

A Cross-Validation Study of the Other Customers Perceptions Scale in the Context of Sport and Fitness Centres

Un estudio de validación cruzada sobre la escala de percepción de otros consumidores en el contexto de centros deportivos y de fitness

Nicholas D Theodorakis

Aristotle University of Thessaloniki, Grecia

Abstract

This study aimed to extend the use of the Other Customer Perception (OCP) scale by testing its psychometric properties and its generalizability in the context of sport and fitness centres. 360 members of three fitness clubs in Greece participated in the study. They were randomly divided into two subsamples (a calibration and a validation sample). Using Confirmatory Factor Analysis and composite reliability estimates the construct validity of OCP was supported. A cross-validation approach using invariance testing procedures across the two samples further supported the validity and generalizability of OCP in sport and fitness settings. OCP was found to be a reliable and valid scale for assessing the role of other customers in the service experience.

Key words: perceptions of other customers; service experience loyalty; sport fitness.

Resumen

Esta investigación ha pretendido extender el uso de la escala de percepción de otros consumidores (OCP) por medio de la evaluación de sus propiedades psicométricas y su generalización en el contexto de centros deportivos y de fitness. La muestra la compusieron 360 miembros de tres clubes de fitness en Grecia, los cuales fueron divididos en dos submuestras (calibración y validación, respectivamente). Tras la aplicación del análisis factorial confirmatorio y estimaciones de fiabilidad compuesta, los resultados indican la validez de constructo de la escala. Además, se ha realizado un análisis de invarianza para el estudio de validación cruzada, que ha apoyado la generalización de su validez en este contexto de estudio. Por tanto, esta escala es fiable y válida para evaluar el papel de los otros consumidores en la experiencia con el servicio.

Palabras clave: percepción de otros consumidores; experiencia con el servicio; marketing deportivo.

Correspondence/correspondencia: Nicholas D Theodorakis
Aristotle University of Thessaloniki, Grecia
Email: ndtheo@phed-sr.auth.gr

Introduction

The creation of a loyal customer base is probably the biggest challenge for sport and fitness centre managers, especially since this business sector is characterized by slow growth, unstable demand, and high drop-out rates (Buckworth & Dishman, 2002; Ferrand, Robinson, & Valette-Florence, 2010). Accordingly, an ongoing research agenda has been developed by sports management scholars in an attempt to comprehend loyalty formation in this sector. As a result, service quality, customer satisfaction, and perceived value were found to be key drivers of sport and fitness customers' loyalty (Cronin, Brady, & Hult, 2000; Murray & Howat, 2002).

Numerous service evaluation models have been presented in the literature, demonstrating that several service attributes related to the fitness facility environment (i.e. design, equipment, cleanliness), interactions with employees (i.e. behaviour, knowledge, availability), and the outcome of participation (i.e. relaxation, personal accomplishment) have directly or indirectly impacted on customer loyalty through perceived value and customer satisfaction (Alexandris, Zahariadis, Tsorbatzoudis, & Grouios, 2004; Ferrand et al., 2010; Howat, Crilley, & McGrath, 2008; MacIntosh & Doherty, 2007; Silcox & Soutar, 2009). However, despite voluminous research on service evaluation in this context, scholars have rather neglected the impact other customers have upon one's cognitive and affective evaluation of service, and its subsequent influence on customer loyalty. This is rather surprising given how earlier theoretical models have called for the importance of including inter-client interactions when assessing customer experience in this sector (Chang & Chelladurai, 2000; Ko & Pastore, 2004). As Ko and Pastore (2004) suggest, sport and fitness consumption episodes are social processes in which customers interact and influence each other. In addition, traditional sports marketing theory has highlighted the role other customers play inside sport facilities and their effect on other patrons' behaviour, since sport products are also produced, consumed, and delivered inside the fitness centre (Mullin, 1985; Mullin, Hardy, & Sutton, 1993; Shilbury, Quick, & Westerbeek, 1998).

