The influence of perceptions of other consumers on consumer responses and the mediation of crowding tolerance: a study on tourism, hotels and the Olympics

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Abstract: During service encounters, consumers perceive each other. This includes at sporting events where many human interactions occur. Large crowds of people tend to arouse negative emotions, even if the experience promotes positive emotions. This paper investigates the influence of consumer's perceptions of each other and the mediating role of crowding tolerance in consumer responses. Research is lacking to demonstrate the effect of interactions between consumers and findings are even scarcer for tourism. This study addresses the global sports entertainment industry and the hotel environment for tourists. A survey targeting the Rio de Janeiro Olympics in 2016 was conducted with students and then we applied structural equation modelling (SEM). The results indicate that the perception that a consumer has of other consumers (in a hotel) has a strong relationship with word of mouth and satisfaction and that such a relationship is mediated by the negative perception generated by the agglomeration.

Keywords: consumer behaviour; perception of other consumers; crowding; crowding tolerance; word of mouth; satisfaction.

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1 Introduction

In crowded entertainment markets, service providers need to devise service strategies and tactics based on understanding the variables and mechanisms that influence their target customers. In that context, they need to ensure they include consumer influences on each other.

Imagine that individuals will travel to another state or country to watch matches of their national team in their country's favourite sport. The expectation is that their own team will win the games and win the tournament. Upon arriving at the airport, they notice several other fans apparently in the same situation. Once in the hotel, the perception about the other fans warns that more people chose the same hotel. These individuals begin to compare those other people with themselves and evaluate similarities and differences. At the same time, cognitive processing starts assessing other variables, such as temperature, sounds and the service environment as a whole. Soon, they also analyse the human agglomeration and the capacity of the hotel to attend to everyone. The individual's (positive) expectation of an exciting trip begins to suffer from a negative influence from the potential lack of space.

In hypothetical situations like this, the hotel client experiences competing emotions:

- positive, linked to the experience of the promoted service

- negative, due to occasional disruptions of the event itself, given the high congregation within the same enclosure.

Thus, the consumer choice process involves both positive and negative emotions (Schwartz, 2004). Too much crowding in a tourism experience can arouse negative emotions, although the experience naturally arouses positive feelings (Vaske and Shelby, 2008). Evidence in the literature, however, indicates that in tourism a crowd can help the experience to be enjoyable; known as the good agglomeration (Bryon and Neuts, 2008). There is a need to research the impacts of crowding, which includes the relationship of the perception of other consumers to consumer satisfaction. When satisfied, after all, the consumer will be more likely to repurchase and recommend the product (services and/or goods; positive word of mouth) (Anderson et al., 1994).

Satisfaction refers to the outcome experienced, given the consumer's expectations regarding the benefits of a service and/or goods offered. Satisfaction is also the perceived contentment, in comparison with what was expected, after consumption (Oliver, 1997). Therefore, satisfaction is based on the relation between expectations and performance, both perceived. Satisfaction arouses interest in business as much as in academia. For decades, many have researched in its multiple facets: cognitive, emotional, behavioural and economic (Schroeder et al., 2011).

In services, the customer's tolerance (variable and intangible) plays an important role. What the consumer gets most of the time is different from what he or she may have expected, at every service. This is not only due to the service itself, but also to the individual and circumstantial characteristics at the time. In hotels, satisfaction may be associated with characteristics of the establishment and its services, as well as aspects intrinsic to the guests (behavioural, cognitive and emotional, already mentioned) or not controlled by the provider (such as the conduct of other guests and the agglomeration of them). Understanding the customers' needs and expectations are paramount in the formation of customer satisfaction, since satisfaction depends on meeting expectations (Gianesi and Corrêa, 2010; Oliver et al., 1997). Crowding tolerance deals with the extent to which the consumer understands that human agglomerations may be circumstantial and such tolerance reduces the negative influence of agglomerations on the overall experience. This variable is more important in services because it mediates the relationship between expectations and results (Zeithaml et al., 1993).

With this background, this paper investigates the relationship between the perception of other consumers and the current customer's responses (word of mouth and satisfaction) with the service, mediated by crowding tolerance. To be able to maintain the relationship with clients in services (Slongo and Müssnich, 2005), it is necessary to know them and their idiosyncrasies, with the appropriation of data and knowledge for decision making (Topanotti, 2007).

This paper has five sections: Section 1 being introductory. In Section 2, hypotheses are derived from the theoretical framework. Section 3 includes the method and the empirical procedures. Section 4 presents the results analyses, which are discussed in Section 5.

