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Crowded and popular: The two sides of the coin affecting theme-park experience, satisfaction, and loyalty

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ABSTRACT

Crowding has become popular in academic research. Empirical studies have not, however, addressed the role of crowding on increasingly popular theme-park settings. This study explores the relative influences of perceived crowding and perceived popularity on theme-park product perceptions, which then influence satisfaction and behavioral intentions. Survey data (N=477) indicates that perceived crowding has a negative effect on internal access (or navigation) of the theme-park experience, while perceived popularity has positive effects on internal access, outdoor entertainment, and retail practices aspects of the theme-park overall experiences. These aspects of theme-park experiences have significant influences on visitors' satisfaction, which then affect behavioral intentions of word-of-mouth, willingness to pay price premiums, and revisit. The external access aspect of theme-park experiences is not influenced by either crowding or popularity, and this aspect does not influence satisfaction either. The theoretical and managerial implications of the study are critical, especially for recovery efforts post COVID-19.

1. Introduction

Crowding and over-tourism have become popular topics in academic research in the past few years, and some scholars argue that they were largely nonexistent before 2017 (Koens, Postma, & Papp, 2018). The term may, however, be considered 'fuzzy', in that "it is ill-defined, lacks clarity, and is highly difficult to operationalize" (Koens et al., 2018, p. 1). While there is not yet a major conceptual framework to understand the term, the academic literature has contributed several theoretical models to better understand the impact of crowding in specific physically defined locations like hospitals and psychiatric hospitals (Teitelbaum et al., 2016; Wang et al., 2017), educational institutions (Graves, 2010), or prisons (Horne & Newman, 2015). While these studies have addressed the impact of crowding on participants, they took place in confined involuntary environments that lack consumer choice of participation, like travel or shopping, or hedonistic consumption experiences, as in theme parks.

Theme parks are a relatively new form of leisure attractions that create a fantasy atmosphere of another place and time (Milman, Li, Wang, & Yu, 2012). These entertainment attractions are pioneers of the emerging experience economy (Geissler & Rucks, 2011) and "remain at the forefront of the innovative design, marketing, and delivery of memorable experiences" (Geissler & Rucks, 2011, p. 129). In 2018, attendance at the top ten global themed attraction companies exceeded half a billion visits for the first time in history, representing 7% of the world population (Rubin, 2019). The themed entertainment industry has matured and been recognized not only as a significant driver of domestic and international economic development and tourism arrivals but also as a shared global experience. Despite the North American theme-park industry's maturity, the top 20 North American theme parks hosted over 157 million visitors in 2018, an increase of 4% compared to the previous year. The increase was led by visitor attendance growth among the top operators like Disney, Universal, and SeaWorld. Nevertheless, the increasing demand for North America's theme parks has resulted in congestion, and overcrowding that could potentially influence the visitors' overall experience, in particular their satisfaction and likelihood to revisit. Notwithstanding this trend, consumer reactions to theme-park crowding have not been studied empirically.

Right after the completion of the current study, the world was hit by the coronavirus COVID-19 pandemic. The historical increase in demand for theme parks has been paralyzed by the pandemic-management measures during this health crisis. A wave of reactions from governments, public organizations, and private businesses resulted in a total global halt in travel and tourism, and thus created the new issue of

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under-crowding. As the world rids itself of the pandemic and slowly re-opens to travel and tourism, a new outlook on, or preference towards, crowding will emerge, especially for those destinations with a high level of dependence on tourism. While it may take some time to gain consumer confidence to visit crowded places like popular theme parks, the industry needs to have a clear understanding of the role of crowding on consumer behavior to design effective pandemic recovery strategies. This proposed research set out to examine the effects of theme-park crowding on visitors' theme park-experience, satisfaction, and loyalty, as reflected in Fig. 1. The results of this study will inform the theme park and attraction industry of the potentials and pitfalls of crowding.

2. Literature review

2.1. Crowding and crowding at theme parks

Crowding has been defined as the negative evaluation of, or disturbance due to, the density of participants and involves a value judgment of the encounters with other participants like patients, consumers, recreationists, visitors, or tourists in a geographically defined area (Klanjšček, Geček, Marn, Legović, & Klanjšček, 2018; Shelby & Vaske, 2007). Perceived human crowding has also been defined as the maximum amount of people who can use a site without an unacceptable alteration in the physical environment or an acceptable quality of the visitor experience (Sanz-Blas, Buzova, & Schlesinger, 2019; Wall & Mathieson, 2006; Zehrer & Raich, 2016). Previous research has confirmed that subjective psychological factors (such as consumer expectations and preferences, perception of other customers, or social inclusions), or objective factors (such as actual visitor encounters) can influence the perception of crowding (Aguiar & de Farias, 2020; Budruk, Schneider, Andreck, & Virden, 2002; Sivey, McAllister, Vally, Burgess, & Kelly, 2019). Perceived severity of crowding also correlates significantly with the level of satisfaction derived from an activity (Huang, Huang, & Wyer, 2018; Moharana & Pradhan, 2019; Shelby & Heberlein, 1986; Sim, Koo, Koo, & Lee, 2018; Thomas & Saenger, 2018). Recent studies have addressed the social-relational changes within a crowd and their impact on the collective experience (Hopkins et al., 2019) and people's collective motion and pedestrian dynamics (Feliciani, Murakami, & Nishinari, 2018).

Most studies in the context of tourism, leisure, and recreation, have addressed various aspects of perceived crowding (Arnberger & Haider, 2007; Gonson, Pelletier, & Alban, 2018; Jacobsen, Iversen, & Hem, 2019; Neuts & Nijkamp, 2012; Pietilä & Fagerholm, 2016), the impact of crowding on consumer behavior and satisfaction (Budruk et al., 2002; Ezzine-de-Blas, Corbera, & Lapeyre, 2019; Gigliotti & Chase, 2014; Line & Hanks, 2020; Liu & Ma, 2019; Luque-Gil, Gómez-Moreno, & Peláez-Fernández, 2018; Rasoolimanesh, Jaafar, Marzuki, & Mohamed, 2016; Santiago, Gonzalez-Caban, & Loomis, 2008; (Ryan, Shih Shuo, & Huan, 2010)), or calculated carrying capacity in geographically defined destinations or settings (Gonson et al., 2018; Santana-Jiménez & Hernández, 2011).

Table 1 summarizes a sample of empirical studies addressing the impact of perceived crowding. Notably, with a few exceptions (e.g., Jin & Pearce, 2011; Manning, Wang, Valliere, Lawson, & Newman, 2002), the majority of the studies did not offer any empirical evidence on the phenomenon of crowding, especially in increasingly popular visitor attractions like theme parks. Theme-park crowding is unique, as parks are conglomerate products involving attractions and rides, shows, restaurants, retail stores, and more. Theme-park crowding may not only be present in open-space areas but also in shows, food services, retail establishments, restrooms, and other guest services. Guests make decisions regarding their visiting path and the time they allocate for each experience according to their personal preferences (Bullinger, 2018).

2.2. Impacts of perceived crowding versus perceived popularity on theme park product perception

In the context of tourism, overcrowding can impact stakeholders, including employees. In May 2019, the Louvre Museum closed when the museum's workers walked out, arguing that overcrowding had made the place dangerous and unmanageable, citing the inadequacy of the museum's facilities to manage the high volume of visitors (Lowrey, 2019). While crowding has been commonly associated with negative connotations and negative impacts on consumer experiences, it may not always have a negative impact on consumers. Crowds can sometimes enhance the overall consumer experience, whether it is a concert, a restaurant, a guided tour, or any other tourism and hospitality experience (Thomas & Saenger, 2019).

The positive influence of crowding may be explained through the perceived popularity of the experience. Past research suggests a positive relationship between perceived crowding and perceived popularity. Even though a clear definition and measure of popularity does not exist in the literature (Li, Lee, & Yang, 2019; Peng & Huang, 2017; Sæþórsdóttir, 2013), different measures are proposed as indicators of popularity. Gordon (2011) suggests statistics to understand historical and present tourism patterns, while social media has gained traction in the generation and dissemination of tourist information in recent years. The popular image of tourist attractions is now highly influenced by social media, and the speed of information dissemination has become an essential factor in enabling distinct tourist attractions to potentially gain high popularity in a relatively short time.

Scholars have thus proposed various approaches to discover popular attractions from geotagged data. For example, Wibowo, Bustomi, and Sukamdi (2019) showed that geotagged Twitter data can be used to determine the popularity of a tourist attraction, although it achieved only a medium level of accuracy. Peng and Huang (2017) extracted hotspots by integrating spatial clustering and text-mining approaches, also using Flickr geotagged images to discover popular tourist attractions. These indicators of popularity are also indicators of crowding. The present study therefore considers popularity to be other side of the crowding medallion.