With a few notable exceptions (e.g. Grove & Fiske, 1987; Lehtinen & Lehtinen, 1991; Martin, 1996), the role of other customers in service exchanges have also received little attention from service management researchers, even though previous research has shown the impact of other customers on satisfaction and loyalty (Moore, Moore, & Capella, 2005). To fill this research void, Brocato, Voorhess, and Baker (2012) recently developed the Other Customer Perception (OCP) scale to assess individual's perceptions of other customers during their own service experience. Using a grounded theory approach, Brocato et al. used qualitative data to identify three dimensions of this measure. The first, similarity, has its tenets in social identity theory (Tajfel, 1981), and is defined as "*the extent to which an individual customer felt that they were similar to and could identify with other customers in the service environment*". It was suggested that customers prefer to spend time with similar others in service facilities. Also, customers more positively evaluate those that they can identify with. Secondly, physical appearance is defined "*as the physical characteristics and overall look of other customers in the service environment as perceived by individual customers*". Based on information availability, it was proposed that a customer's evaluation of the service environment is based on several factors related to design (i.e. store design), ambience (i.e. music) and sociality (i.e. other customers, employees) (Baker, Parasuraman, Grewal, & Voss, 2002). This dimension is supported by the theory of affordance (Gibson, 1979) and the concept of consumer inferences (Huber & McCann, 1982). The theory of affordance describes how clues within the environment can be directly perceived by people, suggesting that other people in the physical setting provide elaborate and rich affordances (i.e.

opportunities for actions). According to inference theory, people make judgments about the unknown on the basis of information they receive from the cues (i.e. other customers in the facility) that are available to them (Baker et al., 2002; Huber & McCann, 1982). Huber and McCann (1982) highlighted the importance of inferential beliefs and evidenced its impact on a product's overall evaluation. Finally, script theory (Schank & Ableson, 1977) is the theoretical base for the third dimension, suitable behaviour, which is defined "*as the extent to which an individual customer felt that other customers in the service environment behaved appropriately given the consumption context*". In a study of tourists in the U.S., Grove and Fisk (1997) found that customers' experiences were positively or negatively influenced by the behaviour of others while they were waiting lines to visit several attractions (i.e. another customer was very polite or someone was smoking during line waits, respectively).

Brocato et al. (2012) assessed the psychometric properties of their model by successively using samples from different service contexts in the U.S. Specifically, data collected from a theme park, a restaurant, and a retail clothing shop provided evidence regarding OCP's reliability, and its factorial, convergent, discriminant, and nomological validity. As proposed by its developers, OCP provides managers with important information that could be used in several marketing and operational areas, such as customer segmentation, targeting and positioning, customer portfolio management, customer experience management, and the creation of customer communities¹.

Despite an avid interest in evaluations of the sport and fitness experience, the present role of other customers during the service delivery process has been largely overlooked by researchers in this sector. A notable exception is a work by Ko and Pastore (2005). Even though these authors assessed inter-client interactions unidimensionally, they developed specific items to capture other customers' attitude and behaviour.

The scarcity of research on inter-customer interaction is rather surprising, since a customer's experience in a sport and fitness centre is not created solely by factors related directly to the firm (i.e. employee performance, variety of programs, modern equipment), but also by other contextual factors such as the presence of other customers in the facility. Other customers may have multiple direct and indirect contacts with the focal customer during the production, consumption, and delivery of the service, and in almost all areas of the sport and fitness centre, such as the exercise classes, locker rooms, concessions areas, and the reception. Also, customers inside the sport and fitness facility do not necessarily have to interact with each other actively (i.e. providing information on how to use a new piece of equipment, socializing in the concessions area) in order to influence customer experience. Even the presence of other customers (i.e. age, style, appearance) is observable and may trigger specific positive or negative behaviours for the firm, influencing both the value creation process and customer loyalty (Brocato et al., 2012; Gruen, Osmonbekov, & Czaplewski, 2007; Lovelock & Jochen, 2007; Martin & Pranter, 1989).

Consequently, acknowledging the importance of customer interactions in sport and fitness settings, and based on Brocato et al.'s (2012) suggestions regarding the need to examine the generalizability of the scale in other service sectors, the present study aims to further validate the OCP model, and to expand its applicability in the context of sport and fitness centres.

Method

Sample and Data Collection

Of the 580,000 customers who attend sport and fitness centres in Greece each year, almost 300,000 attend private centres (Markopoulos, 2012). Data were collected in May and June 2013 from three private fitness centres in a metropolitan area of Greece; one of these was a female-only centre – a popular type of centre in Greece. Both types of centres provide rather similar services to their customers – a variety of indoor health, sport, and fitness programs such as group exercise classes (e.g. aerobics, zumba, Pilates), personalized workouts (e.g. muscle conditioning, spinning, TRX), nutritional counselling, and wellness and stress management programs (e.g. tai-chi, yoga).