2   Theoretical framework

In this section, the theoretical framework introduced includes crowding and the influence of the perception of other consumers on satisfaction and loyalty. Hypotheses were developed that articulate the connections between these elements.

2.1   Crowding

To be successful, companies must know the wishes, preferences and other influences (with multiple dimensions) on the decision-making process of buying a product and/or brand to the detriment of so many others. Such knowledge informs the intricate fit between supply and demand (Churchill and Peter, 1995) especially when companies are not dealing with simple commodities.

In services, among the many constructs with potential consumer impact (Turley and Milliman, 2000), the research on crowding from psychology and sociology (Altman, 1975; Rapoport, 1975; Stokols, 1972) stands out. The perception of crowding is a psychological and practical condition observed when the expectations of the individual, in the search for space, outweigh the real situation of the environment in which he or she is located (Stokols, 1972; Brandão and Parente, 2012). Crowding studies inspire shopkeepers to work on different consumer profiles and buying decisions.

Agglomerations appear in diverse situations and contexts, as in highways, theatre lobbies, soccer games and transport terminals. Most individuals experience crowded conditions over the course of their lives. There is voluntary and involuntary agglomeration (Edney, 1977). Crowding, for the most part, is voluntary. Classrooms, prisons, hospitals and military installations have been approached as special situations where the individual is not free to leave; this is mandatory crowding.

In consumer behaviour, Harrell et al. (1980) and Eroglu and Machleit (1990) were the pioneers. Afterwards, Pons and Laroche (2007) improved the distinction between density and perception of agglomeration and in the definition of density went beyond the number of people in one place, taking also into consideration social and psychological aspects. They emphasised:

- the perception of density in crowded environments and its impacts on consumer affective evaluation in retail

- crowding tolerance as a trait of the person determining his/her acceptance for crowding effects (Pons and Laroche, 2007).

The impact of crowding on consumer behaviour comes from *Environmental Psychology* and its study of behavioural changes resulting from crowding. Loo (1975) suggests broadening the understanding of the various impacts of density on human behaviour and that high density is not the only thing that implies crowding. They distinguish between crowding and density given the weight of social incentives and the limitation of space. In this phenomenon, Stokols (1972) adds social and environmental elements. From Stokols (1972) perspective, the perception of crowding can be affected by the inability of people to establish human relationships (Brandão and Parente, 2010).

For Machleit et al. (2000), the higher the human density, the greater the perception of crowding. The stress generated by crowding decreases satisfaction. The greater the perception of crowding, the more negative feelings and stress, especially in consumers with a high need to control situations. There the perception of crowding intensifies the negative sensations, which in turn negatively affect satisfaction. Alternatively, individuals who have more positive emotions, have greater consumer satisfaction, leading to more purchases (Machleit et al., 2000).

However, Neuts and Nijkamp (2011) and Popp (2012), among others, report that positive emotions are linked to high density (good crowding). They tested whether the perception of crowding would necessarily lead to negative evaluation in tourism contexts. The first of these studies found intrinsic factors of the individual (as a reason for travel and especially nationality) to better explain the perception of crowding than situational conditions. They concluded that, in tourism, agglomeration is not always perceived negatively, especially for the tourist who perceives density as collective interest in a place.

Good crowding also emerges in Popp (2012), diverging from most of the literature that has the perception of crowding associated with stress and negative feelings. Their findings indicate that individual characteristics may be determinant for the perception of crowding. The person with greater interest in relating and sharing experiences is less likely to form negative perceptions of crowding. The study also approaches adaptation and coping mechanisms, in which the tourist changes the focus, schedules and even the itinerary to obtain the perception of good agglomeration. But there is a fine dividing line between good and bad agglomeration, and that division depends, among other antecedents, on the expectation of the individual. Finally, it is pointed out that cultural and behavioural factors of other tourists can intensify the negative perception of agglomeration.

In short, in crowding tolerance, the consumer understands that crowding can be circumstantial and this reduces the negative impact of the occurrence. In services, this variable changes and includes the relationship between expectations and results (Zeithaml et al., 1993), and hence influences the effects of agglomeration on satisfaction. This perspective is aligned with that of Eroglu and Harrell (1986). In turn, Popp (2012) points out that both cultural and behavioural factors of other tourists can intensify the negative perception of crowding of a tourist.

2.2   Perception of other consumers

The effect of other people on an individual is defined by social impact theory (Latané, 1981). Three principles make up this theory:

- physical size or quantity of individuals

- physical proximity or immediacy

- intensity of social forces or importance that the individual attributes to social presence.