As a consequence of this positive side, crowding may yield positive experiences. Researchers have reported that visitors experience increased enjoyment by sharing experiences with others, watching people, or engaging in like-minded group activities (Arnberger, Aikoh, Eder, Shoji, & Mieno, 2010). Consequently, the study proposes a positive influence of crowding on popularity, which then together influence theme-park product perception. Thus, the following hypotheses are

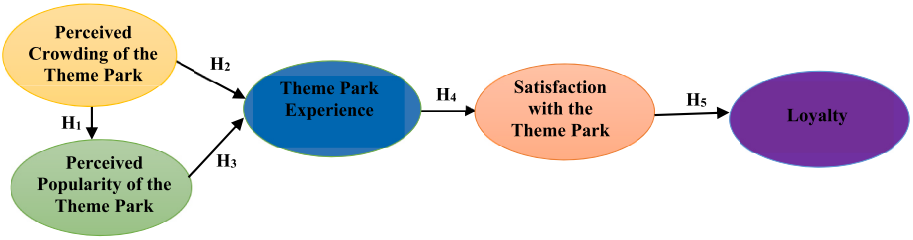

Fig. 1. The conceptual model and hypotheses of the study.

Table 1
Measurement of perceived crowding.

Authors	Study setting	Measurement scales	Dependent variable(s)
Heberlein and Vaske (1977); Vaske and Shelby (2008)	Outdoor recreation (river)	A nine-point scale; 1=not at all crowded; 9=extremely crowded	Overall satisfaction
Harrell, Hutt, and Anderson (1980). Machleit et al. (1994);	Retail industry	A videotape and written scenario were used to simulate a shopping episode, as well as field data collection. 7-point semantic differential scale: Too many visitors-Few visitors; Restricts movement-Allows free movement; Can move at my own pace-Must move at the pace set by others; Crowded-Uncrowded; Gives an open feeling-Gives a close feeling; Confined-Spacious	Level of satisfaction
Doorne (2000)	Waitomo Caves, New Zealand	Nine-point crowding scale: 1–2=Not at all crowded, 3–5=Slightly crowded, 6–7=Moderately crowded, 8–9=Extremely crowded	Overall satisfaction
Morgan and Lok (2000)	Hanging Rock, Victoria, Australia	Nine-point crowding scale: 1–2=Not at all crowded, 3–5=Slightly crowded, 6–7=Moderately crowded, 8–9=Extremely crowded Use-levels (low, medium, high) determined by the number of vehicles arriving at the attraction	N/A
Manning et al. (2002)	Alcatraz Island	Acceptability of photographs by using a 9-point scale across the range very acceptable (+4) to very unacceptable (−4) Computer simulation of visitor use	
Arnberger and Haider (2007)	Municipal forest	Seven-point scale; 1=Severely under crowded, 2=Under crowded, 3=Slightly under crowded, 4=Appropriate use levels, 5=Slightly crowded, 6=Crowded, 7=Overcrowded Counts by video monitoring	N/A
Ryan et al. (2010)	Janfusan Fancyworld	Seven-point scale on motives and attributes of the theme park	Levels of importance and satisfaction
	Theme Park, Taiwan		
Jin and Pearce (2011)	Xi'an, China	Acceptability of visitor photographs on a five-point scale: 1=Half as many as the number of people, 2=Same as shown, 3=Twice as shown, 4=Four times as shown, 5= Eight times as shown	N/A
Neuts and Nijkamp (2012)	City of Bruge, Belgium	Nine-point crowding scale: 1–2=Not at all crowded, 3–5=Slightly crowded, 6–7=Moderately crowded, 8–9=Extremely crowded Seven other variables like interaction with other, evaluation of crowding perception, preference for use levels	Crowding perception
Burduk et al. (2002)	The Arizona-Sonora Desert Museum	Actual, expected and preferred density Expected, preferred, and perceived crowding	Level of satisfaction
Mohd Mahudin, Cox, and Griffiths (2012)	Rail commuters in Kula Lumpur, Malaysia	Scales made with up to four pictorial passenger destiny: Evaluation of psychological aspects of crowded situations, Affective reaction to crowded situations, and evaluation of ambient environment of crowded situations	Stress, Feeling of exhaustion
Gigliotti and Chase (2014)	Outdoor recreation (deer hunting)	A five-point scale; 1=Not enough (hunters); 2= Just Right - Not Crowded, 3= Slightly Crowded, 4=Moderately Crowded, 5= Very Crowded	Overall satisfaction
Zehrer and Raich (2016)	Zell Arena Ski resort, Tyrol, Austria	Five-point scale; 1=Too many; 2=Many; 3= Neutral; 4=Not many; 5=few visitors	Level of satisfaction, coping behavior
Shi et al. (2017)	Urban Shanghai, China	An original geotagged data associated with various kinds of contextual information A sentiment analysis technique on social media text containing sentiments, and determining the polarity and strength of that sentiment	Popularity measured by Photographic attractiveness and the number of visitors
Luque-Gil et al. (2018)	Sierra de las Nieves Natural park, Spanish Mediterranean mountains	Number of persons that visitors met during the visit Degree of perceived crowding 1=scarce;	Level of satisfaction, motivation to visit the attraction

(*continued on next page*)

Table 1 (*continued*)

Authors	Study setting	Measurement scales	Dependent variable(s)
		2=acceptable; 3 =excessive	
Jacobsen et al. (2019)	Destinations	Five-point Likert scale with the endpoints 'very crowded' (1) and 'not at all crowded' (5)	Destination appraisal
Line and Hanks (2020)	Restaurant industry	Seven-point Likert Scale: "the restaurant was too crowded; the restaurant was busier than I would have liked; there were too many people in the restaurant"	A moderator between customer servicescape and satisfaction

formulated to test these relationships:

H_1 Perceived crowding has a positive influence on the perceived popularity of a theme park.

H_2 Perceived crowding has a positive influence on the theme-park experience.

H_3 Perceived popularity has a positive influence on the theme-park experience.

2.3. Theme park experience's influence on satisfaction

The linkages between experience/perception and satisfaction, and between satisfaction and loyalty, have been widely examined in the tourism literature. Specifically, in a theme-park setting, empirical evidence supports a positive relationship between theme-park experience/perception and visitor satisfaction. For instance, Ryan et al.'s (2010) study concluded that in addition to the degrees of crowding experienced, the theme park's atmosphere, the existence of thrill rides, having places to rest, and a perceived reasonable entry price, were also strong drivers of satisfaction. Ali, Kim, Li, and Jeon (2018) researched Malaysian theme parks and concluded that physical setting was a significant predictor of theme-park visitors' satisfaction. Other studies concluded that perceived, expected, and preferred crowding and density, coupled with actual density and visitors' previous experience, may influence theme-park visitors' levels of satisfaction (Budruk et al., 2002). In the retail industry, increased feelings of crowding impacted levels of satisfaction when respondents expected the store to be less crowded than it actually was (Machleit, Kellaris, & Eroglu, 1994).

The literature also confirms differential influence of crowding on satisfaction in outdoor recreational settings as compared to manmade tourist attractions. Shi, Zhao, and Chen's (2017) study of Shanghai's most popular attractions concluded that "perceptions of the numbers and intensity of social encounters is closely related to a fall in satisfaction with the recreational experience due to crowding" (p. 1204). Similar conclusions were made about outdoor recreation like ski resorts (Zehrer & Raich, 2016). Other studies have confirmed that when crowding increases in built-attractions, consumers' overall satisfaction is negatively affected, although in some cases only mildly (Budruk et al., 2002). Anderson and Gerbing (1988) concluded that festival patrons reported that the presence of other people, even in a crowded setting, contributed to their overall level of satisfaction. Art-festival-goers reported that being part of a crowd was a factor that contributed substantially to their festival enjoyment. Conversely, a lack of crowds can also impact recreational experiences. In their study of deer hunters, Gigliotti and Chase (2014) concluded that while hunter satisfaction decreased with feelings of being crowded, lack of crowding also harmed the hunter's overall satisfaction. Thus, the following hypothesis is formulated to test the impact of theme-park experience on satisfaction with a theme park.

H_4 Theme-park experience has a positive influence on visitor satisfaction with a theme park.