A trained research assistant intercepted participants inside the centres throughout the day on weekdays and weekends in order to ensure the representation of all customers. Prior to the questionnaire's completion, the research assistant explained the purpose of study, and provided instructions for filling out the questionnaire. Questionnaire completion took approximately 10 minutes.

The total sample of the study consisted of 362 customers. The majority of participants were female (70.4%) and single (67.4%), and with a mean age of 32 years old. They were mostly university graduates (45.5%), employees in the private sector (36.4%), and with a monthly wage of 580 euros. On average, they had been exercising almost four times per week for six-and-a-half years, and for one-and-half hours each time. The socio-demographic profile of the sample is presented in Table 1.

Participants were randomly divided into two sub-samples¹: a validation sample ($N=181$) and a calibration sample ($N=181$).

Table 1. Socio-demographic Profile of the Total Sample

	N	%	Min.	Max.	M	SD
<i>Gender</i>						
Male	102	28.1				
Female	255	70.4				
Did not specify	5	1.4				
<i>Age (years)</i>			17	73	32.5	9.5
<i>Family</i>						
Married	83	22.9				
Single	244	67.4				
Did not specify	35	9.6				
<i>Education</i>						
Elementary	3	0.7				
High School	77	21.2				
Community college	117	32.3				
University	165	45.5				
<i>Net Monthly Income (in euros)</i>					580.3	
< 450	128					
451-900	146					
901-1200	40					
>1200	25					
Did not specify	21					
<i>Occupation</i>						
Student	60	16.5				
State employee	32	8.8				
Empl. private sector	132	36.4				
Own business	64	20				
Unemployed	53	14.6				
Did not specify	21	5.8				
<i>Exercise experience (years)</i>			<1	30	6.7	5.9
<i>Days per week exercising (days)</i>			1	7	3.9	1.2
<i>Daily exercise duration (hours)</i>			1	4	1.8	0.6

Instrumentation

The OCP scale was recently developed by Brocato et al. (2012) to assess individuals' perceptions of other customers during service exchanges. This is a three-dimensional scale comprising 13 items: similarity (5 items, e.g. "I am similar to the other patrons in the facility"); physical appearance (4 items, e.g. "I like the appearance of the other patrons"); and suitable behaviour (4 items, e.g. "The behaviour of the other patrons is appropriate for the setting"). The OCP scale was translated into Greek using a back-translation technique (Banville, Desrosiers, & Genet-Volet, 2000). In the first step, two bilingual sports sciences professors translated the scale from English to Greek, and then two other individuals with similar academic backgrounds re-translated the Greek items back into English. On the second occasion, the committee comprised four translators, who evaluated the re-translated version with the original OCP English version. Even though very few items were identical to the original ones, all items were retained because their meaning was considered similar to the original OCP items. Finally, a sports management professor and an experienced sport and fitness club manager offered further suggestions for improvement/clarification of the Greek version of the scale. Minor modifications (i.e. syntax) were made after this process.

Participants expressed their agreement with each item on a nine-point Likert-type scale ranged from 1 (strongly disagree) to 9 (strongly agree).

Data Analysis

After a descriptive analysis and an inspection for outliers using the Mahalanobis distance statistic (one case identified as outlier and removed from any further analysis), the construct validity of the OCP scale was tested using confirmatory factor analysis (CFA) (Ullman, 1996) using the EQS 6 software (Bentler, 2006) and composite reliability.

Preliminary data screening based on the inspection of the univariate skewness and kurtosis values was assessed using both samples. For the calibration sample, the skewness values ranged from -1.2 to -.37, and the kurtosis values ranged from -.57 to 1.77. The Mardia's coefficient (Mardia, 1970) was 98.44, and the normalized estimate was 31.33. For the validation sample, the skewness values ranged from -1.26 to -.45, and the kurtosis values ranged from -.55 to 1.71. The Mardia's coefficient was 125.36, and the normalized estimate was 40.27. For both samples, the above results (as well as the Kolmogorov-Smirnov test of normality) revealed that an assumption of the multivariate normality is untenable. Additionally, as Bentler (2005) proposed, a normalised estimate greater than five indicates a departure from normality. Consequently, the Sattora-Bentler scaled χ^2 test was used for both samples (West, Finch, & Curran, 1995). As suggested by Hoyle and Panter (1995), an assessment of the overall model fit was based on an incremental and an absolute fit index: the robust Comparative Fit Index (CFI) and the Root Mean Square Error of Approximation (RMSEA). Reliability, convergence, and discriminant validity were also used as indicators of construct validity.