The theory explains the impact of the presence and behaviour of other customers on a consumer. Some, such as Argo et al. (2005), when applying the theory of social impact to retail, detected that social presence, even when there is no interaction between clients, affects the emotions and behaviours of those present.

However, in the present study, we confirmed that consumers were more likely to perceive the presence of older consumers (middle age and/or elderly) (Hui et al., 2009; Martin, 1996; Thakor et al., 2008). Customers assess other consumers, their genders, behaviours and their general appearances and this impacts their evaluations of the retailer, especially if the customer identifies dissimilarities between him/herself and the others in the environment (Borges et al., 2010; Söderlund, 2011).

On the basis of the theory of social impact, Brocato et al. (2012) developed the OCP (other customer perception) scale to evaluate the perception of other customers. This is a multi-dimensional scale, with 13 items along three dimensions:

- similarity

- physical appearance

- appropriate behaviour.

Similarity is the degree of identification that the consumer has with the other consumers present in the environment, or the feeling of sharing the same social identity. Physical appearance is the physical characteristics and attributes of other customers perceived by the consumer, such as age, gender and physical appearance. Appropriate behaviours are actions or manifestations compatible with a social environment (Brocato et al., 2012). OCP, which emerged in the USA, was validated in Brazil (Araújo et al., 2013).

Among the possible influences of other consumers on a consumer are the effects of non-interactional contact in the purchasing/consumption environment. But it is important to understand the emotions and behaviours of consumers who face this social impact, especially in services.

2.3   Satisfaction and word of mouth

Satisfaction research, over the years, has taken into account cognitive, emotional, behavioural and economic aspects (Schroeder et al., 2011). In terms of emotion, customer satisfaction is a feeling of pleasure generated when the expectation of goods or services are attained (Pizam and Ellis, 1999) or the result found, meeting the consumer's expectation of the benefits of a product (Oliver et al., 1997). Satisfaction, then, has to do with the contentment felt in relation to the expectations of consumption. Customer satisfaction is influenced by the characteristics of the goods or services, the process of choice, quality and the perceived value (Spreng et al., 1996).

Consumer satisfaction has been found to be fundamental to organisations, favouring repurchase and other subsequent results (Lopes et al., 2009). High satisfaction encourages positive word of mouth (Reichheld and Sasser, 1990), which impacts purchase decisions, as it is generally derived from reliable sources (Kozinets et al., 2010).

Word-of-mouth is a verbal communication between the sender and receiver (Arndt, 1967; Taylor and Hunter, 2002) or, more completely, informal communication between people, linked to the purchase of a good or service and its suppliers, generally directed to other potential consumers (Westbrook, 1987). The influence of word-of-mouth comes from the perception of impartiality, since it is usually initiated and disseminated outside of company control (Artoni and Daré, 2008).

In services, in view of characteristics such as intangibility and variability, consumers are more likely to rely on the statements of other people (Zeithaml et al., 1993; Gremler et al., 2001). Word-of-mouth comes from positive or negative feelings generated by the experience of consumption and has to do with altruism. If satisfied, the consumer wishes to reward the company. He or she thus hopes to support the supplier and see his/her success maintained (Hennig-Thurau et al., 2004). In general, word-of-mouth contributes to sales, especially when the customer does not know the product and acquires it based on the reputation of the company.

2.4   Development of hypotheses and conceptual model

In sports event tourism, consumers often experience positive and negative emotions (Popp, 2012). For example, when perceiving other clients as similar to themselves, some consumers have a positive reaction. But a decline is expected in this positive reaction as negative sensations come into focus and act on the consumer, such as that coming from overcrowding. The behavioural intentions of the tourist should therefore reflect both the expectations formed about the event and an adjustment due to circumstantial aspects, such as excessive crowding that affects the capacity of the service.

Studies about the effects of a high density of people include customer response variables such as (re)purchase intention, intention to return, intention to spend, positive and negative word-of-mouth intention, complaint intent and overall satisfaction (Mittal et al., 1999; Matos, 2011). In this paper, we look at the intention of word-of-mouth and satisfaction, very pertinent to the Olympics event, which happens only every four years and, in 2016, occurred in Brazil. Much has been reported about this event, which already informs the population targeted by this research. Regarding this service, the consumer perceives other clients directly in the provider's environment. It is hoped that such a consumer, when faced with others who are similar to themselves and with their expected social behaviour (Brocato et al., 2012), will be inspired to talk about this experience. Hence the first hypothesis was built.