2.4. Influence of satisfaction on loyalty for theme parks

Past research has pinpointed the positive association between satisfaction with and loyalty for theme parks. For example, in a study on Hualien Ocean Park in Taiwan, Kao, Huang, and Wu (2008) found that experiential satisfaction was positively related to loyalty intentions. Cheng, Fang, and Chen (2016) studied the Hangzhou (China) Songcheng historical and cultural theme park and their findings confirmed a positive relationship between theme-park satisfaction and loyalty. Milman and Tasci (2018) also identified a positive influence of satisfaction on loyalty (likelihood to revisit) in the North American theme-park visitor segment. The current study thus hypothesizes that satisfaction with a theme park has positive influences on loyalty in terms of behavioral intentions of word-of-mouth, willingness to pay price premiums, and willingness to revisit.

H_5 Satisfaction with a theme park has a positive influence on visitor loyalty in the forms of word-of-mouth intentions, willingness to pay price premiums, and intention to revisit.

3. Methods

A cross-sectional survey design was used to investigate the influence of crowding versus popularity on visitors' theme-park experience, which was then expected to influence their satisfaction and ultimately loyalty. A survey was designed to measure the core concepts of the study, as well as theme-park visitor behavior and sociodemographic characteristics. Visitors' relatively fresh memories were necessary to measure their perception of crowding in the last theme park visited and its likely influences on the theme-park experience and subsequent satisfaction and loyalty. Respondents were therefore screened for a theme-park visit in the past six months and those who did not make a visit were excluded from the study.

First, an assessment of the general crowding perception was conducted to see the similarity or divergence in crowding perception. For this reason, a picture of a theme park that the researchers of this study considered to be reflecting a medium level crowd was used, and respondents were asked to rate the theme-park crowding level in this picture (1=not enough visitors, 7=too many visitors).

Second, respondents were asked how many different theme parks they visited in the past six months, to report the name of the last theme park they visited, how many times they visited this last theme park within the past six months, the number of adults and children in their travel party, whether their visit was a day trip or an overnight trip, the season of their visit, and the number of hours they spent at the park during their last visit.

Third, to assess the perceived crowding level of the last theme park the subjects visited, a perception calibration was applied to assure that when respondents rate their perceived crowding level, their ratings were on a similar scale rather than on a variety of scales being based on personal differences. Respondents were therefore shown two pictures of theme parks: one with only a few visitors and another one with many visitors. Then, they were asked, '*if the first picture below displays a theme park with not enough visitors (1 on the 7-point scale), and the second picture displays a park with too many visitors (7 on the 7-point scale), how would you rate the theme park you last visited on the 7-point scale below?*' This overall rating was followed by an eight-item crowding/popularity scale with statements reflecting theme-park crowding and popularity (1=strongly disagree, 7=strongly agree).

Fourth, a 24-item theme-park-experience scale was developed to assess visitor experiences in a different product, service, and experience dimensions ranging from the peripheral attributes, such as the highway traffic to the theme park, to the core attributes, such as rides and entertainments, as well as auxiliary attributes, such as power outlets to

charge their mobile devices and toilets. These attributes were listed without any descriptors, and respondents were asked to rate the last theme park visited on these items using the scale of 1=terrible and 7=excellent. Since a comprehensive theme-park experience scale does not exist, the literature was combed to gather diverse attributes related to theme-park products, services, and experiences (Ali et al., 2018; Cheng, Guo, & Ling, S, 2016; Dong & Siu, 2013; Jin, Lee, & Lee, 2015; Kao et al., 2008; Milman, 2009, 2012; Tasci & Milman, 2017).

Fifth, existing scales that had been validated in past research were utilized to measure respondents' satisfaction and loyalty. For satisfaction, Wei, Qi, and Zhang's (2019) four-item scale was utilized with a seven-point agreement scale (1=strongly disagree, 7=strongly agree) (Cronbach's alpha=.804). Three components of attitudinal loyalty were assessed, namely, word-of-mouth, willingness to pay, and intention to revisit. Wei, Qi, and Zhang's (2019) three-item word-of-mouth scale (Cronbach's alpha=.825) and three-item intention to revisit scale (Cronbach's alpha=.768) were utilized with a seven-point agreement scale (1=strongly disagree, 7=strongly agree). Willingness to pay a price premium was measured using Kiatkawsin and Han's (2019) three-item scale with a seven-point agreement scale (1=strongly disagree, 7=strongly agree). Finally, respondents were prompted to answer a few sociodemographic questions about themselves including gender, age, level of education, marital status, the number of children under 18 in the household, state of residence, annual household income, and race/ethnicity.

The survey was designed on Qualtrics and conducted on Amazon's Mechanical Turk, where thousands of registered online survey respondents have access to participate in consumer studies. Respondents were offered one US dollar to encourage a better response rate, and to ensure complete surveys without missing items, a forced response option was used. Also, only those participants with 80% or more reliability rate in completing surveys were allowed to take the survey, and finally, several attention check questions were placed in the survey to ensure reliable data.

A total of 595 participants attempted to take the survey, while 494 participants passed the screening of a theme-park visit within the past six months. Another 17 respondents were deleted from the data for failing to conform to the attention checks. Thus, 477 cases were included in the final analyses. SPSS 24 was used to analyze the data using several procedures. First, descriptives and frequencies were used to see the distributions in sociodemographics, theme-park visiting behavior, crowding perception, theme-park experience, satisfaction, and loyalty. Exploratory factor analysis (EFA) was then used to assess the reliability and structure of the newly developed scales. Anderson and Gerbing's suggestion was followed and the sample was split into two, the first "to develop a model" and the second "to validate the solution obtained from the first" (1988, p. 421). For this purpose, a randomly selected 100 cases of the sample were subjected to EFA using the Maximum Likelihood method of extraction and Varimax rotation on the major constructs of the study. Factor structures were determined using criteria of loadings equal to or higher than 0.5, eigenvalues greater than one, at least three items to load onto a factor, and Cronbach's alpha score of 0.70 or higher (Hair, Black, Babin, & Anderson, 2010).

On the remaining 377 cases of the sample, partial least squares structural equation modeling (PLS-SEM) was used to test the reliability and validity of measures and associated relationships among the variables. Despite being a recent technique of path modeling, PLS is acknowledged for its ability to estimate under conditions of small samples and data non-normality (Wong, 2010). Considering the recent literature on crowding, and the lack of any existing models measuring crowding relationships especially in the theme-park context, this study endeavored to identify the predictive power of a network of concepts, instead of confirming well-accepted theoretical structures (Sarstedt, Ringle, & Hair, 2014). Therefore, using PLS-SEM was an appropriate analysis technique. Smart PLS 3.0 was used in a two-step process to assess the outer model reflecting the measurement model, followed by the inner model reflecting the structure of the relationships in the model (Hair, Hult, Ringle, & Sarstedt, 2013).

4. Results

4.1. Sample characteristics

As can be seen in Table 2, respondents were about 35 years old on average, 41% female and 59% male, residing in several states across the US, and more than half of the respondents had a college/university degree (55.8%). Half (50.7%) the respondents were married, while 35% of them were single. Their income range was skewed to the middle-income group where 50% of the respondents had a household income between US$35–75,000 while 30% earned over US$75,000. About 69% of respondents had a white/Caucasian background, and on average, the sample's respondents visited two theme parks in the past six months, mostly different parks. Table 2 also displays respondents' average rating on the picture that the researchers of this study considered to be a medium level crowded theme-park landscape. Parallel to the researchers' assessment, the average rating was 4.6 on the seven-point scale, where 4 is the neutral space reflecting neither too few nor too many visitors and thus, medium level crowding was also the overall assessment of this group of respondents.

4.2. Theme-park visit characteristics

Table 3 displays the sample's theme-park visit characteristics. Disneyland at Disneyland Resort, Anaheim, California is the most popular theme park followed by the Magic Kingdom at Walt Disney World

Table 2
Sociodemographic profile and general theme park experience of the sample (N=477).

Variables	% or Mean
Age (years, mean)	34.78
Gender (%)	
Male	58.9
Female	41.1
Level of Education (%)	
High school degree	13.2
Vocational school/Associate's degree	11.5
College/University degree	55.8
Master's or PhD	19.5
Marital Status (%)	
Single	35.2
Married	50.7
Divorced/Separated	4.2
Living with a partner	9.2
Other	0.6
Having children under 18 in the household (Yes %)	46.8
# of children under 18 in the household (mean)	2
Family's annual income (%)	
Under US$15,000	2.5
US$15,000–24,999	6.5
US$25,000–34,999	9.6
US$35,000–49,999	20.3
US$50,000–74,999	30.2
US$75,000–99,999	15.7
US$100,000 or above	15.1
Race/Ethnicity (%)	
White/Caucasian	68.8
African American	13.2
Hispanic	8.2
Asian/Pacific Islander	6.5
Others	3.4
# of theme park visits in the past 6 months (mean)	2
# of different theme parks visited in the past 6 months (mean)	1.8
The perception of the picture displaying average level of crowd in a theme park (1= not enough visitors, 7=too many visitors) (mean)	4.64

Table 3
The last theme park visit characteristics of the sample (N=477).