To further support the validity of OCP in this sector, a cross-validation procedure using a multi-group invariance procedure was also employed (Byrne, 2009). According to this procedure, a baseline model was initially established without any invariance constraints (Model 1); the fit of this model served as a comparison standard for all subsequent invariance models. On this step, the configural invariance was examined. Next, a multi-group model (Model 2) with item loading equality constraints was specified in order for metric invariance to be tested. Model 2 examined pattern of factor loading similarities across the two samples.

Results

Model Testing

Based on OCP's theoretical structure, a three-factor model with uncorrelated factors was postulated and tested using the calibration sample. This model (Model 2) implies that the OCP factors are independent and unrelated. The five observed variables were manifestations of the latent factor similarity; four were of the latent factor physical appearance; and four were of the latent factor suitable behaviour. Each observed variable was loaded to its hypothesized factor, and all of the cross-loadings were fixed to zero. A single factor model (Model 1; i.e. items measure one OCP construct) and a correlated factors model (Model 3; i.e. OCP dimensions are related) were also tested in order to examine which model would best fit the observed data.

The goodness-of-fit indices presented in Table 2 show which correlated factor model best fits the data. Specifically, the single-factor model (Model 1) showed a large misfit, suggesting that OCP is not unidimensional (S-B $\chi^2 = 502.45$, $df = 65$, $p < .001$, *CFI = .600, *RMSEA = .20, 90% CI = .19 - .22). Fit statistics for the uncorrelated factors model (Model 2) also indicated an ill-fitting model (S-B $\chi^2 = 230.16$, $df = 65$, $p < .001$, *CFI = .849, *RMSEA = .12, 90% *RMSEA CI = .10 - .14). The fit of the correlated factors model (Model 3) was not considered adequate, since a significant p-value in the chi-squared test means that the model fails to fit (Antonakis, Bendahan, Jacquart, & Lalive, 2010; Hayduk, Cummings, Boadu, Pazderka-Robinson, & Boulianne, 2007) (S-B $\chi^2 = 127.32$, $df = 62$, $p < .001$, *CFI = .940, *RMSEA = .08, 90% CI = .06 - .10.). A further analysis using the Lagrange Multiplier Test (LM test) indicated that the fit of Model 3 was substantially improved by including two error covariances ($\varepsilon_2 \leftrightarrow \varepsilon_3$, $\varepsilon_7 \leftrightarrow \varepsilon_8$). The content overlap between these items justified this decision (Byrne, 2006). The goodness-of-fit results for the newly specified Model 3 (Model 3a) were: S-B $\chi^2 = 74.44$, $df = 60$, *CFI = .987, *RMSEA = .03, 90% CI = .00 - .06. The convergent validity of the scale was established through three steps: first, all standardized factor loadings (except one) were above the .707 threshold as suggested by (Fornell & Larcker, 1981); second, all t-values were statistically significant ($\geq \pm 1.96$), providing additional evidence of convergence validity (Anderson & Gerbing, 1988); and finally, the average extracted values (AVE) were .70 for similarity, .75 for physical appearance, and .81 for suitable behaviour – well above the .50 cut-off (Fornell & Larcker, 1981). The above results provide strong support of the convergent validity of the scale; discriminant validity was also evidenced, since the AVE value for each factor was greater than the squared correlations between each of the factors (Fornell & Larcker, 1981). In terms of reliability, composite reliability scores were satisfactorily ranged from .92 (physical appearance) to .94 (suitable behaviour). CFA item statistics for Model 3a are presented in Table 3, while descriptive statistics and AVE values are presented in Table 4.

