

Fitness Centers Ambience-Customer Behavioral Intentions Relationship: The Mediating Role of Customer Emotional States

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Abstract

This research paper aims to investigate how the ambient conditions in fitness centers affect customer behavioral intentions through examining the mediating role of customer emotional states while in the fitness center. To this end, a conceptual model of relevant research variables was developed based on the extant literature. A questionnaire survey was administered to a convenient sample of 420 fitness center members approached in 10 randomly selected fitness centers in Jordan. The model was validated and tested using structural equation modeling with AMOS 21.0. The findings of analysis demonstrated that fitness center ambience was significant in predicting customers' pleasure, thereby, their behavioral intentions towards the fitness center. Mediation analysis verified the mediating role of customer pleasure but not arousal on the relationship between fitness center ambient conditions and customer behavioral intentions. Research findings show the significance of ambient conditions as an influential marketing tool. Also, such findings are deemed insightful to the operators of fitness centers on how the fitness center ambience can be deployed to enrich customer affective experience and to encourage positive behavioral intentions in turn. Discussion, conclusions, and research agenda for future research were also identified.

Keywords: ambient conditions, behavioral intentions, customer emotions, fitness centers

1. Introduction

The accelerating fierce competition among enterprises in today's markets has significantly led marketers to continually innovate and improve their strategies in order to encounter such challenge and to generate more positive marketing outcomes (Kumar *et al.*, 2017). Sensory marketing posits itself as a new promising horizon for marketers to base their innovations on and to compete effectively. Unlike traditional marketing, sensory marketing shows a special concern to the role of customer sensories in driving customer responses. That is, marketers can utilize visual, olfactory, auditory, tactile, and gustative cues appealing to customer sensory receptors to elicit customers' senses, shape their perceptions, and affect their behaviors (Krishna *et al.*, 2016).

In any business setting, customers are exposed to unlimited number of marketing and non-marketing cues, which contribute in a way or another to customers' perceptions. Several typologies of such business environmental cues can be noticed in the extant literature (e.g. Baker 199; Bitner, 1991; Kotler, 1973). Three decades ago, Bitner (1992) coined the term "servicescape" to describe characteristics of the place, where the service is delivered. Among the fundamental dimensions of a servicescape are its ambient conditions. According to Baker (1986) such conditions are considered background in their nature and exist below our instantcogniti on (e.g. noise, temperature, and cleanliness). Empirical research shows how vital are the ambient conditions to customer experience in retail and service contexts (Chebat & Michon, 2003; Oztas *et al.*, 2016; and Yaqoob *et al.*, 2018). Servicescape literature advocates that the significance of such contextual characteristics in shaping customer experience do vary according to the nature of service provided (Wakefield & Blodgett, 1994; Zeithaml & Bitner, 2009). In general, the physical qualities of retail and service stores were found to play a crucial role in affecting customers emotionally, cognitively, and behaviorally (Areni & Kim, 1994; Birgit, 2019; Foroughi *et al.*, 2019; Heung & Gu, 2012; Kumar & Kim, 2014; Laroche *et al.*, 2005; Sanchez-Flack *et al.*, 2020; Wakefield & Baker, 1998). This specifically becomes very apparent when it comes to commercial settings, where customers spend a

large amount of time such as restaurants and cafes (Nusairat et al., 2020; and Weng et al., 2019), hotels (Jani & Han, 2015), shopping malls (Nusairat et al., 2017; and Poornima, 2020).

Throughout the last decade, the Jordanian community has been showing a growing concern to healthy lifestyle through eating better and exercising more. Many fitness centers are currently penetrating the Jordanian market, intensifying the level of competition in fitness centers industry and imposing more burdens on fitness centers operators to provide a better remarkable customer experience. Typically, customers spend more time in the servicescape of fitness centers compared to other service industries such as banks and fast-food restaurants. Moreover, the fitness center itself constitutes an integral part of the customer experience. Therefore, what perceptions customers form about the fitness center servicescape will have critical implications to the overall customer experience. In this extent and in line with the essence of sensory marketing, ambient conditions of the fitness center can be used as sensory triggers to enrich customer experience at the affective level, and thereby stimulate better behavioral intentions. To this end, and motivated by the limited empirical research on such topic, the current research paper investigates how a fitness center's ambience affect customer behavioral intentions with an emphasis on the mediating role of customer affective states while being in the fitness center.