Variables	% or Mean
Last park visited (%)	
Disneyland at Disneyland Resort, Anaheim, California	11.5
Magic Kingdom at Walt Disney World Resort, Florida	8.6
Cedar Point, Sandusky, Ohio	6.9
Universal Studios Florida at Universal Orlando Resort, Orlando, Florida	6.5
Disney's Animal Kingdom at Walt Disney World Resort, Florida	5.0
Six Flags Great Adventure, Jackson, New Jersey	4.4
SeaWorld Orlando, Florida	4.0
Disney's Hollywood Studios at Walt Disney World Resort, Florida	3.8
Hershey Park, Hershey, Pennsylvania	3.6
Busch Gardens Williamsburg, Virginia	3.6
Disney California Adventure Park at Disneyland Resort, Anaheim, California	3.4
Epcot at Walt Disney World Resort, Florida	3.1
Universal Studios Hollywood, Universal City, California	2.9
Six Flags Magic Mountain, Valencia, California	2.9
Kings Island, Ohio	2.7
Islands of Adventure at Universal Orlando Resort, Orlando, Florida	1.5
Busch Gardens Tampa Bay, Florida	1.5
SeaWorld San Diego, California	1.0
Canada's Wonderland, Ontario, Canada	.8
Knott's Berry Farm, Buena Park, California	.6
Other	21.6
# of prior visits to this theme park (mean)	1.9
Type of visit (%)	
Day trip	65.0
Overnight stay	35.0
Season of the visit (%)	
Summer	61.0
Fall	21.8
Winter	10.5
Spring	6.7
# of adults in the party during the last visit (mean)	3.4
# of children under 18 in the party during the last visit (mean)	2.0
# of hours spent at the park	12.0
Crowd perception of the park (1= not enough visitors, 7=too many visitors)	5.16

Resort, Florida, Cedar Point, Sandusky, Ohio, and Universal Studios Florida at Universal Orlando Resort, Orlando, Florida. Respondents had visited their last theme park about twice before. Their last visit was mostly a day trip (65%), typically during summer (61%), with about three adults and two children under 18 in their travel party, and spending about 12 h at the theme park. After being calibrated with the too-few-visitor and too-many-visitor pictures, respondents rated their last theme park 5.2, on average on the seven-point scale, reflecting that their last visited theme park was a little more crowded than the neutral point (4) or the medium-level, compared to the first picture used in the study.

4.3. Descriptive analysis of major constructs

As can be seen in Table 4, the crowding-related items were rated between 4 and 5.3 on average, while the popularity-related items were rated between 5.9 and 6, on average. The highest-rated perceived theme-park product items were related to the core product, namely, rides and activities (5.6), followed by the main walkway throughout the park (5.4), and outdoor entertainment and shows (5.3). The lowest-rated perceived theme-park product attributes were related to peripheral and auxiliary products, namely access to power outlets to charge their mobile devices (4.3), followed by highway/road traffic to and from the theme park (4.4), and baby-care facilities (4.7). Overall, the theme-park image was on the positive end of the scale. Parallel to this positive perception, average ratings of satisfaction items ranged between 4.8 and 5.6, where word-of-mouth items centered around 5.6, willingness to pay price premiums ranged between 4.3 and 4.4, while the intention to revisit items ranged between 5 and 5.6.

Table 4
Descriptive statistics of the scales (N=477).

Variables	Min.	Max.	Mean	Std. Dev.
Perceived Crowding at the theme park (1=Strongly Disagree, 7=Strongly Agree)				
The theme park seemed very crowded to me	1	7	4.96	1.509
The theme park was a little too busy	1	7	4.87	1.601
There were a lot of visitors in the theme park (deleted in EFA)	1	7	5.30	1.390
I could hardly move in the theme park	1	7	4.04	1.847
I felt cramped visiting this theme park	1	7	4.26	1.776
Perceived Popularity of the theme park (1=Strongly Disagree, 7=Strongly Agree)				
This park is very popular	1	7	5.88	1.162
This park is highly visited	1	7	5.97	1.147
This park attracts many visitors	1	7	5.99	1.171
Theme Park Product Experience (1=Terrible, 7=Excellent)				
Highway/road traffic to and from the theme park	1	7	4.44	1.576
Ease of parking	1	7	4.72	1.562
Walking areas to and from the park (deleted in EFA)	1	7	5.06	1.348
The ticket office at the theme park's gate (deleted in EFA)	1	7	5.15	1.338
Security screening	1	7	5.21	1.346
Ease of navigation through the entrance and exit gates	1	7	5.19	1.399
Main walkway throughout the park	1	7	5.35	1.210
Rides and activities (deleted in EFA)	1	7	5.61	1.309
Indoor entertainment and shows (deleted in EFA)	1	7	5.09	1.445
Outdoor entertainment and shows	1	7	5.33	1.322
Nighttime spectacle (Fireworks, Laser shows)	1	7	5.09	1.524
Access to management and staff members (deleted in EFA)	1	7	4.95	1.415
Access to power outlets to charge cell phones (deleted in EFA)	1	7	4.32	1.619
Access to information boards available at the park (deleted in EFA)	1	7	5.18	1.276
Food and beverage services	1	7	5.31	1.379
Seating areas to consume food and beverage	1	7	5.10	1.412
Indoor shopping facilities	1	7	5.18	1.327
Outdoor shopping facilities	1	7	5.15	1.289
Bathrooms/toilets (deleted in EFA)	1	7	5.14	1.392
Baby care facilities (deleted in EFA)	1	7	4.65	1.338
Security measures in the park (deleted in EFA)	1	7	5.18	1.271
Comfortable places to rest (deleted in EFA)	1	7	5.06	1.416
Souvenir shops located outside the park's gate (Deleted in PLS due to low factor loading)	1	7	4.95	1.595
General behavior of other visitors (deleted in EFA)	1	7	5.22	1.253
Satisfaction with the theme park visit (1=Strongly Disagree, 7=Strongly Agree)				
This theme park was beyond my expectations. (Deleted in PLS due to low factor loading)	1	7	4.83	1.267
The day that I visited this theme park was a really nice day.	1	7	5.59	1.153
I really like the trip to this theme park.	1	7	5.61	1.210
It was a wise choice to visit this theme park.	1	7	5.60	1.234
Word-of-Mouth intentions for the theme park (1=Strongly Disagree, 7=Strongly Agree)				
I will say positive things about this theme park to other people.	1	7	5.61	1.309
I will share with my friends and relatives my experience of this theme park.	1	7	5.60	1.244
I will recommend this theme park to others.	1	7	5.60	1.297
Willingness to pay price premiums for the theme park (1=Strongly Disagree, 7=Strongly Agree)				
I am willing to pay a higher price for this theme park than for other theme parks.	1	7	4.44	1.684
I am willing to pay premium to visit this theme park again.	1	7	4.41	1.684
	1	7	4.34	1.756

(*continued on next page*)

Table 4 (*continued*)

Variables	Min.	Max.	Mean	Std. Dev.
I am willing to pay a lot more to be able to visit this theme park than other theme parks.				
Intention to revisit the theme park (1=Strongly Disagree, 7=Strongly Agree)				
I will visit this theme park again.	1	7	5.62	1.305
I would like to visit this theme park frequently.	1	7	5.05	1.419
I will continue to visit this theme park in the future.	1	7	5.57	1.260

4.4. Exploratory factor analysis

As displayed in Table 5, the Kasier-Meyer-Olkin Measure of Sampling Adequacy (KMO) and Bartlett's Test of Sphericity were assessed to ensure the appropriateness of the data for EFA. The KMO coefficient for all constructs was above 0.72 and Bartlett's test was significant at the 0.01 level, indicating the adequacy of the items. Perceived crowding revealed two factors explaining 71% of the total variance. After deleting some items with low cross-loadings, the theme-park experience items revealed four factors, namely Retail Experiences, Internal Access (reflecting navigation within the park to various attractions and services), Outdoor Entertainment Experiences, and External Access to the park, explaining 59% of the total variance. The scales adapted from the literature, namely word-of-mouth intentions, willingness to pay price premiums, and intention to revisit, revealed one factor each. All factors had acceptable reliability with Cronbach's Alphas ranging between 0.68 and 0.93, reflecting high reliability of the measurement model.