H1: The perception of other consumers (OCP) by the consumer is positively related to their intention to engage in word of mouth

The participants of a sporting event tend to share a positive mood. The hotel environment harbours the expectation of the main service (the event) and peripheral services, which also make up the whole of the experience. The hotel is a suitable place for tourists to compare their expectations and their results, and there is usually some adjustment in their expectations. Martin and Pranter (1989), in a segmentation of clients, have suggested that satisfaction shown through the behaviour of other clients positively influences service

experience, future intentions and overall evaluation. Thus, two more hypotheses are proposed.

> *H2: A consumer's perception of other consumers (OCP) is positively related to crowding tolerance*

> *H3: The perception of other consumers (OCP) is positively related to satisfaction*

The high influx of people to a service environment can trigger negative emotions. These emotions, however, in a sporting event with large numbers of people, can be reduced depending on the tolerance of the people. The composition of the effects may have a positive outcome. Crowding tolerance should therefore attenuate a negative emotion resulting from a consumer's perception of other consumers in the same environment (Machleit et al., 2000). Crowding tolerance is thus likely to have positive relationships with word-of-mouth and satisfaction, but be less intense than those arising only from the perception of other consumers.

> *H4: Crowding tolerance is positively related to word-of-mouth*

> *H5: Crowding tolerance is positively related to satisfaction*

To the extent that crowding tolerance represents an adjustment in the expectation of service due to the large number of people (Machleit et al., 2000), this tolerance is reasoned to mediate relationships with word-of-mouth and satisfaction. From this logic emanate the last two hypotheses.

> *H6: The relationship between a consumer's perception of other customers and word of mouth is mediated by crowding tolerance*

> *H7: The relationship between the perception of other customers and satisfaction is mediated by crowding tolerance*

The integration of the hypotheses leads to the conceptual model outlined in Figure 1.

Figure 1   Conceptual model of influences of the perception of other consumers and the tolerance to crowding (see online version for colours)
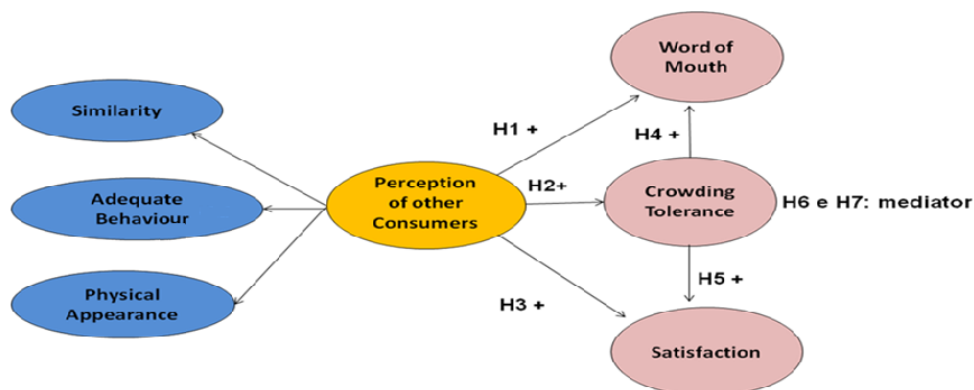
Source: The authors

3   Empirical methodology and procedures

For the test of the conceptual model (Figure 1), we adopted a quantitative and descriptive research methodology (Malhotra, 2008), with a single cross-section of subjects. Its implementation was completed with the following scales, samples, data collection and analysis techniques.

3.1   Scales

The crowding tolerance scale was used by Machleit et al. (2000), which were already validated in Brazil (Brandão and Parente, 2012). For the perception of other clients (OCP) we used the scale by Brocato et al. (2012), with the dimensions similarity, physical appearance and adequate and validated behaviour in Brazil (Araújo et al., 2013). The satisfaction scale was proposed by Oliver and DeSarbo (1989) and the positive word-of-mouth intention known also by word-of-mouth has three items and was proposed by Zeithaml et al. (1996). The measurement of the total of 26 items was a Likert scale, with 7 points, from 1 – I fully disagree to 7 – I totally agree.

3.2   Sample and data collection

Sampling was non-probabilistic and by convenience (Hair et al., 2009; Mattar, 2008). The sample for this research was composed of university students taking an administration course. Participants were from a higher education institution in two of the largest states (São Paulo and Minas Gerais) in Brazil. A total of 118 questionnaires were completed.

The data were collected through an online questionnaire, available on the Survey Monkey site. An invitation to respond was sent to the target population in the two universities. The link to the questionnaire (which includes 32 items) was sent by email (in addition to a social network site of the authors) to about 200 students and 118 valid questionnaires were returned.