2. Theoretical Foundation and Hypothesis Development

The emerging arena of sensory marketing has been introduced in marketing literature as a distinctive technique linking marketing cues to the five senses of customers for the purpose of producing and delivering a memorable customer experience. More than ever before, marketers acknowledge how powerful are the visual, olfactory, auditory, tactile, and gustative cues in boosting the entire experience of customers in shopping and service contexts. The ever increasing fierce competition along with the growing power of customers in various service sectors nowadays have called for more servicescape-generated sensory marketing to break through the clutter (Rathee & Rajain 2017). Apart from other environmental cues in a servicescape, ambient conditions involving music, lighting, ambient scent, cleanliness, noise and temperature can be all deployed to generate more favorable customer responses.

A review of extent literature suggest that ambient conditions have been substantially investigated as a certain particular factor such as music (Andersson et al., 2012; Milliman, 1986; Sweeney & Wyber, 2002), lighting (Areni & Kim, 1994; El Sayed et al., 2004), ambient scent (Chebat & Michon, 2003; Spangenberg et al., 1996) ambient temperature (Hong & Sun, 2012; and Zwebner et al. 2014). On the other hand, less empirical studies have studied ambient conditions as a holistic concept (Im & Ha, 2011; Jani & Han, 2015; and Lin & Liang, 2011).

Many studies reported a direct impact for ambient conditions on customer behavioral responses. Empirical evidence from different retail and service contexts confirms the role of various specific components of ambient conditions in fostering several behavioral outcomes such as customer behavioral intentions (Gupta, 2020; Spangenberg et al., 1996), money and time spending (Herrington, 1996; Leenders et al., 2019; Milliman, 1986; Yalch & Spangenberg, 1993), and approach behavior (Mattila & Wirtz, 2001; Oh et al., 2016). Other studies examining ambient conditions as a holistic construct also found it to be positively linked to the behavioral intentions of customers (Heung & Gu, 2012), and their approach behavior (Chen & Hsieh, 2011). Accordingly, we hypothesize that:

H1: Ambient conditions of fitness centers will have a significant positive impact on customer behavioral intentions.

Empirical evidence also introduces ambient conditions as a critical determinant of customer emotions in fitness centers (Freitas & Lacerda, 2019; Kim et al., 2016). In this extent, Naami and Hezarkhani (2018) showed that outstanding ambient conditions enhance the positive emotions of new customer, while reduce the negative ones. Likewise, Quartier et al. (2014) noted that intangible factors such as lighting can have hidden effects on customer emotions, thus, can be utilized to deliver a certain image. Oztas et al., (2016) reported that fitness center lighting and temperature levels can influence customer emotions more than paintings and pictures. In the same venue, Bilgili et al., (2018) founded that cool lighting (e.g. green lighting) makes customer feel comfortable and warm. Another study by Foroughi et al., (2019) showed that lighting and music through sound systems have a positive influence on pleasant emotions. Thus, we hypothesize that:

H2: Ambient conditions will have a significant positive impact on customer emotions of a-pleasure and b-arousal in fitness centers.