4.5. Results of PLS-SEM

Before the PLS-SEM was undertaken, G*POWER 3.1.9.3 software (Faul, Erdfelder, Buchner, & Lang, 2009) was used to check post-hoc if the sample size (n=377) was enough for statistical power to the model, by following Lu, Heslop, Thomas, and Kwan's (2016) recommendations. For a two-tailed test with a moderate effect size (0.3) and an error probability of 0.05, the power (1-B err prob) is 0.999, which is well above the recommended threshold of 0.8.

4.5.1. Measurement model (outer model)

PLS-SEM tests on the 10-factor reflective model revealed acceptable levels of reliability and validity. Table 6 shows factor loadings and cross-loadings of all indicator items to their respective constructs. Construct reliability and convergent validity were evaluated by several measures (Hair et al., 2013), including factor loadings, Cronbach's alphas, composite reliability (CR), and AVE (average variance extracted) scores. Following Hair et al.'s (2013) suggestion, the cutoff score of 0.7 was used and some items were deleted due to low factor loadings as indicated in the table. Next, all items loaded on their respective factor with coefficients between 0.74 and 0.96, and with larger loadings on their respective factors than on any other.

The Cronbach's alphas of all factors were above the threshold of 0.70, except for those of outdoor entertainment experiences and external access, which were slightly lower than the acceptable level. Bootstrap validation to test the item loadings' significance using 5000 samples revealed confidence intervals of the loadings at a 95% level, both lower and upper percentiles being positive. These values confirmed the scale's convergent validity for measuring the 10-Factor model. Furthermore, all AVEs were above 0.5, indicating the convergent validity of the constructs in the model. Discriminant validity of the reflective PLS model was checked by comparing the square root of the AVE of the factors to the inter-correlations. As displayed in Table 7, the square roots of the AVE, shown on the diagonals, were greater than the correlations between the factors, shown as the off-diagonal elements, confirming the constructs' discriminant validity.

4.5.2. Structural model (inner model)

The proposed structural model (inner model) was assessed using 5000 bootstrap resamples and the confidence intervals at 95%. Table 8 displays the structural estimations and Fig. 2 shows the path coefficients and R^2 values. The significance of the path coefficients, between the exogenous and endogenous variables and R^2 values, were examined to evaluate the model's fit.

Of all paths tested, 12 were supported at $p < .05$ (Table 8). The relationship was significant (β=.475, t=11.339, p<.01) regarding the expected influence of perceived crowding on perceived popularity, thus H_1 was supported. However, for the expected influence of perceived crowding on the theme-park experience, the influence was negative and significant only for internal access or navigation within the park (β=-.160, t=3.212, p<.01, thus H_2 had minimal support in the data. Perceived popularity, in contrast, showed significant influences on three theme-park product perception factors, namely Retail Experiences (β=.419, t=8.422, p<.01), Internal Access (β=.386, t=6.630, p<.01), and Outdoor Entertainment Experiences (β=.366, t=6.805, p<.01), thus H_3 had more support but was still only partially supported by the data. In terms of the theme-park experiences' influence on satisfaction, except for that of external access, all other factors showed significant influences, specifically Retail Experiences (β=.294, t=5.012, p<.01), Internal Access (β=.332, t=5.528, p<.01), and Outdoor Entertainment Experiences (β=.194, t=3.387, p<.01), thus H_4 was also partially supported. As for the influences of satisfaction, they were significant on all three outcome variables included in the study, namely, word-of-mouth intentions (β=.779, t=30.140, p<.01), willingness to pay price premiums (β=.364, t=7.598, p<.01), and intention to revisit (β=.692, t=19.931, p<.01), thus H_5 was fully supported. As can be seen in Table 8, the beta values of perceived popularity were higher than those of perceived crowding.

An examination of the R^2 values for all endogenous variables revealed that perceived crowding and perceived popularity predicted more of Outdoor Entertainment Experiences (R^2=.182), compared to the other three theme-park experience factors. In turn, the three theme-park experience factors explained almost half of satisfaction (R^2=.421), which then explained over half of the word-of-mouth intentions (R^2=.607), which is higher than the willingness to pay for price premiums (R^2=.132), as well as intention to revisit (R^2=.479).

5. Discussion and implications

This study attempted to uncover the relative influences of perceived crowding and perceived popularity on theme-park experiences, which then influence satisfaction and behavioral intentions. Although the study sampled a general population of the US through an online survey platform, respondents had a high level of theme-park visiting experiences. Also, contrary to expectations of a rather younger and single profile of respondents in online survey platforms, the study reflects a sample that is more of a representative of the general population, with over 50% being married and 47% having children younger than 18 years of age in the household, which is consistent with the typical theme-park consumer segment in the US. Additionally, past theme-park visiting characteristics in terms of the most popular park (i.e. Disneyland, Anaheim, California, the Magic Kingdom, Florida, Cedar Point, Sandusky, Ohio, and Universal Studios Florida), day trip visits (65%), visits mostly during the summer (61%), a visiting party of about three adults and two children under 18, and spending about 12 h at the theme park, reflect typical theme-park visitor characteristics in the US theme-park segment. Furthermore, the sample evaluated the theme-park picture as reflecting a medium level crowd, which was parallel to the assessment of the researchers of the study. Thus, the sample acquired can be considered a representative sample with reliable and valid responses to the measured concepts.

Table 5
Results of exploratory factor analysis (n=100).

Items & Factors	Factor Loadings	% of Variance Explained	Cumulative % of Variance Explained	Factor Mean	Cronbach's Alpha	Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy	Bartlett's test of sphericity
Perceived Crowding/Popularity			71.244	4.18	.91	.721	.000
Crowding		42.960					
I felt cramped visiting this theme park	.951						
I could hardly move in the theme park	.871						
The theme park was a little too busy	.806						
The theme park seemed very crowded to me	.708						
Perceived Popularity		28.283		5.87	.86		
This park is very popular	.935						
This park is highly visited	.896						
This park attracts many visitors	.630						
Theme Park Experiences			59.366			.783	.000
F1: Retail Experiences		12.756		5.23	.81		
Indoor shopping facilities	.777						
Outdoor shopping facilities	.754						
Food and beverage services	.642						
Seating areas to consume food and beverage	.508						
F2: Internal Access		30.985		5.21	.87		
Ease of navigation through the entrance and exit gates	.853						
Security screening	.756						
Main walkway throughout the park	.678						
F3: Outdoor Entertainment Experience		9.824		5.27	.70		
Nighttime spectacle (Fireworks, Laser shows)	.717						
Outdoor entertainment and shows	.575						
Souvenir shops located outside the park's gate	.568						
F4: External Access		5.800		4.74	.68		
Ease of parking	.989						
Highway/road traffic to and from the theme park	.495						
Satisfaction with the theme park visit			59.290	5.44	.85	.811	.000
I really like the trip to this theme park.	.878						
It was a wise choice to visit this theme park.	.772						
This theme park was beyond my expectations.	.710						
The day that I visited this theme park was a really nice day.	.708						
Word-of-Mouth Intentions			74.011	5.64	.89	.744	.000
I will say positive things about this theme park to other people.	.893						
I will recommend this theme park to others.	.885						
I will share with my friends and relatives my experience of this theme park.	.800						
Willingness to pay price premiums			81.518	4.27	.93	.762	.000
I am willing to pay premium to visit this theme park again.	.925						
I am willing to pay a higher price for this theme park than for other theme parks.	.910						
I am willing to pay a lot more to be able to visit this theme park than other theme parks.	.872						
Intention to revisit			70.311	5.42	.86	.674	.000
I will visit this theme park again.	.959						
I will continue to visit this theme park in the future.	.877						
I would like to visit this theme park frequently.	.649						
Extraction Method: Maximum Likelihood. Rotation Method: Varimax with Kaiser Normalization.							

5.1. Theoretical implications

The results revealed that respondents rated the theme parks that they last visited as a little more crowded (5.2) than the neutral point (4) or the medium-level on the seven-point scale used in the study. This finding is in line with the recent concerns about overcrowding in tourism research. Neuts and Nijkamp (2012) suggest that there is a broad academic consensus on the factors that influence a person's perception of crowding in a specific situation. These include the situational variables, characteristics of other tourists encountered, and the individual's

Table 6
PLS Factor loadings (bolded) and cross loadings (n=377).