In the questionnaire, the respondent was instructed to imagine him or herself in a hotel, on a sports tour, using as an example the Rio de Janeiro Olympic Games. Respondents were encouraged to picture the scenery of a hotel with many people in one setting. To stimulate the creation of the sports tourism context, the respondent read a description of the scenario and saw Figure A1. The scenario and figure are included in (Appendix A). Then he or she responded to the first block of questions (26 items of the scales). The second block followed, containing six questions on socioeconomic profile. Data collection took place between March and April 2016.

3.3   Analysis techniques

Structural equation modelling (SEM) was applied, making it possible to analyse the multiple relations between the variables, for the various hypotheses, simultaneously. In the SEM the partial least squares method (PLS), based on a correlation matrix, and compatible with the expected non-normality of the data (Chin, 1998; Hair et al., 2014) was chosen. The processing was done with the software SmartPLS2.0M3 (Ringle et al., 2005). The PLS fit here because it does not require normal distribution; accommodates

metric and ordinal scales, favours training models and served well for prediction (Hair et al., 2011).

The reliability of the model was examined by internal consistency, using Cronbach's alpha (values between 0.6 and 0.7) and composite reliability (values between 0.7 and 0.9). The convergent and discriminant validities of the constructs of the model were then evaluated. Convergent validity indicates the extent to which a variable correlates positively with other measures of the same construct. The discriminant validity, which indicates the degree to which constructs are distinct, was probed with the criterion of Fornell–Lacker, in which the square root of the extracted average variance (AVE) of a construct must be superior to any correlation of it with the other constructs of model. We also observed discriminant validity through the correlation of the items of a construct, and if they were expected to be larger in their dimensions than their correlation with other constructs (cross-loadings). The explanatory power of the model was measured by the coefficient of determination (explained variance, R^2).

The model adjustment index (goodness of fit, GoF) was also used as the geometric mean of the mean R^2 (structural model adequacy) and mean AVE. An appropriate GoF, in the applied social sciences, starts from 0.36 (Hair et al., 2014). In addition, the Stone–Geisser indicators for predictive validity (Q2) and the Cohen indicator (f2) of the variables, which portrays the size of the construct effect in the model (Hair et al., 2014), were calculated. Q2 must be greater than zero. The f2 has bands formed by 0.02, 0.15 and 0.35, expressing low, medium and high effects, respectively.

The significance of the relationships between the model variables was based on the bootstrapping procedure, in which student *t*-tests indicate acceptance of the hypotheses at 5% ($t \geq 1.96$, $p \leq 0.05$).

4   Results

This section presents the results, starting with the sample profile and culminating in the SEM.

In the sample, females were the majority (62.4%) and males contributed 37.6%. In the age group, the majority (37.6%) were between 25 and 34 years old and the minority (3%) were 55 years old or older. As for marital status, 50.4% were single; 42.7%, married or in stable relationships and 6.9%, separated, divorced or widowed.

Table 1 shows the results of AVE (average variance extracted) construct analysis, composite reliability, Pearson's determination coefficients (R^2), and Cronbach's alpha. The AVE was confirmed after the removal of items with a factorial load below 0.5 and had satisfactory convergent validity. As for composite reliability, values above 0.7 were observed. Therefore, the scale reliability condition is presented.

After evaluating the Pearson determination coefficients (R^2), it was verified that the variables word-of-mouth and tolerance to crowding did not present a value higher than 0.50. Cronbach's alpha values are considered adequate because the values were above 0.60 (Hair et al., 2014). The overall fit index of the model (goodness of fit – GoF) of 0.655, was higher than 0.36, which meets the adequate level for research in social sciences (Ringle et al., 2014).

Convergent validity was identified using the criterion of Fornell and Larcker, who observed the loads between the manifest and latent variables (>0.50) (Henseler et al., 2009). And the discriminant validity was identified by comparing the square root of the AVE of the construct and the correlation coefficients between the construct and the other variables. The square root of the AVE cannot be inferior to any correlation (Chin, 1998). Table 2 presents the indicators that demonstrate the discriminant validity of the model.

Table 1   Results of the analyses of convergent validity and internal consistence

Variable	AVE	Composite reliability	R²	Cronbach's Alpha
Physical appearance	0.57	0.841	0.721	0.746
Word of mouth	0.915	0.97	0.48	0.953
Adequate behaviour	0.677	0.893	0.783	0.838
Satisfaction	0.841	0.941	0.505	0.906
Similarity	0.698	0.902	0.751	0.853
Crowding tolerance	0.717	0.835	0.269	0.608

*GoF = 0.655.