Customer emotional as a response to retail environments and servicescapes were considered a key construct in understanding customer behavioral intentions (Birgit, 2019; Pedragosa et al., 2015; Yap & Ong, 2017). In this

extent, Naami and Hezarkhani (2018) found that the positive emotions by fitness center staff to improve the positive emotions of customers and to diminish their negative emotions. The results also showed that positive emotions have a positive influence on customer behavioral intention to renew their membership, and to be more loyal to the fitness center. While, negative emotions have an unfavorable influence on customer behavioral intention in that context. Similarly, Yap and Ong (2017) approved that emotional responses have the strongest influence on customer behavioral intentions in gym club settings. Pedragosa et al. (2015) showed that the negative emotions have a negative impact on behavioral intentions and customer satisfaction. Such unfavorable emotions may generate from the interaction with employees, peripheral services (e.g. baby-sitter, parking) and ambience factors such as music and cleanliness. On the other hand, positive emotions are shown to have a positive influence on customer behavioral intentions and satisfaction. This means that peripheral services and ambience factors are also important to generate favorable emotions. The empirical evidence in fitness center contexts have summarized that the emotional states elicited by environmental factors encourage customers to stay longer and revisit again (Ong & Yap, 2017). Therefore, the following hypothesis is formulated:

H3: Customer emotions of a- pleasure and b- arousal in fitness centers will have a significant positive impact on customer behavioral intentions.

Lots of research studied the direct relationship between customer emotion and behavioral intentions across different business settings. However, the link between ambient conditions as a whole, customer emotions, and behavioral intentions has not been substantially addressed in the extant literature. In this scope, several scholars have investigated specific aspects of the ambient conditions. Ali *et al.*, (2016) for example have examined the influence of temperature and cleanliness and found it to have a positive impact on behavioral intentions through customer emotion. Similarly, Foroughi *et al.*, (2019) reported that lighting and music through sound systems have indirect impacts on behavioral intentions through favorable emotions.

Mehrabian and Russell (1974) originated the PAD model, which has inspired marketing atmospherics scholars for more than four decades. The PDA model fundamentally posits customer emotional states (e.g. pleasure and arousal) as an organism mediating variable in stimulus-organism-response framework. In line with this, many scholars have clearly reported on a mediating influence for customer emotions on the relationship between ambient conditions and customer behavioral responses (Baker *et al.*, 1992; Chang *et al.* 2014; Foroughiet *al.*, 2019; Oztas *et al.*, 2016; Walsh *et al.*, 2011). Ambient factors were concluded to positively affect customer positive emotions, which in turn drive customer impulse buying behavior (Chang *et al.*, 2014). Likewise, Walsh *et al.*, (2011) demonstrated a mediating role for customer emotions on the effect of ambient factors on customer loyalty. Baker *et al.* (1992) reported a mediating effect for both customer pleasure and arousal in the relationship between ambient factors and customer willingness to buy. Hence, we hypothesize that:

H4: Customers emotions of a- pleasure and b- arousal will mediate the relationship between fitness center ambient conditions and customer behavioral intentions.

The research conceptual model is shown in Appendix (A).

3. Method

3.1 Measures and Questionnaire Development

In this research, the field work was carried out using a self-administered questionnaire as a data collection instrument. Previously established measures were adapted to capture the research variables of the conceptual model, presented in Appendix (A). Twenty-two measurement items in total, measured on 7-point scales were employed to estimate the responses of fitness centers customers. The ambient conditions were measured using nine indicators relating to, lighting, cleanliness, temperature, music, noise, scent, and air quality adapted from different studies (Akroush et al., 2011; Baker *et al.*, 1994; Lin & Liang, 2011; Reimer & Kuehn, 2005; and Wakefield & Baker, 1998). The measurement of customer emotional states was based on Mehrabian and Russell's (1974) semantic differential scale with eight items capturing both pleasure and arousal. The behavioral intentions of fitness center customers were assessed using five items addressing word of mouth and re-patronage intentions adapted from (Kim & Moon, 2009; Ryu & Jang, 2007). Original questionnaire was translated using back-translating technique by two bilingual marketing professors. Resulting questionnaire was further subjected to academic and field piloting to ensure validity and reliability of the measures, and the clarity of the questions to respondents.

