media or travel review websites (Jeong & Jang, 2011) indicating a strong link between guests satisfaction and eWOM (Berezina et al., 2012).

**Figure 1. Conceptual framework.**



**Figure 2. Conceptual model.**



Customer satisfaction is an integral part of any service firm’s core marketing and management strategy (Heung & Gu, 2012). In the S-O-R model, the user’s emotional reactions are triggered by the organism “O”. Previous studies illustrated an important link between customer satisfaction, the firm’s offerings and its customers’ behaviour (Grissemann & Stokburger-Sauer, 2012). Customer satisfaction act as a mediator between service offering and behavioural outcome (Taylor & Baker, 1994). Hence, it is proposed that customer satisfaction plays a mediating role between the environment and behavioural intentions. Meanwhile, in a hotel setting, several potential service encounters exist during the service delivery process. Hence, to overcome the intangible nature of service, environment design factors can be incorporated to significantly influence the overall evaluation of service quality (Ryu & Han, 2010). Similarly, atmospheric factors such as social, design and ambience can influence customer satisfaction which in turn influences

**Table 1. Participants' information**

<b>Respondents' profile</b>	<b>Percentage %</b>
<b>Gender</b>	
Male	59.0
Female	41.0
<b>Age</b>	
Between 18 to 30	74.5
Between 31 to 40	24.5
between 41 to 50	0.75
between 51 to 60	0.25
<b>Nationality</b>	
Malaysian	100.0
Others	00.0
<b>Race</b>	
Malay	63.5
Chinese	35.5
Indian	1.00
<b>Education</b>	
Certificate	14.0
Diploma Degree	36.5
Master	39.5
PhD	10.0
<b>Monthly Income</b>	
RM 3000 to RM 3900	57.0
RM 4000 to RM 4900	29.0
RM 5000 to RM 5900	10.5
RM 6000 and above	3.5
<b>Marital Status</b>	
Single	34
Married	66

behavioural intentions (Harris & Ezech, 2008). Thus, based on the above discussion, we hypothesized that:

H7: Customer satisfaction mediates the relationship between servicescape and repurchase intentions.

H8: Customer satisfaction mediates the relationship between servicescape and eWOM.

### **3.6. Conceptual framework**

The conceptual framework (Figure 1 and Figure 2) depicts the servicescape (a higher-order construct) as exogenous variables, while repurchase intentions and eWOM intentions as endogenous variables. Sequential behaviour of social servicescape and physical servicescape predict the outcome variables through experience satisfaction construct. Meanwhile, perceived crowdedness plays a moderating role between servicescape and customer satisfaction.

#### 4. Research design/methodology

The population in this study consisted of Malaysian citizens who have dined in a full-service restaurant before. Minimal sample size was determined to perform PLS-SEM. We used G\*power 3 by Faul et al. (2007), the latest sample size calculation software as suggested by Hair Jr et al. (2016). In the G\*power 3.0 program, the following options were used to determine the sample size for the PLS-SEM model. We initially selected F-tests from the Test family, then made a selection of “Linear multiple regression: Fixed model, coefficient of determination ( $R^2$ ) deviation from zero”. As for the power analysis, we took “a priori: Compute required sample size—given  $\alpha$ , power and effect size”. Next, input parameters such as effect size ( $f^2 = 0.15$ ),  $\alpha$  error prob = 0.05, power ( $1-\beta$  error prob) = 0.99 and number of predictors = 3 were set. Based on these input parameters, a minimum sample size of 161 was determined for this study to run a model in Smart PLS. However, in view of respondents’ business and generalisability (to get better results), data was collected from 300 respondents. After careful consideration with spurious entries deleted, the final sample size consisted of 200 responses.

The online google form survey method was used to collect data from respondents who were conveniently available and fulfilled our selection criteria (have dined in a full-service restaurant in the last one or two months). Online platforms of different universities within Malaysia were utilized to contact the respondents to share the details regarding the aim of the study and respondent selection criteria. As a reward, respondents were offered a voucher at the end of the survey. Interested respondents were requested to provide their email or contact details. Once the list of interested respondents was compiled, the questionnaire was emailed for them to share their dining experience. The demographic details demonstrated that most of the respondents were male between the age group of 18 to 30 years. Whereby, 100% of the respondents were Malaysian nationals mostly comprising Malays and Chinese. Table 1 provides details of the demographic characteristics.