Items & Factors	Perceived Crowding	Perceived Popularity	Retail Experiences	Internal Access	Outdoor Entertainment Experiences	External Access	Satisfaction	Word-of-Mouth	Willingness to Pay Price Premiums	Intention to Visit
Perceived Crowding/Popularity										
Perceived Crowding										
Cronbach's Alpha =.91; CR=.93; AVE=.780										
The theme park seemed very crowded to me	**0.892**	0.511	0.184	0.061	0.273	0.023	0.126	0.127	0.227	0.107
The theme park was a little too busy	**0.905**	0.483	0.188	0.079	0.286	0.025	0.161	0.111	0.212	0.106
I could hardly move in the theme park	**0.853**	0.256	0.109	−0.086	0.204	0.042	−0.093	−0.139	0.284	−0.047
I felt cramped visiting this theme park	**0.883**	0.333	0.109	−0.036	0.192	0.032	−0.038	−0.09	0.223	−0.01
Perceived Popularity										
Cronbach's Alpha =.90; CR=.94; AVE=.831										
This park is very popular	0.423	**0.917**	0.378	0.293	0.379	0.022	0.457	0.425	0.195	0.367
This park is highly visited	0.449	**0.906**	0.359	0.27	0.412	−0.005	0.391	0.392	0.229	0.32
This park attracts many visitors	0.411	**0.912**	0.381	0.286	0.345	0.069	0.379	0.382	0.211	0.359
Theme Park Experience										
Retail Experiences										
Cronbach's Alpha =.77; CR=.85; AVE=.59										
Food and beverage services	0.109	0.35	**0.748**	0.421	0.338	0.258	0.411	0.429	0.252	0.369
Seating areas to consume food and beverage	0.069	0.276	**0.747**	0.462	0.318	0.316	0.434	0.426	0.329	0.412
Indoor shopping facilities	0.156	0.327	**0.804**	0.326	0.498	0.219	0.428	0.392	0.366	0.333
Outdoor shopping facilities	0.206	0.297	**0.766**	0.28	0.493	0.203	0.413	0.378	0.421	0.389
Internal Access										
Cronbach's Alpha =.74; CR=.85; AVE=.656										
Security screening	0.075	0.252	0.437	**0.776**	0.299	0.372	0.382	0.404	0.172	0.349
Ease of navigation through the entrance and exit gates	0.009	0.273	0.358	**0.843**	0.222	0.334	0.442	0.471	0.095	0.405
Main walkway throughout the park	−0.027	0.229	0.396	**0.809**	0.334	0.268	0.461	0.486	0.192	0.383
Outdoor Entertainment Experiences										
Cronbach's Alpha =.68; CR=.86; AVE=.754										
Outdoor entertainment and shows	0.196	0.37	0.512	0.373	**0.895**	0.137	0.473	0.447	0.283	0.411
Nighttime spectacle (Fireworks, Laser shows)	0.3	0.353	0.413	0.222	**0.84**	0.163	0.318	0.353	0.433	0.316
External Access										
Cronbach's Alpha =.65; CR=.85; AVE=.737										
Highway/road traffic to and from the theme park	0.049	0.012	0.216	0.284	0.182	**0.817**	0.167	0.156	0.252	0.225
Ease of parking	0.013	0.039	0.33	0.387	0.121	**0.898**	0.222	0.219	0.19	0.259
Satisfaction										
Cronbach's Alpha =.80; CR=.88; AVE=.714										
The day that I visited this theme park was a really nice day.	0.07	0.423	0.409	0.442	0.355	0.135	**0.775**	0.557	0.182	0.51
I really like the trip to this theme park.	0.08	0.369	0.484	0.42	0.417	0.244	**0.863**	0.694	0.361	0.597

(*continued on next page*)

Table 6 (*continued*)

Items & Factors	Perceived Crowding	Perceived Popularity	Retail Experiences	Internal Access	Outdoor Entertainment Experiences	External Access	Satisfaction	Word-of-Mouth	Willingness to Pay Price Premiums	Intention to Visit
It was a wise choice to visit this theme park.	0.027	0.361	0.495	0.487	0.399	0.195	**0.893**	0.712	0.358	0.64
Word-of-Mouth (WOM) Intentions										
Cronbach's Alpha =.86; CR=.92; AVE=.785										
I will say positive things about this theme park to other people.	0.022	0.417	0.476	0.547	0.392	0.236	0.749	**0.912**	0.327	0.636
I will share with my friends and relatives my experience of this theme park.	0.026	0.391	0.448	0.479	0.43	0.149	0.653	**0.869**	0.3	0.586
I will recommend this theme park to others.	0.031	0.356	0.487	0.465	0.418	0.201	0.664	**0.877**	0.372	0.625
Willingness to Pay Price Premiums										
Cronbach's Alpha =.93; CR=.96; AVE=.880										
I am willing to pay a higher price for this theme park than for other theme parks.	0.235	0.233	0.447	0.203	0.376	0.207	0.346	0.391	**0.927**	0.432
I am willing to pay premium to visit this theme park again.	0.231	0.229	0.431	0.193	0.393	0.274	0.372	0.376	**0.955**	0.465
I am willing to pay a lot more to be able to visit this theme park than other theme parks.	0.28	0.187	0.365	0.123	0.361	0.222	0.299	0.278	**0.932**	0.426
Intention to Revisit										
Cronbach's Alpha =.79; CR=.88; AVE=.706										
I will visit this theme park again.	0.018	0.393	0.394	0.45	0.362	0.215	0.613	0.641	0.291	**0.849**
I would like to visit this theme park frequently.	0.091	0.188	0.427	0.307	0.323	0.238	0.494	0.52	0.54	**0.791**
I will continue to visit this theme park in the future.	0.049	0.359	0.42	0.413	0.377	0.262	0.626	0.584	0.389	**0.878**

Table 7
Discriminant validity (intercorrelations) of constructs (n=377).

	External Access	Intention to Visit	Internal Access	Outdoor Entertainment Experiences	Perceived Crowding	Perceived Popularity	Retail Experiences	Satisfaction	Willingness to Pay Price Premiums	Word-of-Mouth
External Access	0.858									
Intention to Revisit	0.283	**0.840**								
Internal Access	0.397	0.469	**0.810**							
Outdoor Entertainment Experiences	0.171	0.423	0.350	**0.868**						
Perceived Crowding	0.033	0.059	0.020	0.279	**0.883**					
Perceived Popularity	0.031	0.382	0.310	0.416	0.469	**0.912**				
Retail Experiences	0.325	0.489	0.487	0.537	0.176	0.409	**0.766**			
Satisfaction	0.230	0.692	0.531	0.463	0.068	0.449	0.550	**0.845**		
Willingness to Pay Price Premiums	0.251	0.471	0.187	0.403	0.263	0.232	0.444	0.364	**0.938**	
Word-of-Mouth	0.222	0.695	0.563	0.465	0.029	0.439	0.530	0.779	0.376	**0.886**

Bolded figures are square root of average variance extracted (AVE).
Figures below the AVE line are the correlations between the constructs.

Table 8
Structural estimations (hypotheses testing) (n=377).

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Perceived Crowding - > Perceived Popularity	0.475	0.475	0.042	11.339	0.000
Perceived Crowding - > Retail Experiences	−0.022	−0.020	0.059	0.374	0.709
Perceived Crowding - > Internal Access	−0.160	−0.160	0.050	3.212	0.001
Perceived Crowding - > Outdoor Entertainment Experiences	0.106	0.107	0.056	1.906	0.057
Perceived Crowding - > External Access	0.023	0.025	0.063	0.363	0.716
Perceived Popularity - > Retail Experiences	0.419	0.421	0.050	8.422	0.000
Perceived Popularity - > Internal Access	0.386	0.388	0.058	6.630	0.000
Perceived Popularity - > Outdoor Entertainment Experiences	0.366	0.367	0.054	6.805	0.000
Perceived Popularity - > External Access	0.020	0.020	0.065	0.307	0.759
Retail Experiences - > Satisfaction	0.294	0.292	0.059	5.012	0.000
Internal Access - > Satisfaction	0.332	0.334	0.060	5.528	0.000
Outdoor Entertainment Experiences - > Satisfaction	0.194	0.193	0.057	3.387	0.001
External Access - > Satisfaction	−0.031	−0.030	0.044	0.696	0.486
Satisfaction - > Word-of-Mouth	0.779	0.780	0.026	30.140	0.000
Satisfaction - > Willingness to Pay Price Premiums	0.364	0.364	0.048	7.598	0.000
Satisfaction - > Intention to Revisit	0.692	0.693	0.035	19.931	0.000

unique characteristics that may as well impact theme-parks' visitors' perception of crowding. This study's population may have experienced specific situations of crowds in open-space areas, dining, shopping outlets, or outdoor entertainment. Since theme parks attract a diverse demographic and cultural populations, their behavior may impact other patrons' perceptions of crowding, coupled with their distinct characteristics.