    Source: Research data

Table 2   Discriminant validity of the model (see online version for colours)

Variable	AVE	Physical appearance	Word of mouth	Adequate behaviour	Satisfaction	Similarity	Crowding tolerance
Physical appearance	0.57	0.755					
Word of mouth	0.915	0.453	0.956				
Adequate behaviour	0.677	0.661	0.645	0.823			
Satisfaction	0.841	0.463	0.861	0.637	0.917		
Similarity	0.698	0.616	0.549	0.613	0.582	0.835	
Crowding tolerance	0.717	0.299	0.551	0.501	0.571	0.511	0.847

The highlighted diagonal represents the square root of AVE in the dimension.

    Source: Research data

In Table 3, the discriminant validity of the model was performed through cross-loading, which is an evaluation method performed through the cross load test. This analysis made it possible to adapt the model, since the loading of each indicator is greater than all its cross-loadings.

Using the Bootstrap resampling technique, we verified the significance of the coefficients by performing the hypothesis test. The final model has a good fit and there is evidence in favour of all the hypotheses, as shown in Table 4.

In the final structural model, the relationships between the constructs are positive and significant, in line with the hypotheses. The indicators of accuracy and predictive value of the model are considered satisfactory, as presented in Table 5.

Table 3 Crossloadings (see online version for colours)

Item	Physical appearance	Word of mouth	Adequate behaviour	Satisfaction	Similarity	Crowding tolerance
ape1	0.725	0.324	0.43	0.385	0.564	0.313
ape2	0.779	0.293	0.532	0.285	0.346	0.187
ape3	0.827	0.447	0.572	0.405	0.406	0.242
ape4	0.681	0.293	0.456	0.315	0.538	0.155
wom1	0.433	0.945	0.618	0.772	0.514	0.505
wom2	0.437	0.954	0.637	0.84	0.516	0.524
wom3	0.43	0.97	0.595	0.856	0.545	0.55
beha1	0.462	0.489	0.743	0.48	0.421	0.345
beha2	0.531	0.474	0.756	0.482	0.438	0.34
beha3	0.559	0.582	0.88	0.566	0.504	0.446
beha4	0.612	0.57	0.9	0.563	0.63	0.498
sat1	0.359	0.71	0.509	0.893	0.491	0.439
sat2	0.448	0.828	0.638	0.935	0.57	0.56
sat4	0.456	0.82	0.593	0.923	0.534	0.559
sim2	0.487	0.513	0.431	0.516	0.73	0.348
sim3	0.569	0.504	0.573	0.522	0.904	0.515
sim4	0.574	0.503	0.602	0.563	0.908	0.529
sim5	0.41	0.301	0.415	0.325	0.786	0.273
ct2	0.179	0.397	0.319	0.476	0.474	0.818
ct4	0.317	0.526	0.515	0.492	0.399	0.875

Source: Research data

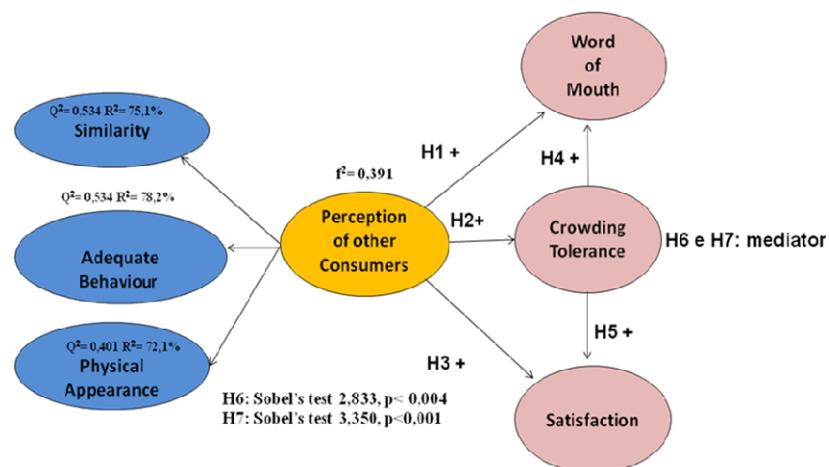Figure 2 summarises the main indicators of the model, which shows excellent explanation of the dependent variables.

