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Consumer Satisfaction with a Periodic Reoccurring Sport Event and the Moderating Effect of Motivations

Laura Martínez Caroa and Jose Antonio Martínez Garcíab

Abstract

This research has focused on the evaluation of the consumer satisfaction process in a sport event. A popular athletic cross urban race, periodically organized by a City Council, has served as the framework for the study of cognitive and affective elements that drives satisfaction judgement and the moderator effect of sport motivations. A causal model is tested and the results show that satisfaction is primarily driven by an affective factor (arousal), and the effect of pleasure is not significant. The cognitive element is also important for determining satisfaction and future behavior intentions, and all of the antecedents are independent in the satisfaction process. Sport motivations have a moderating effect on the relationship between disconfirmation and satisfaction. In addition, satisfaction is an emotional evaluation for the highly motivated individuals. Implications for both practical and theoretical research are discussed.

Introduction

The proliferation of studies in the sport management literature about consumer satisfaction is ample (e.g. Triadó et al. 1999, Murray & Howat, 2002; Van Leeuwen et al., 2002) but all of this research have focused on services such as private sport centers, public sport services, or sport attendance. Nevertheless, nothing has been found in relation to particular events having a periodic nature, distinguished by their short operating time and the recurrence in future editions.

This research has focused on the measure of consumer satisfaction in a reoccurring sport event; a popular long distance race organized every year by the City Council of Cartagena (Spain). In addition, the role of sport motivations has been considered as a moderating factor on the cognitive-affective relationships that drive satisfaction evaluation. Thus, a model building exercise has been achieved where alternative models of satisfaction were explored in order to get a better understanding of the customer satisfaction process. Furthermore, motivations have been presented as an attractive variable for segmentation.

"... the role of sport motivations has been considered as a moderating factor on the cognitive-affective relationships that drive satisfaction evaluation."

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Theoretical background

Cognitive-affective model of consumer satisfaction

Consumer satisfaction has attracted a lot of attention in the literature because of its potential influence on consumer behavioral intentions and customer retention (Cronin et al., 2000). The literature on consumer satisfaction has focused primarily on people as cognitive beings, whereby satisfaction is generally modelled as the outcome of a comparison process between expectations and perceived performance (Wirtz & Bateson, 1999). Recently, however, it is accepted that consumers' evaluative judgements are based partly on cognition and partly on affective responses to a product stimulus (Oliver, 1997). According to this latter approach, satisfaction is described as "the consumer's fulfillment response. It is a judgment that the product or service feature, or the product or service itself, provided (or is providing) a pleasurable level of consumption-related fulfillment, including levels under- or overfulfillment" (Oliver, 1997, p. 13). The inclusion of affect into the conceptualizations of consumer satisfaction is particularly important with services due to their experiential nature (Wirtz et al., 2000). Affect represents the feelings side of consciousness, as opposed to thinking, which taps the cognitive domain (Oliver, 1997). In the field of psychology, affect has been conceptualized in several

ways, in particular Izard's discrete emotion model (1991) and Russell's model of affect (1980).

Proposed models of satisfaction

Russell's model suggests that affect is the mediating variable among stimuli, cognitive process, and response behavior. Russell pointed out pleasantness/unpleasantness and arousal/quietude as two primary orthogonal dimensions of affect that describe the internal emotional state of people per se.

In contrast to Izard's discrete emotion model, Russell's conceptualization is richer because low arousal effect is explicitly included in the taxonomy (Oliver, 1997). It has no discriminant validity problems (Holbrook, 1986), and its predictive and exploratory power seems to provide good external validity (Wirtz, 1994).

Since Russell's framework is particularly useful in studying services, for it aims at capturing human-environment and interpersonal iterations (Russell & Pratt, 1980), we have used the two affective dimensions (arousal and pleasure) proposed by Russell for modelling the runner satisfaction process.