##### 4.1. Measurement instruments

Measurement instruments for this study were adopted from existing studies and modified to fit the context of full-service restaurants in Malaysia. Since servicescape is proposed as a third-order construct comprised of first- and second-order dimensions, measures of the second-order constructs, customer servicescape and employee servicescape (consisting of first-order subdimensions) were adopted from (Brocato et al., 2012) and Line and Hanks (2019) respectively. While the physical servicescape items (second-order consisting of three sub-dimensions) were adopted from (W. G. Kim & Moon, 2009; Han & Ryu, 2009; Ryu & Jang, 2008).

On the other hand, the five-item scale for perceived crowding was adopted (Grewal et al., 2003), while satisfaction from Maxham Iii and Netemeyer (2002), Hightower and Thomas (2002), and Patterson and Smith (2003). Whereas, eWOM was adopted from Alhidari et al. (2015) and Thurau et al. (2004). Lastly, the repurchase intentions scale was adopted from Oliver and Swan (1989) and (Ryu et al., 2012). All these items were measured using a seven-point Likert scale ranging from strongly disagree (1) to strongly agree (7).

#### 5. Results

##### 5.1. Smart PLS analysis

The utilisation of the Smart PLS-SEM approach provides multiple advantages. Smart PLS-SEM is a second-generation multivariate analysis technique widely applied in social sciences to estimate complex models. Researchers recommended this approach when theory is less developed (the initial stage of development) and the primary purpose of the research is to predict and explain the endogenous construct. Compared to CB-SEM, smart PLS-SEM is a useful technique for small sample size and does not require the normality distribution of data. This technique is also useful in generating high efficiency in parameter estimation due to greater statistical power than CB-SEM. Greater statistical power refers to PLS-SEM being more likely to render a specific relationship significant when it is significant in the population. Also, Smart

**Table 2. Measurement model**

**Reflective Measurement Model Analysis**

Items	Outer loadings – original Sample O	VIF	p-Value	Cronbach's	CR	AVE
				$\alpha$		
<b>Facility aesthetic</b>						
FE1	0.728	2.053	0.00	0.927	0.926	0.557
FE2	0.616	2.503	0.00			
FE3	0.741	2.096	0.00			
FE4	0.720	2.200	0.00			
FE5	0.738	1.906	0.00			
FE6	0.734	2.586	0.00			
FE7	0.694	2.243	0.00			
FE8	0.838	2.331	0.00			
FE9	0.761	2.234	0.00			
FE10	0.728	2.458	0.00			
<b>Layout/Seating comfort</b>						
L1	0.745	1.789	0.00	0.804	0.804	0.508
L2	0.623	1.648	0.00			
L3	0.772	1.787	0.00			
L4	0.701	1.687	0.00			
<b>Ambient Conditions</b>						
AC1	0.633	1.870	0.00	0.872	0.873	0.497
AC2	0.706	2.199	0.00			
AC3	0.678	1.735	0.00			
AC4	0.734	2.129	0.00			
AC5	0.774	1.810	0.00			
AC5	0.798	1.967	0.00			
AC7	0.587	1.441	0.00			
<b>Physical Appearance of Employees</b>						
PAE1	0.829	2.405	0.00	0.94	0.866	0.684
PAE2	0.798	2.772	0.00			
PAE3	0.853	3.226	0.00			
<b>Perceived Similarity (Employee)</b>						
PSE1	0.776	2.391	0.00	0.87	0.869	0.572
PSE2	0.707	2.291	0.00			
PSE3	0.672	2.152	0.00			
PSE4	0.695	2.186	0.00			
PSE5	0.675	2.197	0.00			
<b>Suitable Behaviour</b>						
SBE1	0.841	2.098	0.00	0.883	0.883	0.654
SBE2	0.789	2.343	0.00			
SBE3	0.817	2.345	0.00			
SBE4	0.785	2.405	0.00			

(Continued)