Table 2. Goodness-of-Fit Indexes for the Competing Models

Model	S-B χ^2	Df	*CFI	*RMSEA	90% CI
Model 1	502.45	65	.600	.20	.19 - .22
Model 2	230.16	65	.849	.12	.10 - .14
Model 3	127.32	62	.940	.08	.06 - .10
Model 3a	74.44	60	.987	.03	.00 - .06

Table 3. CFA Item Statistics of Model 3a

Variables	t-values	Skewness	Kurtosis	Factor loading	Error term	SMCs
Similarity						
I could identify with the other patrons in the facility.	8.37	-.63	-.23	.62	.77	.39
I am similar to the other patrons in the facility.	7.73	-.72	-.20	.78	.2	.61
The other patrons are like me.	7.57	-.47	-.57	.80	.59	.64
The other patrons come from a similar background to myself.	6.1	-.37	-.57	.89	.45	.79
I fit right in with the other patrons.	5.36	-.50	-.43	.91	.41	.82
Physical Appearance						
I liked the appearance of the other patrons.	5.62	-.58	.06	.87	.48	.76
The other patrons were dressed appropriately.	6.52	-1.1	1.1	.83	.54	.69
The other patrons looked nice.	7.03	-.93	.55	.79	.60	.63
The other patrons looked like they were my type of people.	6.87	-.63	.29	.81	.57	.67
Suitable Behaviour						
The behaviour of the other customers were appropriate for the setting.	7.82	-1.2	1.7	.83	.55	.69
The other patrons were friendly towards me.	7.94	-.95	.37	.82	.56	.68
I found that the other patrons behaved well.	3.47	-.1.1	1.77	.96	.26	.93
The other patrons' behaviour was pleasant.	6.68	-.92	.81	.90	.42	.82

Cross Validation

Before proceeding to the invariance testing procedure, the psychometric properties of the validation sample were also examined. A correlated three-factor model with two error covariances ($\varepsilon_2 \leftrightarrow \varepsilon_3$, $\varepsilon_7 \leftrightarrow \varepsilon_8$) was again tested. Results indicated that this model was tenable (S-B $\chi^2 = 72.40$, $df = 60$, *CFI = .988; *RMSEA = .03, 90% CI = .00 - .06) (see Table 4).

Regarding invariance testing, the fit of the baseline model (Model 1) was good (S-B $\chi^2 = 146.63$, $df = 120$, *CFI = .987; *RMSEA = .02, 90% CI = .00 - .04), revealing equality among both samples in terms of the factor structure. Model 2 also had an adequate fit to the data (S-B $\chi^2 = 149.76$, $df = 130$, *CFI = .991, *RMSEA = .02, 90% CI = .00 - .03). According to Byrne

(2009, p.239), invariance holds when the configural model (Model 1) is tenable, and its fit statistics have minimal difference in fit from the subsequent more restricted model (Model 2). Difference in fit was measured using the S-B χ^2 difference test (Δ S-B χ^2) and the *CFI difference (Δ *CFI). The S-B chi-squared difference test showed no significant differences between Model 1 and Model 2 (chi-squared probability = .99), indicating that the strength of the factor loadings is the same across the two samples. Likewise, the difference in *CFI was also minimal (Δ *CFI = .004) (Cheung & Rensvold, 2002).

Table 4. Means, Standard Deviations, Reliability Estimates, Correlations, and Average Variance Extracted values for the Examined Latent Factors for both Samples

Variables	Calibration Sample					Validation Sample				
	Mean	SD	CR ¹	AVE	ES ²	Mean	SD	CR	AVE	ES
Similarity	5.6	1.7	.92	.70	.50	5.6	1.6	.90	.67	.49
Physical Appearance	6.5	1.5	.92	.75	.27	6.5	1.5	.92	.75	.30
Suitable Behaviour	7.1	1.2	.94	.81	.47	7.2	1.3	.93	.79	.47

Discussion

Recently, Brocato et al. (2012) developed the Other Customer Perception (OCP) scale in order to assess how other customers' specific characteristics influence an individual's perceptions of, and behaviours towards, service organizations. Acknowledging the influence of other customers during service exchanges, Brocato and her colleagues developed and validated OCP in a series of studies in three business settings. Surprisingly, the role of other customers in the service evaluation process has received limited attention from scholars in the sport management literature, despite earlier calls for this (Ko & Pastore, 2004). This study made an attempt to present the role of other customers in sport and fitness experiences by testing the plausibility of the OCP model. Results provided strong evidence regarding the multidimensional three-factor structure of the OCP model, and its applicability in the context of sport and fitness.