Nonetheless, even though the multi-item crowding items were rated between 4 and 5.3 on average, the popularity items were rated between 5.9 and 6, on average. These findings reflect that crowding is also associated with the theme park's popularity. Previous research confirmed that popular tourist establishments like theme parks may attract large numbers of visitors while giving rise to crowding (Canestrelli & Costa, 1991; Riganti & Nijkamp, 2008). The popularity of tourist attractions can be defined as the flagship of expectation, which draws a relatively large number of visitors to a destination (Shi, Zhao, & Chen, 2017).

Despite the theme parks' crowds, respondents rated their theme-park experience attributes relatively high on the positive end of the scale. The highest being the core product, namely rides and activities (5.6), followed by the main walkway throughout the park (5.4), and outdoor entertainment and shows (5.3). The lowest-rated theme park attributes were related to peripheral and auxiliary services, namely access to power outlets to charge mobile devices (4.3), followed by highway/road traffic conditions to and from the theme park (4.4), and baby care facilities (4.7). These findings are not surprising as theme-park guests may use these services and experiences, but may not even be aware of their availability or have limited information about them.

Parallel to the positive product perception, the average ratings of satisfaction items ranged between 4.8 and 5.6, word-of-mouth items centered around 5.6, willingness to pay price premiums ranged between 4.3 and 4.4, while the intention to revisit items ranged between 5 and 5.6. These findings show that theme-park crowding, associated with the perceived popularity, results in a positive theme-park experience, satisfaction, and behavioral intentions. The findings are also consistent with previous research that indicated that the selection of a particular US theme park was not primarily influenced by crowding perceptions. Factors like climate, preference for the type of park, children's desire to visit the park, and admission price are considered to be more significant factors (McClung, 1991). More recently, Pan, Bahja, and Cobanoglu (2018) concluded that despite increasing level of crowds in popular theme parks, online reviews appeared to be the most influential factor to visit a theme park, followed narrowly by admission price, the type of theme park, distance from accommodation facilities, and appeal for children.

The EFA uncovered the structure of the relatively large set of attributes of the theme-park experience that may provide implications concerning crowd management. The first factor, labeled Retail Experiences, reflected consumers' perceptions about retail facilities like indoor and outdoor shopping outlets, food and beverage services, as well as seating areas to consume food and beverage. Crowded retail stores may limit the visitors' access to the merchandise or shop assistants, while crowded food service areas and lack of seating to consume the food due to crowding may impact visitors' experience, in particular when spending additional money for those items that are typically pricy.

The second factor, labeled Internal Access, revealed visitors' perceptions associated with navigation through the entrance and exit gates, security screening, and the main walkways through the park. Popular theme-park operators are faced with the challenge of offering their guests convenient navigation and course-plotting to attractions and entertainment facilities in the park's public areas. Some popular and crowded theme parks have already addressed the crowding issues associated with internal navigation and mobility. For example, Disneyland's Project Stardust was recently launched to tackle pedestrian traffic by introducing tweaks such as shrinking or eliminating tree and flower planters, moving queue lines, and designating areas as stroller-parking (Martin, 2019).

The third factor, Outdoor Entertainment Experiences, reflects consumer perceptions of night-time spectacles, outdoor entertainment and shows, or souvenir shops located outside the park's gate. Whereas the physical location of rides and indoor entertainment may not be perceived crowded due to the individual seating requirement, outdoor entertainment venues featuring fireworks, concerts, parades, and accessibility to outdoor shopping facilities may generate a negative perception of crowds. This issue is a major concern to consumers who look for outdoor events that may result in injuries and sometimes death (Raineri, 2004; Raineri & Earl, 2005). Nevertheless, social identification cues may help ease consumer worries in such outdoor events since social identification with the crowds was found to predict the feeling of safety directly and indirectly through expectations of help and trust in others

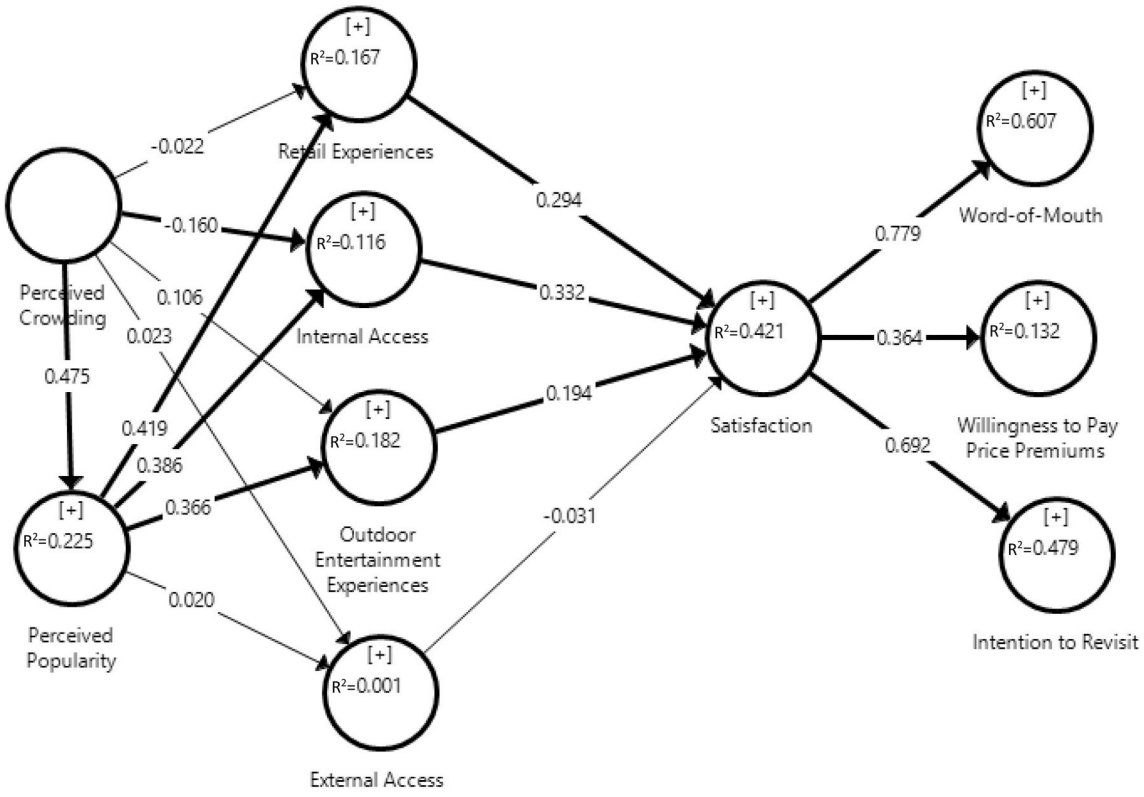

Fig. 2. PLS regression paths and R^2 values (bold paths are statistically significant).

when dealing with an emergency (Drury, Novelli, & Stott, 2015).

Finally, the fourth factor, External Access, echoed visitors' perceptions regarding the ease of parking and highway and road traffic to and from the theme park. This experience before and after entering the park is an important component of the overall visit experience.

The PLS results indicated that perceived crowding has a negative influence on internal access while perceived popularity has a positive influence on three theme-park experience factors, namely, internal access, outdoor entertainment experiences, and retail experiences. Perceived popularity not only influences more of the theme-park experience factors but also exhibited higher beta values. These effects of perceived crowding and perceived popularity are in line with the literature (Budruk et al., 2002; Ryan et al., 2010; Santiago et al., 2008).

In terms of the influence of theme-park experience factors on satisfaction, the three factors mentioned above showed significant influences, specifically Internal Access, Outdoor Entertainment Experiences, and Retail Experiences. These findings are consistent with previous studies that established these relationships in similar settings. For example, Pratiwi, Zhao, and Mi (2015) confirmed the importance of pedestrian mobility during special events such as festivals on visitor satisfaction. Additionally, theme-parks' retail experiences often incorporate educational (e.g. glass blowing) or entertaining experiences (e.g. character appearances), and Sands, Oppewal, and Beverland (2015) concluded that the staging of education and entertainment-focused in-store events impacts consumers' value perceptions, arousal levels, and satisfaction.

Furthermore, the results revealed significant positive influences of satisfaction on the three loyalty dimensions included in the study, word-of-mouth intentions, willingness to pay price premiums, and intention to revisit. These are in line with past research that showed that satisfaction affected visitors' likelihood to return to a destination or an attraction (Fotiadis, 2016; Jarvis, Stoeckl, & Liu, 2016; Jensen, 2007; Milman & Tasci, 2018).