PLS is user friendly and can easily handle a reflective formative measurement model. Compared to the covariance-based method, PLS-SEM applies ordinary least squares (OLS) regression to minimise error terms (i.e., the residual variance) of the endogenous constructs. In short, PLS-SEM estimates coefficients (i.e., path model relationships) that maximise the  $R^2$  values of the (target) endogenous constructs. This feature achieves the prediction objective of PLS-SEM. PLS-SEM is therefore preferred when the research objective is the explanation of variance (prediction of the constructs). Based on the multiple advantages, Smart PLS-SEM is the best fit technique for the analysis of the developed conceptual model (Hair et al., 2019; Hair Jr et al., 2016).

The collected data was analysed using Smart PLS software, while the psychometric properties (validity and reliability) of the measurement scale was analysed through the confirmatory factor analysis (CFA) procedure. The path analysis model was used to determine the effects of exogenous variables on endogenous variables apart from the specific indirect effects to confirm the mediation.

Data analysis was performed in two steps comprising of measurement and structural model assessment. Firstly, the measurement model was analysed to establish psychometric properties and appropriateness of the reflective and formative measurement models. The structural model using the two-step approach (Becker et al. (2012) was used to develop the second-order formative construct (i.e. physical servicescape, employee servicescape and customer servicescape) and third-order formative construct (i.e. servicescape) to test the proposed hypotheses between the latent variables. Prior to analysis, factors (manifest variables) of latent variables were assessed for outliers. However, the results indicated that there was no outlier since all the values were between the range of  $\pm 3$  the standard deviation.

#### 5.1.1. Assessment of reflective (first-order) measurement model

Darsono et al. (2019) recommended the following quality checks to ensure reliable and sound reflective constructs, the outer loadings should exceed the minimum value of 0.40, reliability measures must be greater than 0.70, and convergent validity (AVE) must be 0.50 or greater. Discriminant validity is another criteria to assess reflective constructs. This study employed the most recent approach by Henseler et al. (2015) to assess the discriminant validity. The authors suggested that the HTMT value should be lower than 0.90 (Voorhees et al., 2016). Results in Table 3 indicate that these criteria are met. Moreover, based on Table 2, the factor loading of maximum items was close to or greater than the 0.70 threshold point. Hence, all the loading items that were close to or greater than 0.70 were maintained. No discriminant issue was identified in this study as all values were lower than the critical values. Moreover, values of AVE, VIF and Cronbach's alpha were demonstrated to be favourable.

#### 5.1.2. Second-order and third-order formative measurement model analyses

Smart PLS 3.2.9 was utilised to develop the second-order formative constructs (physical servicescape, employee servicescape and customer servicescape) and third-order formative construct (servicescape). The two-stage approach by Becker et al. (2012) was utilised to calculate the latent variable scores to assign them to construct the second-order formative construct. Although VIF lower than 5 are deemed ideal (Kock & Lynn, 2012), Hair et al. (1998) also stated that VIF lesser than 10 is also acceptable. Based on Table 4, the VIF values in most cases were less than 5, with a few being lower than 10 indicating no multicollinearity issue. Indicator weights of the second-order formative constructs were statistically significant, depicting that the constructs are valid. Similarly, indicators of the overall third-order servicescape construct (physical, customer and employee servicescape) were also statistically significant, with VIF values lower than 5. These results indicated that servicescape is a valid third-order construct.

#### 5.1.3. Structural model analysis

In this section, we evaluated the beta value, t-values,  $R^2$ , effect size and predictive relevance (Darsono et al., 2019). The statistical significance of the structural model parameters was established using bootstrapping technique, by running 5,000 sub-samples. Table 5 summarises the