More specifically, a comparison of three competing models indicated that only the three correlated factors model had a good fit. Empirical support for this model signifies that the three dimensions of the scale examine different elements related to one's perceptions of other customers; however, these dimensions are indeed related. This was a rather unexpected result, since Brocato et al. (2012) mentioned that the three dimensions of the scale do not necessarily need to co-vary with one another. In the present study, there was a large misfit for both samples in the uncorrelated factors model³. Thus, the correlated factors model was clearly superior, and therefore used in all subsequent analyses. An examination of both the parameter change statistics and the univariate increments indicated that an error covariance between items 7 and 8 was found to be a significant parameter for improving the fit of this model. Both items refer to the appearance of other customers. Looking carefully at the original items in English and the translated Greek items, it was inferred that item 8 ("The others patrons looked nice") could be re-worded in the translated version in order to avoid overlap with item 7. In the present study, this could have been due to the original English version of the OCP being translated into Greek.

Several tests for convergent validity, discriminant validity, and reliability strongly supported the construct validity of the OCP in sport and fitness settings. A CFA analysis and reliability estimates derived from the validation sample additionally supported the psychometric

properties of the OCP measure. The above analysis provided encouraging results regarding the new specification of the hypothesised model (correlated factors model).

To further examine the psychometric properties of OCP, a cross-validation approach was used. Initially, configural invariance showed that the number and structure of factors were the same for customers from both groups. In the next step, full metric invariance was also supported, indicating that the strength of all factor loadings were the same across the two groups. Based on the above, OCP showed good cross-generalizability in the context of sport and fitness centres.

Managerial Implications

OCP is a short scale that could be used with confidence by club managers to measure the social dynamics that might influence customers' future behaviour inside the fitness facility. As Verhoef, Lemon, Parasuraman, Roggeveen, Tsiros, and Schlesinger (2009) have mentioned, club managers should account for these inter-client interactions, since they are important determinants of a customer's total experience with the firm and its services. By only measuring interactions between customers and employees, club managers will have an incomplete picture of the service experience. It has been suggested that OCP dimensions play a complimentary role in traditional models that only assess the performance of a firm (i.e. service quality). After accounting for the direct effects of overall service quality, the three OCP dimensions added 30% and 26% to the prediction of young customers' approach (i.e. "I enjoyed shopping at this retailer") and avoidance (i.e. "I would avoid having to return to this store") intentions, respectively, which was similar to the findings of Brocato et al. (2012). Drawing on the above, managers should acknowledge how different age groups are affected by OCP dimensions, and consider this information in the creation of their promotional plans. Even though not all customer behaviours are under the control of the club's management, OCP could provide managers with valuable insights into how to improve service performance, and eventually the experience of their customers (for example, issue a mobile-free policy, or imposing a dress code inside the facility). By understanding how customers view other customers and their behaviours, managers could more effectively handle the composition of their customer base by segmenting their market more effectively, and developing better communication strategies so as to attract the "right customers" for their club¹.

Conclusion, Limitations and Future Research

Responding to Brocato et al.'s (2012) call for additional testing of the OCP scale in different services, the present study provided initial evidence of its construct validity in the context of sport and fitness centres. However, since data were solely collected from a convenient sample in Greece, any generalizations should be made with caution. The cultural element should be also taken in consideration. Cross-cultural studies in the future will increase our understanding of the role of customers in social exchanges in different parts of the world, and will assist in the development of sound theory and knowledge in the context of sport and fitness (Duda & Allison, 1990). Another limitation was the under-representation of male participants, since one of the selected fitness clubs only admitted female customers. Researchers that will use the Greek version of the scale should be aware of the two misspecified parameters in the model. It is also suggested that they should re-examine the wording, grammar, and syntax of these items in Greek before using the scale. Finally, since the aim of this study was to test the construct validity of a measure, only configural and metric invariance were tested (Byrne, 2009). Researchers who wish to further explore the invariance properties of OCP could conduct additional tests, including measurement error

invariance and scalar invariance. Measurement error invariance examines whether the individual item's residual variances are equivalent across groups, providing information about the quality of items as measures of the construct they define were the same across groups. Finally, scalar invariance could be used in cross-cultural research to assess the equivalence of the item intercepts across groups.