The literature reveals two different ways of introducing affect into the cognitive satisfaction model:

(1) Emotions as a mediator between cognitive evaluations and satisfaction

This perspective suggests that emotions are treated as a mediator among cognitive evaluations, such as perceived product performance or disconfirmation of some comparison standard and overall satisfaction (Oliver, 1993; Oliver & Westbrook, 1993).

Bigné & Andreu (2002) explain this approach. They point out that there is a direct relationship between disconfirmation and emotions based on the cognitive theory of emotions (Bagozzi et al. 1999). In the cognitive theory, the cognitive activity that the consumer makes for processing the emotional situation produces the emotional experience. Therefore, the grade of pleasure and arousal is an increasing function of the perceived disconfirmation (Wirtz & Bateson, 1999). This relationship has been empirically proved by Menon & Dubé (2000) or Oliver et al. (1997).

(2) Emotions as independent factors between cognitive evaluations and satisfaction

According to this approach, emotions can be looked on as independent variables that, together with a cognitive construct, explain more of satisfaction than either construct would on its own (Liljander & Strandvik, 1997). This perspective is supported by Oliver (1993), who suggests that disconfirmation and emotions can be different sources of satisfaction. This draws on the locus-of-causality literature in attribution theory (Oliver, 1993), where the locus dimension is concerned with the source of causality; that is, either the cause resides in you, in some other people, or in the situation. Thus, as Oliver (1993) points out, if the consumer understands that she or he is solely responsible for the purchase of a bad product, it is proposed that dissatisfaction would be aggravated by the consumer's guilt. Alternatively, if the product is susceptible to situationally-caused failings, dissatisfaction could be worsened by sadness. In other words, the runner can feel dissatisfaction if he or she thinks that the cause of the state can be driven by a situational factor, independently of his or her cognitive evaluation. Therefore, the relationship between disconfirmation and emotions is affected by the attributions made by the consumer (Liljander & Strandvik, 1997).

"The motives for sport activities are highly diverse (Recours et al., 2004), and this has been categorized by different ways."