**Table 2. (Continued)**

<b>Reflective Measurement Model Analysis</b>						
Items	Outer loadings – original Sample O	VIF	p-Value	Cronbach's	CR	AVE
				$\alpha$		
<b>Physical Appearance of Customers</b>						
PAC1	0.776	1.906	0.00	0.826	0.827	0.615
PAC2	0.840	1.896	0.00			
PAC3	0.732	1.827	0.00			
<b>Perceived Similarity (Customer)</b>						
PSC1	0.821	2.381	0.00	0.884	0.886	0.608
PSC2	0.728	1.719	0.00			
PSC3	0.828	2.708	0.00			
PSC4	0.747	1.931	0.00			
PSC5	0.771	2.272	0.00			
<b>Customer Satisfaction</b>						
CS1	0.747	2.688	0.00	0.905	0.904	0.613
CS2	0.696	2.273	0.00			
CS3	0.830	2.193	0.00			
CS4	0.839	2.410	0.00			
CS5	0.706	2.333	0.00			
CS6	0.864	2.695	0.00			
<b>EWOM intentions</b>						
EWOM1	0.896	2.538	0.00	0.918	0.916	0.687
EWOM2	0.730	3.056	0.00			
EWOM3	0.780	3.075	0.00			
EWOM4	0.849	2.272	0.00			
EWOM5	0.877	2.642	0.00			
<b>Repurchase intentions</b>						
RPI1	0.537	1.314	0.00	0.769	0.784	0.556
RPI2	0.773	1.941	0.00			
RPI3	0.885	1.995	0.00			
<b>Perceived Crowding</b>						
PC1	0.850	2.420	0.00	0.892	0.893	0.621
PC2	0.762	2.375	0.00			
PC3	0.789	1.853	0.00			
PC4	0.841	2.435	0.00			
PC5	0.678	2.297	0.00			

results of the structural model analysis. The path analysis results confirmed and supported all hypotheses (H1, H2, H3 and H4). Hence, servicescape, as a third-order construct has statistically significant effects on customer satisfaction, H1:  $\beta = 0.740$ ; [t = 5.383], p = 0.001) and 54.7% variance ( $R^2 = 0.547$ ) in customer satisfaction. Meanwhile, servicescape H2:  $\beta = 0.372$ ; [t = 3.167], p = 0.001) and H3:  $\beta = 0.376$ ; [t = 2.857], p = 0.008) has a significantly positive relationship with eWOM and repurchase intentions respectively. On the other hand, customer satisfaction in both hypothesis H4:  $\beta = 0.281$ ; [t = 2.542], p = 0.006) and H5:  $\beta = 0.290$ ; [t = 2.542], p = 0.006) demonstrated statistically significant effects on repurchase intentions and



**Table 3. Heterotrait-monotrait ratio (HTMT)**

	Ambient con	C App	C similarity	satisfaction	Emp App	Employ Similarity	Employ behaviour	Aesthetic	Layout	Crowding	P. intentions	eWOM
Ambient conditions												
Customer appearance	0.582											
Customer similarity	0.638	0.829										
Customer satisfaction	0.596	0.735	0.660									
Employee Appearance	0.747	0.859	0.825	0.712								
Employee Similarity	0.647	0.849	0.810	0.620	0.844							
Employee behaviour	0.697	0.839	0.817	0.714	0.891	0.86						
Facility aesthetic	0.740	0.421	0.436	0.536	0.497	0.447	0.508					
Layout	0.862	0.544	0.527	0.549	0.630	0.598	0.661	0.845				
Perceived Crowding	0.479	0.647	0.654	0.818	0.681	0.663	0.643	0.438	0.455			
Re-purchase intentions	0.473	0.486	0.496	0.539	0.463	0.490	0.560	0.509	0.589	0.587		
eWOM	0.399	0.572	0.546	0.557	0.555	0.54	0.612	0.375	0.444	0.617	0.824	

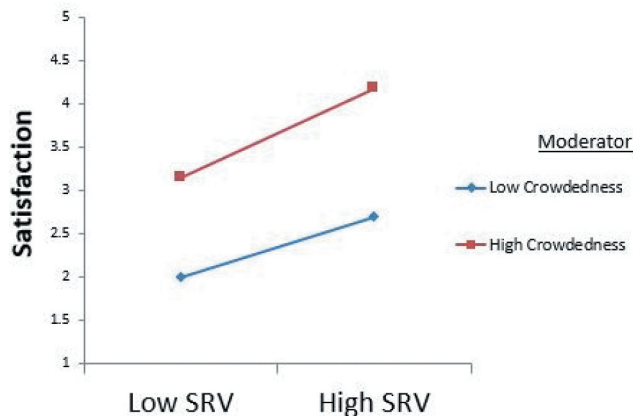
**Table 4. Formative measurement model**