In conclusion, the relationship between the OCP dimensions and the other predictors of customers' future behaviour is still unknown, especially with regards to service value, quality, and satisfaction. Thus, researchers should include the OCP dimensions in their service evaluation models so as to improve the predictive power of these models, and to further understand the customer's total service experience in this sector.

Endnotes:

1. For a detailed discussion on how the OCP model could assist managers, please see Brocato et al. (2009), pp. 395-396.
2. Cross validation technique is a model validation technique for assessing how the results of a statistical analysis will generalize to an independent data set. The basic form of cross-validation, k-fold cross-validation was conducted in this study.
3. The uncorrelated factors model's CFA statistics for the validation sample could be obtained from the author.

References

- Alexandris, K.; Zahariadis, C., Tsozbatzoudis, C., & Grouios, G. (2004). An empirical investigation of the relationships among service quality, customer satisfaction and psychological commitment in a health club context. *European Sport Management Quarterly*, 4(1), 36-52.
- Anderson, J.C., & Gerbing, D. W. (1988). Structural equation modeling in practice: a review and recommended two-step approach. *Psychological Bulletin*, 103(3), 411-423.
- Antonakis, J.; Bendahan S.; Jacquart P., & Lalive R. (2010). On making causal claims: A review and recommendations. *The Leadership Quarterly*, 21(6), 1086-1120
- Baker, J.; Parasuraman, A.; Grewal, D., & Voss, G.B. (2002). The influence of multiple store environment cues on perceived merchandise value and patronage Intentions. *Journal of Marketing*, 66(5), 120-41.
- Banville, D.; Desrosiers, P., & Genet-Volet, Y. (2000). Translating questionnaires and inventories using a cross-cultural translation technique. *Journal of Teaching in Physical Education*, 19, 374-387.
- Bentler, P. M. (2006). *EQS Structural Equations Program Manual*, Encino, CA: Multivariate Software, Inc. Brocato, E.D.; Voorhees, C.M., & Baker, J. (2012). Understanding the influence of cues from other customers in the service experience: A scale development and validation. *Journal of Retailing*, 88(3), 384-398.
- Buckworth, J., & Dishman, R.K. (2002). *Exercise Psychology*, Champaign, ILL: Human Kinetics Publishers
- Byrne, B. M. (2009). *Structural equation modeling with EQS: Basic concepts, applications, and programming (2nd ed)*. N.Y: Routledge.
- Chelladurai, P., & Chang, K, (2000). Targets and standards of quality in sport services. *Sport Management Review*, 3(1), 1-22.
- Cheung, G. W., & Rensvold, R. B. (2002). Evaluating goodness-of-fit indexes for testing measurement invariance. *Structural Equation Modeling*, 9, 233-255