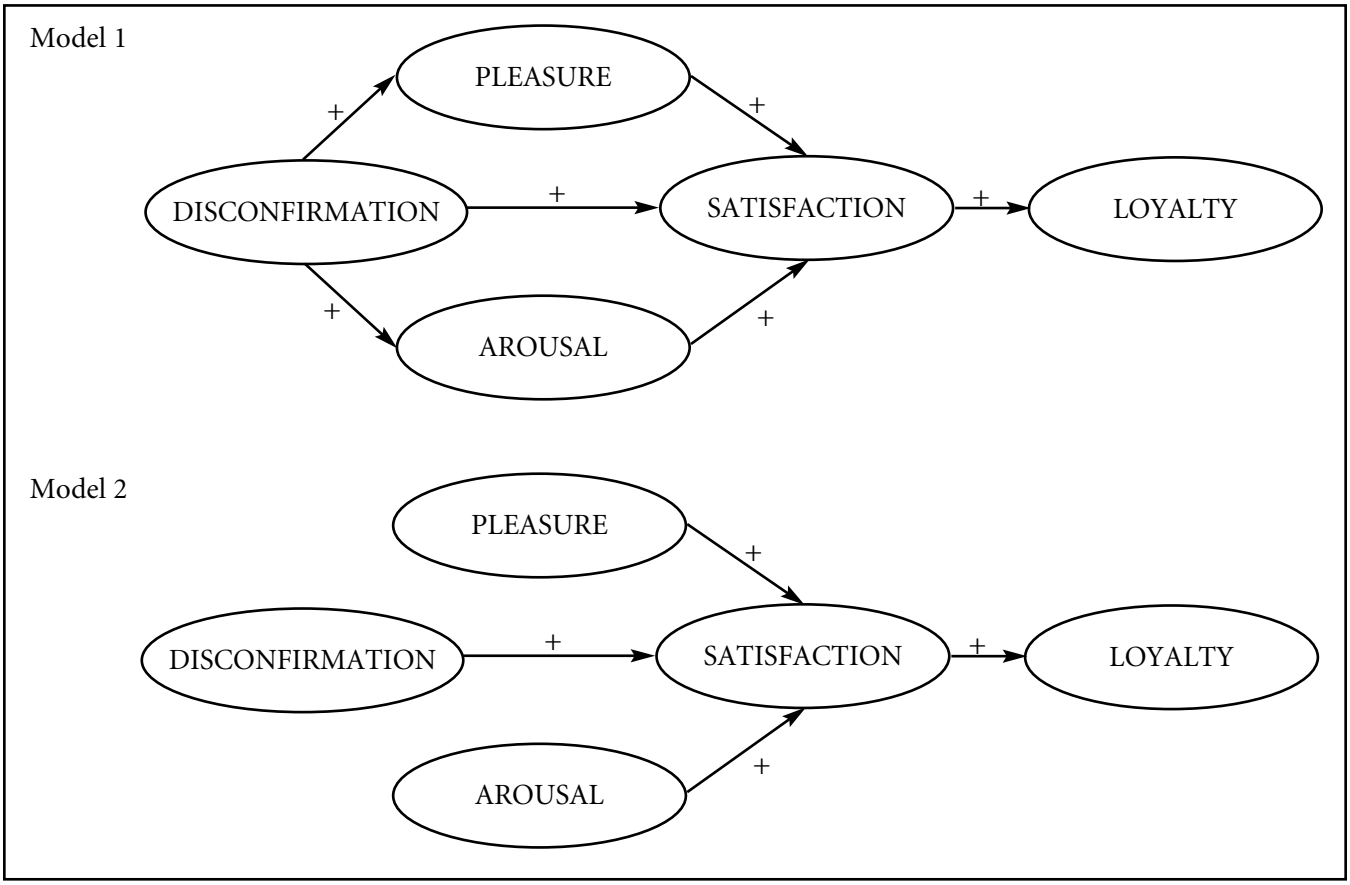
These two different approaches in the conceptualization of relationships between disconfirmation and emotions are the main divergence of the consumer satisfaction models that are proposed in this research. However, both models hold the same hypothesized relations between disconfirmation and satisfaction, emotions and satisfaction, and satisfaction and loyalty.

Disconfirmation-satisfaction. Consumers make their evaluations of the consumption experience and indicate that their satisfaction is driven by the comparison between the perceived outcome and some prior standard (Bigné & Andreu, 2002). Thus a positive disconfirmation would lead a positive consumer satisfaction. This relationship has been empirically proved by Wirtz & Bateson (1999) or Spreng & Chiou (2002).

Emotions-satisfaction. There is ample evidence to suggest that emotional reactions associated with the consumption experience are important in the determination of satisfaction (Matilla & Wirtz, 2000; Jayanti, 1996; Erevelles, 1998). The relationship between pleasure experienced during the consumption process and satisfaction is empirically studied by several authors (Mano & Oliver, 1993; Wirtz & Bateson, 1999). Likewise, Bigné & Andreu's (2002) study proves that satisfaction is an increasing function of the level of pleasure and arousal. Therefore any element that improves the consumer's affective state would lead to a higher level of satisfaction.

Satisfaction-loyalty. Finally, the link between customer satisfaction and loyalty has been acknowledged in literature (Nguyen & LeBlanc, 1998) and several researchers have proved that customer satisfaction is a

Figure 1
Competitive models of satisfaction



key determinant of future behavior intentions (e.g. Murray & Howat, 2002; Cronin et al. 2000).

On the basis of the prior analysis of the convergent and divergent literature about the relationships of the diverse constructs modelling the cognitive-affective satisfaction process, we identify two different models of runner satisfaction (Figure 1).