Figure 2 Relational-theoretical model: results of the analysis (see online version for colours)

Table 4   Structural final model

Hypothesis	Signal	Relationship	Original load	Bootstrap mean	Standard error	Test t	Sig	result
H1	+	OCP → Word of mouth	0.491	0.505	0.078	6.299	0.001	Accepted
H2	+	OCP → Crowding tolerance	0.518	0.518	0.073	7.103	0.001	Accepted
H3	+	OCP → Satisfaction	0.495	0.505	0.072	6.791	0.001	Accepted
H4	+	Crowding tolerance → Word of mouth	0.2957	0.286	0.087	3.379	0.001	Accepted
H5	+	Crowding tolerance → Satisfaction	0.314	0.309	0.071	4.406	0.001	Accepted
H6		OCP → CT → Word of mouth	–	–	–	2.833	0.004	Accepted
H7		OCP → CT → Satisfaction	–	–	–	3.35	0.001	Accepted
–		OCP → Physical appearance	0.8491	0.850	0.035	23.897	0.001	–
–		OCP → Adequate behaviour	0.8846	0.888	0.023	37.970	0.001	–
–		OCP → Similarity	0.8664	0.864	0.027	31.894	0.001	–

Source: Research data

Table 5   Accuracy and predictive value of latent variables in the model

Indicator	R^2	Q^2	f^2
Similarity	75.10%	0.534	–
Adequate behaviour	78.20%	0.534	–
Physical appearance	72.10%	0.401	–
OCP	–	–	0.391
Crowding tolerance	26.9%	0.194	0.184
Satisfaction	50.50%	0.409	–
Word of mouth	48%	0.432	–

Source: Research data

5   Discussion

The objective of this paper was to analyse a consumer's perception of other consumers and the tolerance to crowding and its influences on satisfaction and the positive word-of-mouth intention.

The proposed model provides an explanation of satisfaction and expressive word-of-mouth ($Q^2 = 0.409$, $R^2 = 50.5\%$ and $Q^2 = 0.432$, $R^2 = 48\%$, respectively). The variables obtained similar values that the model could be very predictive of these variables. Sports events are often a source of satisfaction for participants, which leads them to spontaneously share their experiences. This appears in frequent personal reports and photos on social networks. The hotel setting is part of the entertainment experience and also contributes to customer satisfaction and word-of-mouth.

In the predictors of satisfaction and word-of-mouth, this paper proposed, in addition to a consumer's perception of other consumers (tourists), the tolerance to crowding to adjust the level of service received. The perception of other consumers ($f^2 = 0.391$) was more relevant in explaining the responses of the tourist–consumer than crowding tolerance ($f^2 = 0.184$). This was expected because tolerance to crowding involves a perception of other negatively inclined people.

The hypothesis H1 (confirmed, $\Gamma = 0.491$, $t = 6.299$, $p < 0.001$) evidences the strength of the relationship between OCP and word-of-mouth. The perception that the tourist forms of other tourists is a relevant intention to propagate the positive experience. But in the intense experiences of service, among a large number of people, the adjustment that tolerance to crowding provides better explains the phenomenon of shared/widespread consumption. The OCP's indirect path to word of mouth (H6), mediated by crowding tolerance, emphasises that understanding a consumer's perception of other consumers helps clarify the influence of consumers on each other in consumer experiences, despite the fact that there are other variables involved in this relationship (Sobel's test = 2.833, $p < 0.004$). Something similar happened in the other dependent variable: perceiving other tourists as similar increases tourists' satisfaction (H3, $\Gamma = 0.495$, $t = 6.791$, $p < 0.001$). It is also necessary to understand the relationship between agglomeration and crowding, as well as satisfaction (H7, Sobel's test 3350, $p < 0.001$). The relationship between the perception of other consumers and crowding tolerance was identified in this study, confirming that its mediating role is relevant (H2, $\Gamma = 0.518$, $t = 7.103$, $p < 0.001$).

The perception of other consumers has an important role in the model ($f^2 = 0.391$) and its three dimensions were identified. The OCP captures the perception of consumers among themselves, a major aspect of consumer experiences. In addition to the traditional marketing stimuli (such as advertisements and point-of-sale material) or environmental (for example, temperature and sounds), social dimensions must be considered in the consumer environment. In a hotel, the perception of other tourists–consumers is very clear, as in the consumers of different teams from different locations with different individual characteristics.

The 'adequate behaviour' dimension ($Q^2 = 0.534$, $R^2 = 78.2\%$) impacts the perception of other consumers ($\Gamma = 0.866$, $t = 37.970$, $p < 0.001$). Similarly to the similarity dimensions ($\Gamma = 0.866$, $t = 31.894$, $p < 0.001$, $Q^2 = 0.534$, $R^2 = 75.1\%$) and 'physical appearance' ($\Gamma = 0.8491$, $t = 23.897$, $p < 0.001$, $Q^2 = 0.401$, $R^2 = 72.1\%$). These results are applicable to the scale of OCP in tourism and hotels, something not yet reported.