3.2 Sampling and Data Collection

The research population of our study consists of fitness center members in Jordan. Data was collected from a convenient sample of customers using a self-administered questionnaire distributed in ten randomly selected

fitness centers in Jordan. Although the study utilized convenience sampling, the selection of respondents followed a systematic randomization. In sum, 420 questionnaires were handed to respondents, who were willing to participate in the survey. 62 questionnaires were discarded based on a screening question and due to incomplete responses. Therefore, 358 valid and complete questionnaires were retained and considered for data analysis.

4. Results

4.1 Data Preparation and Respondents' Statistics

Utilizing the valid and complete questionnaires, a dataset of 358 was generated. The dataset was inspected first to make sure we have a complete and normally distributed data. Descriptive statistics ensured data completeness and validity. The values of skewness and kurtosis for all observed variables were within acceptable range of normal distribution (skewness $< \pm 3$ and kurtosis $< \pm 10$ (Kline, 2005). Table (B1) in Appendix (B) presents the sample's demographic profile. Descriptive measures show that (64.5%) of the respondents were males. The majority of the respondents were 18-26 years old (50.8 %) with a membership age of 6-12 months (31.8 %). The first degree holders constitute (58.9%) of the total number of respondents and most of them were privately hired (57.8 %) with an income level ranged between 500-999 JDs (45 %).

4.2 Measurement Model

The measurement model with four latent variables measured by 22 observed indicators were assessed using Structural Equation Modeling (SEM). In line with Anderson and Gerbing's (1988) model-building process, the measurement model was developed first. The measurement model exhibited acceptable measures within the recommended cut-off values of model fit (RAMSE < 0.08 , GFI ≥ 0.90 ; CFI ≥ 0.90 ; NFI ≥ 0.90 ; and IFI ≥ 0.90) (Byrne, 2001; Hair *et al.*, 2006). Confirmatory factor analysis was further used to validate the model. Constructs' validity was concluded based on the measures of convergent and discriminant validity indicators. Factor loadings for all measurement items on their respective latent variables Table(B2) were above the acceptable threshold (0.50) suggested by Hair *et al.* (2006). Average variance extracted AVE for all of the model's variables as shown in Table (B2) were within the recommended cut-off value of ($> 50\%$) (Fornell & Larcker, 1981). Furthermore, inter-correlations among the model's variables Table (B3) and squared correlations among the variables compared to AVE of each one (Table B4) suggested that the variables are sufficiently different from each other (Fornell & Larcker, 1981). Accordingly, both convergent and discriminant validity of the model's constructs were established. Reliability measures as shown in Table (B2) indicated a good reliability for all constructs, with Cronbach's alpha scores greater than the recommended benchmark of (0.70) as suggested by Hair *et al.*, (2011).

4.3 Structural Model and Hypothesis Testing

Referring to model fit indices reported in Table (B5), the structural research model exhibited a satisfactory goodness of fit to the observed data as suggested (Byrne, 2001; Hair *et al.*, 2006). Path analysis revealed a support to three direct structural paths, lending verification to respective research hypotheses. Specifically, the ambient conditions of fitness center were significant in predicting the behavioral intentions of customers ($\beta = 0.36$, $p < 0.001$) and their emotions of pleasure ($\beta = 0.46$, $p < 0.001$). Customer pleasure was also found to be positively linked to customer behavioral intentions ($\beta = 0.42$, $p < 0.001$). No significant impact was noticed for fitness center ambient conditions on customer arousal ($\beta = 0.06$, $p = 0.179$). Also, the path linking customers' arousal to their behavioral intentions towards the fitness center was insignificant ($\beta = 0.08$, $p = 0.124$). The findings of hypothesis testing are shown in Table (B6).

The mediating role of both customer pleasure and arousal on the relationship between fitness center ambient conditions and customer behavioral intentions toward the fitness center was tested following Baron and Kenny's (1986) procedures. That is, the mediation was reported on the basis of path coefficients in structural models with and without mediators. Bootstrapping available in AMOS 21.0 was also considered to report the significance of mediation. The findings revealed that the impact of ambient conditions on customer behavioral intentions is only mediated by customer pleasure. The results of mediated path-hypothesis testing are shown in Table (B7).