- Cronin, J. J.; Brady, M. K., & Hult, G. T. M. (2000). Assessing the effects of quality, value and customer satisfaction on consumer behavioral intentions in service environments. *Journal of Retailing*, 76(2), 193-218.
- Duda, J. L., & Allison, M. T. (1990). Cross-cultural analysis in exercise and sport psychology: A void in the field. *Journal of Sport and Exercise Psychology*, 12, 114-131.
- Ferrand, A.; Robinson, L., & Valette-Florence, P. (2010). The intention-to-repurchase paradox: a case of the health and fitness industry. *Journal of Sport Management*, 24(1), 83-105.
- Fornell, C., & Larcker, D. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18, 39-50.
- Gibson, J.J. (1979). *The ecological approach to visual perception*. Boston, MA: Houghton-Mifflin Company.
- Grove, S.J., & Fisk, R.P. (1997). The impact of other consumers on service experiences: A critical incident examination of "Getting Along". *Journal of Retailing*, 73(1), 63-85.
- Gruen, T.W.; Osmonbekov, T., & Czaplewski, A.J. (2007). Customer-to-customer exchange: Its MOA antecedents and its impact on value creation and loyalty. *Journal of the Academy of Marketing Science*, 35, 537-549.
- Hayduk, L. A.; Cummings, G., Boadu, K., Pazderka-Robinson, H., & Boulianne, S. (2007). Testing! Testing! one, two, three testing the theory in structural equation models!. *Personality and Individual Differences*, 42 (5), 841-850.
- Howat, G.; Crilley, G., & McGrath, R. (2008). A focussed service quality, benefits, overall satisfaction and loyalty model for public aquatic centres, *Managing Leisure*, 13(3/4), 139-161.
- Hoyle, R.H., & Panter, A.T. (1995). Writing about structural equation models. In R.H. Hoyle (Ed.), *Structural equation modeling: Concepts, issues, and applications* (pp. 158-176). Thousand Oaks CA: Sage.
- Huber, J., & McCann, J. (1982). The Impact of Inferential Beliefs on product evaluations. *Journal of Marketing Research*, 19(8), 324-33.
- Ko, Y. J., & Pastore, D. L. (2004). Current issues and conceptualizations of service quality in the recreation sport industry. *Sport Marketing Quarterly*, 13, 158-166.
- Ko, Y. J., & Pastore, D. L. (2005). A hierarchical model of service quality for therecreational sport industry. *Sport Marketing Quarterly*, 14(2), 84-97.
- Lehtinen, U., & Lehtinen, J.R. (1991). Two approaches to service quality dimensions. *The Service Industries Journal*, 11(3), 287-303.
- Lovelock, C., & Jochen, W. (2007). *Services Marketing*. Upper Saddle, NJ: Prentice Hall
- MacIntosh, E., & Doherty, A. (2007). Reframing the service environment in the fitness industry. *Managing Leisure*, 12, 273-289.
- Makropoulos, D. (2012, July 22). 'Εσβησε η ολυμπιακή φλόγα για τις μεγάλες επιχειρήσεις [The Olympic flame was put out for the big corporations]. *Proto Thema*, Business Stories. p.12.
- Mardia, K. V. (1970). Measures of multivariate skewness and kurtosis with applications. *Biometrika*, 57, 519-530.
- Martin, C.L. (1996). Consumer-to-consumer relationships: Satisfaction with other consumers' public behavior. *The Journal of Consumer Affairs*, 30(1), 146-69.

- Martin, C.L. & Pranter, C.A. (1989). Compatibility management: Customer-to-customer relationships in service environments. *Journal of Services Marketing*, 3, 6-15.
- Moore, R.; Moore, M.R.; Capella, M. (2005). The impact of customer-to-customer interactions in a high personal contact service. *Journal of Services Marketing*, 19 (7), 482-91.
- Mullin, B. (1985). Characteristics of sport marketing. In G. Lewis and H. Appenzellar (Eds), *Successful Sport Management* (pp. 101-123). Charlottesville, VA: Michie Company.
- Mullin, B.; Hardy, S., & Sutton, W.A. (1993). *Sport Marketing*. Champaign, ILL: Human Kinetics.
- Murray, D., & Howat, G. (2002). The relationships among service quality, value, satisfaction, and future intentions of customers at an Australian sports and leisure entre. *Sport Management Review*, 5(1), 25-43.
- Schank, R.C., & Ableson, R.P. (1977). *Scripts, plans, goals, and understanding*. New York: John Wiley and Sons.
- Shilbury, D.; Quick, S., & Westerbeek, H. (1998). *Strategic sport management*. Allen & Unwin, St Leonards, Australia.
- Silcox, S., & Soutar, G.N. (2009). Patrons' intentions to continue using a recreation centre: a suggested model, *Managing Leisure*, 14(3), 177-194.
- Tajfel, H. (1981). *Human groups and social categories*. Cambridge, UK: Cambridge University Press.
- Ullman, J. B. (1996). Structural equation modeling. In B. G. Tabachnick and L. S. Fidell, *Using multivariate statistics* (3rd ed.) (pp. 709-811). Northridge, CA: HarperCollins.
- Verhoef, P.C.; Lemon, K.N.; Parasuraman, A.; Roggeveen, A.; Tsiros, M., & Schlesinger, L.A. (2009). Customer experience creation: Determinants, dynamics and management strategies. *Journal of Retailing*, 85(1), 31-41.
- West, S. G.; Finch, J. F., & Curran, P. J. (1995). Structural equation models with non normal variables: Problems and remedies. In R. H. Hoyle (Ed.), *Structural equation modeling: Concepts, issues, and applications* (pp.57-75). Thousand Oaks CA: Sage