There was a pattern of tolerance to crowding in the context studied, from hotel to sports event with a large participation of people ($Q^2 = 0.194$, $R^2 = 26.0\%$, $f^2 = 0.184$). Therefore, it is important to consider crowding tolerance in the research and management of tourism consumption, and its role of adjusting consumer expectations.

6   Final considerations

The objective of this paper was achieved by the solid properties of the proposed model and for the support for the series of hypotheses, highlighting the mediation of crowding tolerance.

Some theoretical contributions stand out. First, the perception of other consumers was related to tolerance to crowding. To the best of our knowledge, this study innovates by establishing such a relationship. The perception of other consumers is a consumer's perspective of their counterparts, taken as a background of attitudinal responses. However, in services, due to their intrinsic characteristics, it is expected that such perception will include other related services, constituting a general experience. Here consumers need to adjust their expectations to service delivery in order to maintain their initial goal of positive results. Second, this psychological approach between expectation and delivery of service, in the various elements of service experience, through crowding tolerance is another theoretical contribution of this research.

On the methodological side, this paper analysed the perception of other consumers in a context different from the usual one. We took hotel services in a sporting context, serving the OCP scale's external validity. On the other hand, the use of SEM – able to contemplate interactions between variables simultaneously – is tailored to the hotel scenario in the models studied, with several variables of influence on satisfaction and word-of-mouth and several possible answers. The use of the sporting event scenario of the Olympics boosts the understanding of consumer behaviour in a very special context.

For organisations, this research yields interesting contributions. It is useful to know of the psychological adjustment that the consumer undertakes in the service experience. In addition, a four-year sporting event, like the Olympics, makes it difficult to observe the phenomena, so here is one contribution. It was pointed out that social dimensions are relevant in the management of hotel services. Tourists perceive each other as members of a common interest group (tourists and customers), but also recognise the distinctions between themselves. That is, the common interest does not eliminate divergences that can influence the tourist's responses to the hotel. But such disagreements and other contingencies can be tolerated, and it is up to the manager to understand to what extent this happens. Therefore, managers have to gain from actions in hotels other than those that generate traditional marketing stimuli. This addition is embodied in these social dimensions.

Among the limitations of the research is the lack of respondents actually hosted during the 2016 Olympics events. It is suggested that surveys study clients in the moment of a real event and address other contexts of entertainment services (besides sport, now addressed). It is also suggested that such surveys measure other consumer responses such as complaint and loyalty.

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Appendix A

Figure A1 Crowding stimulation (see online version for colours)

Source: Tripadvisor (available in <https://www.google.com.br/search?q=
crowding&biw=1366&bih=643&source=lnms&tbm=isch&sa=X&ve
d=0ahUKEwimrdzpzOHNAhUDS5AKHegmAuQQ_AUIBigB#tbm
=isch&q=crowded+hotel&imgrc=4AIQw_7EGdsW3M%3A>
(Accessed 5 February, 2016).

Scenario description

You should assume that you finally concluded your studies and the recognition for your dedication came quickly from your boss. The long-dreamed promotion and salary increase came at the right time, since in less than a month you will be on vacation. As a sports lover, you will make true the dream of following the Olympic Games in Rio de Janeiro. Consider that, after searching, you chose a hotel at a reasonable value for the occasion, good infrastructure and well located (easy access to the Olympic Games' events). Arriving at the hotel, you become surprised with the number of guests: all rooms were occupied. Soon you realise that most guests are from Portugal. On the first day of hosting, you decide to take advantage of the shared areas of the hotel and go to the bar for a drink. You realise that a great deal of the guests had the same idea. There is a crowd to order. When you finally sit, you perceive that the Portuguese tourists are mostly taking spirits, such as whisky, while you drink a cold beer. The next morning, you wake up early to take advantage of the hotel's swimming pool. When you get a place there to sit down, you cannot stay without noticing the excitement with the official opening of the Olympic Games, to happen in the next day. For the comments, people like sporting events a lot. Bermuda shorts and large swimsuits are the favourite swimsuits of those Portuguese tourists. Now the Olympic Games are over and they were a success. You have accomplished your dream to be in the event. It is time to obtain the hotel bill and go back to your city. In line at the checkout, you pay attention to the agglomeration and to a group of people eager to leave soon, while another group debate the gold medals of each athlete.