5. Discussion

Reviewing the literature on role of ambient conditions in shaping customer behavioral intentions demonstrates that relatively few empirical studies have examined the influence of ambient conditions on both customers' emotions and consequently on their behavioral intentions. To fill this gap, the current study investigated how a fitness center's ambience affects customer behavioral intentions through examining the mediating impact of customer emotional states while in the fitness centers in Jordan. Structural equation modeling was used to test the four research hypotheses proposed in this study. The first hypothesis relating ambient conditions to customer

behavioral intentions was fully supported. Ambient conditions in fitness centers were evidenced to be a significant predictor of customer intentions to spread positive word of mouth and to renew their membership with the fitness center in the future. This is in line with the findings of previous empirical studies (Bouzaabia, 2014; Lim, *et al.*, 2020; Ong & Yap, 2017; Shashikala & Suresh, 2013). Ong and Yap (2017) for instance, found individual behavioral intentions to be significantly affected by the physical dimension including ambient factors of the servicescape. Likewise, the findings of Bouzaabia (2014) indicated that customers show greater revisit intentions for stores with pleasant ambient scents. Ambient conditions were also reported as a critical determinant of customer loyalty (Shashikala & Suresh, 2013). The findings reported in this paper lend a partial support to the hypothesis addressing the impact of ambient conditions on customer emotions. That is, customer pleasure but not arousal was found to be affected by the ambient conditions in fitness centers. Pleasant ambient conditions such as lighting, temperature, music and cleanliness at Jordanian fitness centers play a role in evolving customer pleasure. This is fairly in line with the findings of previous empirical research (Bilgili *et al.*, 2018; Foroughi *et al.*, 2019; and Naamiand & Hezarkhani, 2018). Some other empirical studies also revealed supporting findings, where the effect of ambient conditions was limited to customer pleasure and no significant impact were noticed on arousal (Im & Ha, 2011; and Novak *et al.*, 2010). This could be attributed to the fact that arousal conveys a sense alert and activation, which may not easily elicit in customers when simply exposed to unobvious stimuli such as ambient conditions. A partial support was also reported to the third hypothesis, addressing the relationship between customer emotions of pleasure and arousal and customer behavioral intentions. Pleased customer revealed greater tendencies to renew their membership with the fitness center and recommend it to others. This corresponds with the results of prior research in the same venue (Pedragosa *et al.*, 2015; and Yap & Ong, 2017). This result is also aligned with other prior research findings. For instance, Sweeney and Wyber (2002) revealed a significant positive impact for customer pleasure on customer intended behaviors, while no impact was found for customer arousal. Furthermore, restaurant customers with higher levels of pleasure were more likely to revisit the restaurant again in the future (Kim & Moon, 2009). This insignificant direct impact for arousal on customer behavioral intentions in the present study can attributed to that the effect may flow indirectly through pleasure as suggested some other scholars (Hyun & Kang, 2014; Morrison *et al.*, 2011). Finally, the mediating impact for customer emotions on ambient conditions-customer behavioral intentions relationship as predicted by the fourth hypothesis was partially confirmed. Specifically, the results indicated that the relationship is partially mediated by customer pleasure only. This supports the findings of Novak *et al.*, (2010) and Nusairat, (2015) who reported a mediating role for pleasure but not arousal on the relationship between ambient factors and customer behavioral responses.

6. Research Contributions and Implications

The paper was motivated by several deficiencies in the literature. Noticeably, substantial amount of previous empirical studies have been conducted in Western developed economies. Although there has been an accelerating growth for different retail and service industries such as shopping malls, chain restaurants, and fitness centers in MENA region, limited empirical evidence is reported on the role store environment and services capes in driving customer responses in the region. The theoretical model introduced in the current research was mainly developed based on the findings of Western empirical studies. An empirical test to the model for the first time in Jordan and more particularly in the context of fitness centers contributes to the novelty of this paper. This becomes fundamental given the growing number of fitness centers opening in Jordan in the last decade. Unlike the majority of prior empirical research, ambient conditions have been investigated in the present study as a holistic concept rather than particular characteristics such as lighting and ambient scent. Moreover, the fieldwork has been conducted in real settings (fitness center servicescape). Therefore, the findings revealed here provide more comprehensive, practical, and realistic insights on how customers are affected by ambient conditions as a whole.