<b>Constructs</b>	<b>Item</b>	<b>Scale Type</b>	<b>Weight</b>	<b>t statistics</b>	<b>P-value</b>	<b>VIF</b>
Physical servicescape	Facility aesthetic	Formative 2nd order	0.483	8.624	<0.001	1.378
	Layout	Formative 2nd order	0.244	2.952	<0.001	6.132
	Ambient conditions	Formative 2nd order	0.398	8.638	<0.001	3.865
Employee servicescape	Employee appearance	Formative 2nd order	0.261	7.976	<0.001	5.497
	Employee similarity	Formative 2nd order	0.461	25.438	<0.001	4.44
	Employee behaviour	Formative 2nd order	0.386	13.062	<0.001	6.089
Customer servicescape	Customer appearance	Formative 2nd order	0.434	6.143	<0.001	6.012
	Customer similarity	Formative 2nd order	0.670	9.797	<0.001	6.012
	Physical Servicescape	Formative 3rd order	0.349	2.312	0.011	1.617
Servicescape	Employee Servicescape	Formative 3rd order	0.431	4.201	<0.001	4.642
	Customer Servicescape	Formative 3rd order	0.347	2.296	0.011	3.954

**Table 5. Structural model assessment**

<b>Hypothesis</b>	<b>STD coefficient (β)</b>	<b>SE</b>	<b>t-values</b>	<b>P Value</b>	<b>R<sup>2</sup></b>	<b>Results</b>
H1: Servicescape→Customer satisfaction	0.740	0.050	5.383	0.001	0.547	Accepted
H2: Servicescape→eWOM	0.372	0.121	3.167	0.001	0.382	Accepted
H3: Servicescape→Repurchase intentions	0.367	0.122	2.857	0.002	0.366	Accepted
H4: Customer Satisfaction→Repurchase intentions	0.281	0.113	2.542	0.006		Accepted
H5: Customer satisfaction→eWOM	0.290	0.117	2.409	0.008		Accepted
H6: Moderating effect	0.085	0.033	2.568	0.005		Accepted

**Figure 3. Moderation graph.**



word of mouth respectively. Servicescape and customer satisfaction together yielded a 38.2% variance ( $R^2 = 0.382$ ) in eWOM. Finally, servicescape and customer satisfaction cumulatively indicated a 35.9% variance in repurchase intentions.

**5.1.4. Moderation analysis**

Table 5 also provides the details of the moderation effects. The Smart PLS two-step approach was utilised for moderation analysis recommended by Darsono et al. (2019). Interaction term results confirmed a significant moderating effect of perceived crowding H6:  $\beta = 0.085$ ; [ $t = 2.568$ ],  $p = 0.005$ ) between the servicescape and customer satisfaction. The moderation graph (Figure 3) elaborates the contingent effects of perceived crowding (Low vs High) in the relationship between servicescape (High vs Low) and customer satisfaction. The moderating effect delineated the perception of crowdedness enhance positive effects of servicescape on customer service evaluation (satisfaction)

**5.1.5. Mediation analysis**

To test the mediation hypothesis, we applied the bootstrapping approach developed by Preacher and Hayes (2008). This mediation technique is more advanced with more advantages than the Sobel (1982) and Baron and Kenny (1986) tests for the following reasons. Firstly, the normality of data is not compulsory before conducting an analysis. Secondly, this approach uses the bootstrapping technique twice during the analysis to help determine the mediation with certainty. Thirdly, since the direct effect significance is not a necessary condition for mediation estimation, Preacher & Hayes emphasised the significance of indirect effects. In view of the indirect effects, Table 6 indicates that the customer satisfaction indirectly explained the influence of servicescape