5.2. Managerial implications

Theme parks have evolved as leisure and recreation grounds and attracted different types of visitors. Theme-park crowding is often more complex than other attractions, as patrons distribute themselves unevenly throughout the park's spaces (Bullinger, 2018; Milman, 2019). The increasing annual industry reports do not address the actual drivers for the parks' image, satisfaction, or loyalty (Rubin, 2019). This study has evaluated the important relationships between theme park consumer perceptions of crowding, popularity, and experience that subsequently impact satisfaction and loyalty exhibited by word-of-mouth intentions, willingness to pay premium prices, and intention to revisit.

The data revealed that crowding is associated with popularity, yet, it should be controlled by various strategies already adopted by the major global theme park groups like Disney, Universal, or Sea World (Rubin, 2019). Some of these strategies include capacity-control policies based on guests' characteristics, ticket-price structure based on anticipated demand, preferential theme park access for on-property resort guests, skip-the-line tickets or passes for additional fees, virtual queuing to eliminate visitors' concentration in certain areas of the park, interactive queuing experiences, delay the lines by harmonizing related experiences, or off-peak visiting incentives (Baker, 2016; Disney World, 2020a; Milman, 2019; Walt).

Crowding levels can also motivate theme-park operation executives to consider adopting revenue-enhancement strategies to alleviate crowds. One such approach is differential pricing based on anticipated crowds during peak and off-peak times. For example, in 2019, Disney theme parks changed their single-day admission prices by introducing a three-tiered system that charged different amounts according to the date when people visit (Walt Disney World, 2020b). The policy was designed to entice consumers to visit during less-crowded times and at the same time enhance revenue by selling more expensive tickets on higher-traffic days. Another revenue-enhancement strategy in crowded theme parks is to offer an exclusive reduced-wait queue line for higher-paying

customers. For example, Universal Express Pass, currently ranging between US$40 and US$150, allows customers to skip the lines at most of the parks' attractions and access priority seating at shows (Universal Orlando, 2020).

Marketing executives in the theme-park industry should develop creative marketing campaigns to enhance their brand image and carefully examine the impact of perceived crowding on their guests' behavior. In addition, operation managers should examine carefully their guests' perceptions regarding particular experiences identified in the study like retail and shopping activities that typically generate extra income to the park, internal access and navigation within the park, outdoor entertainment experiences, as well the pre- and post-experience of external access to and from the park. New creative experiences should be developed to cater to their patrons' needs and consequently increase satisfaction and loyalty.

After the study and the paper were completed, COVID-19 transpired and changed the focus of academia and industry from crowding and over-tourism to tourism in crises due to catastrophic events. While the UNWTO and WHO have been working to assist countries and destinations to ensure that health measures are implemented to minimize unnecessary interference with international traffic and trade, it is too early to estimate the impacts that this outbreak will have. Preparation efforts to alleviate fears, reduce adverse impacts, and plan for recovery are therefore crucial, especially for densely populated and highly visited tourist attractions, typically impacted by crowding and over-tourism. At this time, when the COVID-19 pandemic is spreading exponentially globally, it is an ideal period for overcrowded destinations and attractions to consider and develop new strategies to manage the masses of tourists when they return. As consumers try to control the spread of the virus by canceling their travel plans, many still have the travel bug. This is the time to effectively study, monitor and manage crowds for optimum results; Research on technology like virtual reality (VR), augmented reality (AR), or 360-degree content can be used to manage crowding while preserving optimal guest experiences during pandemic times (Haugen, 2020).

For example, when the popular Ha'ena State Park in Kauai closed due to catastrophic flooding in 2018, Hawaii state officials took the opportunity to integrate technology into its future visitation management plans. When the park reopened in 2019, it introduced visitor limits supported by a web-based advanced reservation system and corresponding shuttle system. Technology also helped the traditionally crowded park to conduct surveys that collected user-enabled location data via smartphones and smartphone apps within the park's geo-fenced boundary. Additional visitor profile data entered by smartphones also provided detailed visitor demographic information within the park. The data were analyzed and plotted on a map so park authorities could learn about the more- and less-frequented areas in the park, better serve park users based on their needs and habits, and deploy staff to different locations at the tourist attraction (Haugen, 2020). Additional strategies should include human resource training to deal with the pandemic crisis. The tourism industry is prosperous and resilient, yet vulnerable to this type of external shocks. For it to become resilient, a spectrum of situations and outcomes need to be foreseen and planned for to keep it sustainable.

In light of the COVID-19 pandemic's social-distancing necessity, many theme parks and attractions around the world have adopted several policies upon re-opening. For example, a reservation system was introduced to limit the number of guests admitted each day. When Disneyland Shanghai reopened in May 2020, the park allowed a maximum of 24,000 guests, 30% of its 80,000-person capacity (Antonio, 2020). Social-distancing decals were also placed on the ground at attractions and in high-traffic areas indicating where visitors should stand to maintain a safe distance from others. In the US, guidelines were determined at the federal, state, and county levels, and theme parks have followed government requirements, along with recommendations from the Center for Disease Control and Prevention (CDC) (Antonio, 2020).

As theme parks have been historically regarded as hedonistic consumption destinations (Milman & Tasci, 2018), theme parks should seek innovative entertaining operation policies while adhering to social-distancing guidelines. Creative ideas from other hospitality operations transformed the social-distancing necessity into entertaining and interactive experiences. For example, a cafe in Germany distributed straw hats with two colorful swimming noodles attached to the top to keep customers apart in a fun way (Schmidt & Guy, 2020). Using the same idea, Burger King Restaurants in Germany have introduced large-sized crowns that diners can wear and will keep them safely apart (Gibson, 2020; Schmidt & Guy, 2020). Other European restaurants placed mannequins, characters, or stuffed toy animals to space out customers in their indoor and outdoor facilities (Gibson, 2020; Schmidt & Guy, 2020).

Additionally, innovative technology emerged to monitor social distancing in the workplace, retail establishments, and other public areas (Crowd, 2020; Google, 2020; Right). For example, Google has released a new free tool called Sodar ('social-distancing radar'), an augmented reality application that lets people view social-distancing guidelines superimposed over real geographical space around the user (Google, 2020). Another example is the *Crowdless* application that uses anonymized existing data sources like Google Maps to track the movements of mobile devices. It combines this information with crowd-sourced data by asking the user to confirm whether or not the location is busy (European Space Agency, 2020). Many theme parks have already started adopting variations of these technologies. For example, Attractions.io has created a new social-distancing package that allows visitors to use their application to purchase admission tickets or order food to reduce contact with employees. The technology also allows crowding control through virtual queueing and enables distance alerts and follow-up of infected people (attractions.io, 2020). To ensure that guests comply with the applicable distance rules, Europa Park has developed an application called Distance Radar to motivate their visitors in a playful way to comply with the social-distance guidelines while visiting the park. The application will be able to inform users after possible contact with an infected person (Europa Park, 2020). From an operator point of view, these technological innovations allow managers to view maps of crowded hotspots and send messages to visitors while on-site, as well as helping them to collect feedback from guests.

5.3. Methodological implications

The study has some limitations that need attention in future research. First, only experiences from the last six months were collected for ensuring fresh memories. Future research should be conducted onsite, as visitors experience the theme-park crowding and product experiences may reveal different findings. Additionally, experimental research design can be used where different levels of crowding can be manipulated to make inferences of the relationships between crowding and potential outcomes in a more controlled environment. Furthermore, the current study performed a recent technique of path modeling, PLS-SEM, to test the reliability and validity of measures and relationships among study variables. PLS was recognized for its capability to estimate under conditions of small samples and data non-normality (Wong, 2010). Given the emerging stage of crowding literature accompanied by the scant number of any existing models measuring crowding relationships especially at theme parks, this study strived to empirically determine the predictive power of a network of concepts, rather than confirming well-established theoretical structures (Sarstedt et al., 2014). PLS-SEM was thus selected as an appropriate analysis technique. Future research can compare findings through maximum likelihood-based SEM modeling.

Furthermore, the study was conducted before the coronavirus COVID-19 pandemic. With global level stay-at-home orders, the profile of destinations and attractions changed from overcrowded places to

ghost towns within less than two months. Therefore, the study findings would be completely different if repeated post-pandemic era. Nonetheless, the study shows the positive side, popularity, of the crowding coin, and thus signals the necessity of some level of crowds for positive tourist experiences in certain experience contexts such as theme parks.

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