From a practical perspective, the specific findings generated in this research are insightful to fitness center operators, who seek to provide extraordinary practice experience to their customers. This particularly becomes crucial in light of the intensive competition in fitness center industry. Furthermore, the current research signifies the significance of fitness center ambience as a vital marketing cue, constituting an integral part of the customer experience. Hence, practitioners have to recognize the necessity to add ambient conditions to their marketing toolbox. Although they are not obvious to customer awareness, pleasant ambient conditions such as good lighting, appropriate ambient temperature, hygiene, and air quality should not be neglected when designing and managing indoor fitness centers.

7. Limitations and Research Agenda

Similar to any behavioral study, this research is assumed to be deficient at some points, suggesting promising research agenda for future research. The research findings at first were reported based on customers' perceptions

to the ambient conditions of fitness centers in Jordan, revealing a generalizability issue. Hence, future empirical studies are invited to test the conceptual model, presented in the current study in different service settings such as restaurants and hotels. Customer responses and perceptions to the particular ambient conditions may vary according to respondents' demographic characteristics such as age (Andersson *et al.*, 2012). The moderating role of such demographics can be then addressed in further empirical research. In our study the focus has been only limited to examine how fitness center ambience is linked to the behavioral intentions of customers through their emotional states. Although the mediating role of highly cited major emotional states is examined, the potential relationship between these emotional states as mediators as reported in some similar studies (e.g. Morrison *et al.*, 2011) is not considered. Thus, it would be interesting if the interplay mediating role of pleasure and arousal is taken into consideration in future research. Furthermore, cognitive evaluations such as perceived service quality may also play a mediating role in bridging the relationship between ambient conditions and customer behavioral intentions, offering another interesting area of research.

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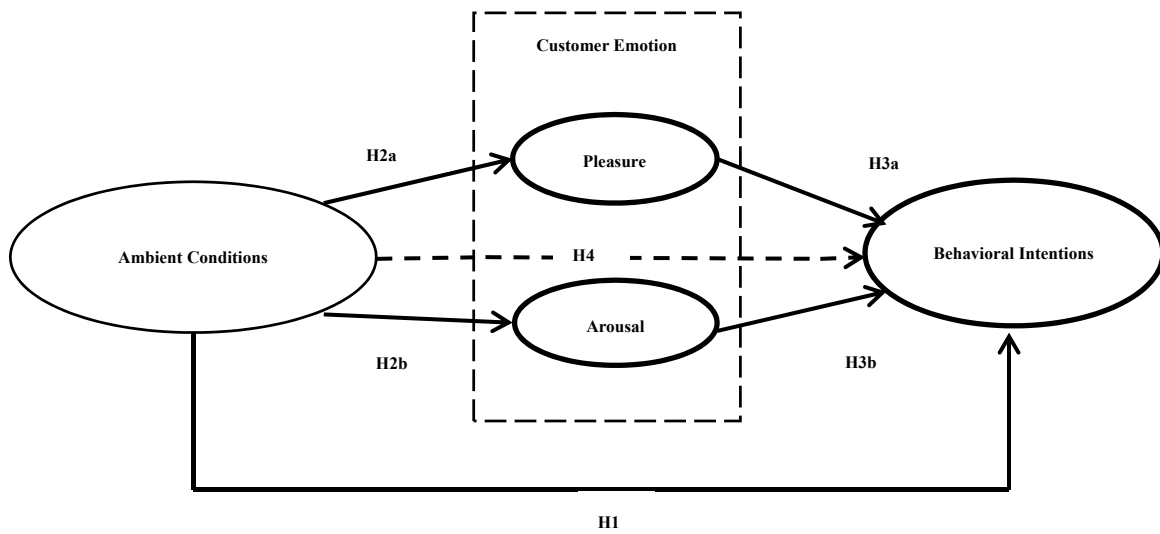
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Appendix A