Moderator effect of sport motivations

Sport motivations are a classical topic in the literature of sport consumer behavior. As mentioned by James & Ross (2002), several authors have studied the motives to explain sport consumption (e.g. Sloan, 1989; Trail et al., 2000). Most of the relevant research has focused on the motives for sport attendance (e.g. James & Ross, 2002; Sloan, 1989; Trail & James, 2001); however it is difficult to find studies on the motivation for participating in an organized sports activity in sport marketing literature. In fact, the majority of these studies come from sport psychology and sport sciences (e.g. Martens & Webber, 2002; Ogles & Masters, 2003; Wang & Biddle, 2001).

Motivation refers to an activated state within a person consisting of drive urges, wishes, and desires that lead to goal-directed behavior (Mowen & Minor 1998). The motives for sport activities are highly diverse (Recours et al., 2004), and this has been categorized by different ways. Thereby, Butt (1979) considered the sport motivations developing from four levels: biologic, psychological, psychosocial, and reinforcement. Later, Deci & Ryan (1985) distinguished intrinsic motivation from extrinsic motivation; the former is concerned with the pleasure of participating, and the latter with future reward or punishment (personal or social). On the other hand, Milne & McDonald (1999) proposed a series of potential motivational factors for the sport participants, namely: physical fitness, risk-taking, stress reduction, affiliation, social facilitation, self-esteem, achievement, skill mastery, aesthetics, and self-actualization. Finally, Luna-Arocas (2001) developed a scale of motivations which was tested on a consumer sample of a private sport center. These motivations were grouped in eight constructs after a factor analysis: factors positive affect, social contact, physical exercise, coping strategy, challenge, body image, competition, and entertainment. All of these classifications of motives present, as a main feature, the prevalence of emotional component of urges and desires and the psychological states associated to them.

From a marketing perspective, the knowledge of why people participate in an organized sports activity is

valuable information that allows management to develop strategic actions to satisfy the consumer's sought benefits. It is a source for segmentation criteria in order to offer a distinctive sell proposition to the different clusters, and therefore maximizes their satisfaction. As Ko & Pastore (2004) pointed out, it is important to identify the motives of participation because this determines not only the level of service quality, but also the level of customer satisfaction. Nevertheless, there is a lack of information in the sport marketing literature about the relationship between consumer satisfaction and sport motivations. The only work reviewed dealing with this relationship is the study of Luna-Arocas & Tang (2005), whose results showed diverse levels of satisfaction between different clusters grouped by motivations. But there is no evidence in this field relating to the moderator effect of motivations on customer satisfaction.

Sport consumption allows consumers to engage in an extraordinary experience unlike other forms of consumption (Arnould & Price 1993). The sport service holds a strong emotional dimension (Desbordes et al. 2001) and requires the active participation of the consumer. The emotions can be divided into reactive and goal-directed (Bagozzi et al., 1998, Koelemeijer et al., 1995). For example, if the delivered service exceeds the promises made in the advertising, the consumer may react with positive emotions and high satisfaction (Liljander & Bergenwall, 1999). On the other hand, goal-directed emotions are emotions the consumer consciously seeks to experience. We can consider this kind of event as primary driven by goal-directed emotions, since it is distinguished by popular and non-professional participation and most of the runners seek to feel emotions analogous to other leisure services.

Considering the emotional components of the motivations for playing sport which have been proposed in the sport literature, and the specific nature of this sport service where the goal-directed emotions have a determinant prevalence, this research analyses the moderating effect of these motivations on the cognitive-affective relationships.

Method

Data collection

The sample was collected from a population of 352 participants. The procedure for obtaining the data was the self-administered questionnaire sent via postal mail with a cover sheet and a postage-paid return envelope. The response ratio was 38% and a total of 137 valid questionnaires were collected. The measurement error for the final sample was 6.55%, and the representation of the data was guaranteed by the heterogeneity of the individuals polled1. Subjects were predominantly men (94.8%) and ranged in age from 20 to 63 years (mean: 39.19; st.dev.: 8.69). Fifty of them (36.5 %) were participating in their first race and only three runners were professional.