Table 6. A mediation analysis						
	Effect	L.C.L	U.C.L	T	P	VAF %
Servicescape→ Satisfaction →eWOM						
Total effect	0.587	0.349	0.74	5.537	0.000	36.60
Direct effect	0.372	0.104	0.617	2.826	0.016	
Indirect effect (H7)	0.215	0.008	0.354	2.452	0.014	
Servicescape→ Satisfaction →Repurchase						
Total effect	0.575	0.38	0.736	5.915	0.000	36.17
Direct effect	0.367	0.125	0.633	2.767	0.006	
Indirect effect (H8)	0.208	0.002	0.344	2.351	0.019	

on consumer eWOM (H7:  $\beta = 0.215$ ; [0.008, 0.354],  $p = 0.014$ ,  $T = 2.454$ ) and repurchase intentions (H8:  $\beta = 0.208$ ; [0.002, 0.344],  $p = 0.019$ ,  $T = 2.351$ ), where the paths are statistically significant. Hence, the results generated in this section supported mediation hypotheses H7 and H8. In short, the mediating effects of satisfaction was higher for eWOM compared to repurchase intentions. Next, we analysed the variance accounted for (VAF) to determine the importance of mediation. According to Ringle et al. (2014), VAF between 20% and 80% indicates a partial mediation of the mediator variable. However, the table demonstrated that customer satisfaction behaves as a partial mediator between the relationship of servicescape and eWOM (VAF 36.60), servicescape and repurchase (VAF 36.17).

## 6. Discussion and conclusion

The full-service restaurant industry presents an important sector of the Malaysian service industry. Given this sector's contribution to the national exchequer, it is important to understand the influences of the physical and social servicescape (in the full-service restaurant) on the consumers dining experience. Having said that, most previous studies investigated both constructs (physical servicescape and social services) independently in a retail setting with limited studies on full-service restaurant context. In particular, most of the earlier studies were conducted in an individualistic society like the USA. To the best of researchers' knowledge, this is the first study to systematically analyse both the physical and social servicescapes' effects on consumer satisfaction post-purchase behaviour in a collectivist society like Malaysia. The explosive growth of the full-service restaurant industry in Malaysia necessitates the need to understand the combined effects of physical servicescape and social servicescape on consumer satisfaction and behavioural intentions. The structural equation modelling results revealed that the holistic effects of servicescape directly and positively affected consumer satisfaction and behavioural intentions (eWOM and repurchase intentions). These results are also consistent with the findings of Line and Hanks (2020), (Choi & Kandampully, 2019) and (Tubillejas-Andrés et al., 2020) studies in a casual restaurant, luxury hotel and opera event context respectively. Similarly, Bae et al. (2018) also demonstrated that food, service and physical environment are positively related to solo diner's satisfaction.

On the other hand, customer satisfaction with service evaluation also positively influenced behavioural intentions (eWOM and repurchase intentions), while it also partially mediated the relationship between servicescape and behavioural intentions (eWOM and repurchase intentions). Similarly, these findings were consistent with Bae et al. (2018) findings, where satisfaction was identified to have mediated the relationship between restaurant attributes and behavioural intentions. Furthermore, perceived crowding exhibited a positive contingent effect between servicescape and customer satisfaction. The results also demonstrated that consumers in a collectivist society like Malaysia considers both physical and human factors of the restaurants. Moreover, they prefer to dine in the company of others rather than alone. They fulfil their social need of affiliation by identity with others of similar characteristics and physical appearance. Besides the presence of others in a restaurant setting, they create a sense of community by removing the feelings of loneliness and isolation. These findings are consistent with Line and Hanks (2020) which focused on the social aspects of servicescape only. Additionally, this study also included physical components of the environment where crowdedness was determined to have increased the positive influence of servicescape (third-order construct) on consumer service evaluation (satisfaction). This is an important contribution to the existing body of knowledge because the consumer observes the restaurant environment holistically and not individually. Therefore, the combined effects of the environmental constructs (servicescape and perceived crowding) as a stimulus can positively influence service evaluation (organism) and post-purchase behaviour (response). These findings have theoretical and practical/managerial implications.