Conceptual Research Model



Appendix B

Data Analysis

Table B1. Respondents' Demographics

Measure	Item	Count	Percentage %
Gender	Male	231	64.5
	Female	127	35.5
Age	Less than 18	42	11.7
	18-26	182	50.8
	27-35	81	22.7
	36-44	27	07.5
	45-53	11	03.1
	54 and above	15	04.2
Membership Starts	Less than 6 Months	59	16.5
	6-12 months	114	31.8
	13-18 months	83	23.2
	19-24 months	53	14.8
	More than 2 Years	49	13.7
Marital Status	Single	168	47.0
	Married	181	50.5
	Other	9	02.5

Education	Secondary	18	05.2
	Diploma	22	06.1
	Bachelor	211	58.9
	Higher Education	107	29.8
Job	Public Sector Employee	110	30.7
	Private Sector Employee	207	57.8
	Business Owner	41	11.5
Income	Less than 500 JDs	101	28.2
	500-999 JDs	161	45.0
	1000-1499 JDs	51	14.2
	1500-1999 JDs	24	06.7
	2000 JDs and above	21	05.9

Table B2. Factor Loadings and Construct Validity and Reliability

Variables	Items	Factor loadings	AVE%	Cronbach's alpha
Ambient Conditions [AMB]	AMB1	.90	0.75	0.87
	AMB2	.87		
	AMB3	.94		
	AMB4	.89		
	AMB5	.87		
	AMB6	.82		
	AMB7	.86		
	AMB8	.83		
	AMB9	.81		
Pleasure [PLA]	PLA1	.87	0.78	0.91
	PLA2	.84		
	PLA3	.90		
	PLA4	.91		
Arousal [ARO]	ARO1	.85	0.67	0.89
	ARO2	.80		
	ARO3	.83		
	ARO4	.80		
Behavioral Intentions [BIN]	BIN1	.85	0.77	0.90
	BIN2	.83		
	BIN3	.89		
	BIN4	.91		
	BIN5	.90		

Table B3. Constructs' Inter-correlations

Construct	1	2	3	4
1. Ambient Conditions	1.00	0.38	0.28	0.36
2. Pleasure		1.00	0.33	0.31
3. Arousal			1.00	0.42
4. Behavioral Intentions				1.00

Table B4. Discriminant Validity Assessment

Construct	1	2	3	4
1. Ambient Conditions	0.75	0.14	0.08	0.13
2. Pleasure		0.78	0.11	0.10
3. Arousal			0.67	0.18
4. Behavioral Intentions				0.81

AVE (Diagonal values) for each variable is greater than squared correlation (off-diagonal values) between respective variables.

Table B5. Structural Model Fit

Chi sq (df)	Chi sq/df	RMSEA	GFI	CFI	NFI	IFI
51.96* (28)	1.86	0.059	0.952	0.951	0.901	0.953

**P-value < .01, df: degree of freedom*

Table B6. Hypothesis Testing Findings

Path/Hypothesis		(β)	<i>P</i>	Result	
Ambient Conditions	→	Customer Behavioral Intentions	0.36	**	Supported
Ambient Conditions	→	Pleasure	0.46	**	Supported
Ambient Conditions	→	Arousal	0.06	0.179	Not Supported
Pleasure	→	Customer Behavioral Intentions	0.42	**	Supported
Arousal	→	Customer Behavioral Intentions	0.08	0.124	Not Supported

Table B7. Mediation Test

Path	Without mediator	With mediator	Indirect path
AMB-PAL-BIN	.44 *	.29*	Significant (.005) Partial mediation
AMB-ARA-BIN	.44 *	.32 *	Not Significant (.129) No mediation

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