### **6.1. Theoretical implication**

This study has important theoretical contributions to the hospitality literature. Firstly, based on the overarching S-O-R model, this study investigated the holistic effects of servicescape as a higher-order multidimensional construct. servicescape (third-order construct), with its three sub-dimensions (employee servicescape, customer servicescape and physical servicescape) was confirmed as a stimulus. Secondly, the role of servicescape on consumer behaviour emerged as another aspect in this study. Most of the previous literature on servicescape investigated its direct effects on consumer behaviour. Servicescape can also directly affect consumer eWOM intentions and repurchase intentions, apart from an indirect effect through partial mediation of customer satisfaction. Moreover, the results also indicated the higher mediating effects of customer satisfaction in explaining the effects of servicescape on eWOM intentions compared to the servicescape effects on repurchase intentions. Therefore, the holistic view of servicescape is highlighted as critical for consumption evaluation and post-purchase behaviour. This significant theoretical contribution is an important driver of consumer behaviour.

Another significant contribution of this study is the moderating effects of perceived crowdedness. Although crowdedness has demonstrated negative effects on consumer behaviour in the retailing sector, the situation differed in the context of the full-service restaurant sector in a collectivist society (Malaysia), where the consumer feels comfortable with the sense of community by the mere presence of others as consumer evaluation influencing service environment and satisfaction with service delivery. Hence, this study revealed that perceived crowdedness can strengthen the positive relationship between servicescape and customer satisfaction evaluation, which is an important theoretical contribution to the S-O-R model and consumer experience research.

### **6.2. Managerial implication**

A holistic view of servicescape has important implications on consumer behaviour. The managers can incorporate the outcomes of this study to enhance servicescape's direct and indirect effects on consumer behaviour. Managers should incorporate social and physical servicescape to develop their policies and strategies to appease customers. For instance, the restaurant can use this information to redesign their restaurant layout and outlook to be more comfortable and easier to traverse, whereby they can also control the ambience (lighting, music, temperature etc.) to impress prospective consumers. Since consumers prefer employees and patrons from similar standards, managers can control their employees' behaviour and appearance. Employee training programs should be introduced to enable them to master an appropriate set of behaviour. Moreover, the dress code and appearance should also be up to the standards to impress the consumers apart from maintaining their professional outlook even when interacting with consumers as they are being watched at all times. Any unprofessional behaviour can negatively influence consumer service experience (satisfaction).

The findings also revealed that customers prefer other consumers to be similar to themselves. However, restaurant managers cannot control their range of customers but can organise servicescape elements and procedures to ensure similar types of customer gathering at the same place. To achieve this purpose, they can devise some strategies to segregate different types of customers in different service settings. For instance, the price range can be adjusted to target customers as per their social/economic class. Lastly, advertising strategies can also be used to target a specific type of customers.

Satisfied consumers are also prone to spread positive eWOM and repurchase intentions. Hence, organisations should encourage consumers to post their reviews and suggestions on the restaurant's website. This practice could help win new customers, whereby restaurants managers can also use consumer's suggestions to improve service procedures and restaurant design.

The other contribution of this study lies in the moderating role of perceived crowding in a full-service restaurant setting. Although servicescape (physical and social facets) directly influenced consumer service evaluation and post-purchase behaviour, the presence of other patrons and perception of crowdedness was also identified to enhance the positive effects of servicescape on consumer service evaluation (satisfaction). According to the social facilitation theory, the mere presence of other patrons can affect task performance. Similarly, the presence of restaurant patrons can also positively affect service evaluation and post-purchase behaviour. Therefore, the higher the number of patrons in a restaurant, the higher the level of experience satisfaction. These findings suggested that customers prefer a lively service setting. Hence, it could be challenging for the restaurant managers to carefully craft their spatial setting without negatively affecting consumer evaluation. Moreover, Malaysians dine out with their friends and family. Therefore, half-open walls could be used to separate each group of diners with sufficient space. Lastly, entrance and exit should be managed using multiple pathways (consumer to exit the dining space easily) as it would help make the restaurant crowded/lively and busy to influence the dine-in experience of diners.

### 6.3. Limitations and future research

Future research should continue to investigate the combined effects of servicescape (physical and social) in a new geographical location for generalisability. Secondly, for this study, the purposive sampling technique was used for respondent selection. Future researchers can use probability sampling for better results. Lastly, this is a cross-sectional study in which data was collected at a single point of time, hence, a longitudinal study can be conducted to determine causality between endogenous and exogenous variables.

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