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Measures[2]

According to Wirtz & Bateson (1999) *disconfirmation* was measured using two single items: (1) "Overall, my experience in the race was better/worse than expected" (Oliver, 1980); and (2) "Overall, my expectations about the race was better/poorer than I thought" (Churchill & Surprenant, 1982). Both items were measured on a five-point semantic differential scale.

To measure *emotions*, we selected ten items from the Russell's scale (1980). These items were measured on a five-point semantic differential scale; six items were used to measure pleasure and four items were used to measure arousal (Bigné & Andreu, 2002). The respondents were cued to focus on feelings during the popular race when answering these questions (Wirtz & Bateson, 1999).

Satisfaction was measured using a five-point, "disagree-agree" scale; taken from available sources (e.g. Westbrook & Oliver, 1981 and Westbrook, 1987). Customers were asked to evaluate their overall satisfaction, taking the experience in the popular race into account.

Loyalty was measured using the scale proposed by Zeithaml et al. (1996). These authors proposed a five-item scale: 1) Say positive things about them, 2) Recommend them to other consumers, 3) Remain loyal to them, 4) Pay price premiums, and 5) Spend more with the company. We have used the earliest four items to measure loyalty. A five-point Likert-type scale was used ranging from "strongly agree" to "strongly disagree".

Finally, *sport motivations* were measured with eight items, according to the factors proposed by Luna-Arocas (2001): factors positive affect, social contact, physical exercise, coping strategy, challenge, body image, competition, and entertainment. The items were measured on a five-point Likert scale.

Assessment of the measures

The items of the proposed model were evaluated with exploratory techniques to assess the reliability and

dimensionality of the measures. In a first stage, each construct was assessed using the item-to-total correlation, Cronbach's alpha, and exploratory factor analysis. The decision to retain items was based on recommendations proposed by Nurosis (1993), Nunnally (1978) and Hair et al. (1999) with regard to statistical criteria3. As a result of the exploratory analysis, several items were dropped; three for the scale of pleasure, and one for the arousal, satisfaction and loyalty measures. Thereby, the psychometric properties of the measures improved the original proposal.

In order to get a more robust evaluation of the quality of the measures, a confirmatory factor analysis was achieved using the covariance matrix as input via LISREL 8.50 (Jöreskog & Sörbom, 2001) maximum likelihood (ML) method. Following Gerbing & Anderson (1992) the model fit was evaluated using the most stable and robust fit indices: DELTA2 (Bollen, 1989), the comparative fit index (CFI) (Bentler, 1990) and the relative noncentrality index (RNI) (McDonald & Marsh, 1990). Additionally, other fit indices were used for evaluative purposes; the chi-square statistic, and the root-mean-square error of approximation (RMSEA) (Steiger, 1990) recommended by Hu & Bentler (1999). The criteria for assessing the indices were established following the recommendations of Bagozzi & Heatherton (1994) (RNI> .90), Kline (1998) (CFI> .90), Hu & Bentler (1999) (RMSEA < .08), Widaman & Thompson (2003) (DELTA2 > .95). The results indicate an adequate close fit of the measures (χ^2: 169.47; df: 80; $p < .001$; DELTA 2: .928; RNI and CFI: .927; RMSEA: .08). The internal consistency of each scale was also evaluated; standardized loadings of individual items were highly significant, and the values were larger than the recommended threshold of .70 (Steenkamp & Van Trijp, 1991) except for one item of the "loyalty" construct (.667). Composite reliability (Bagozzi & Yi, 1988) and average variance extracted indices (Fornell & Larcker, 1981) presented higher values than those of the evaluation criteria of .5 (Hair et al., 1999). The convergent validity of the measures was highly supported by the significant item t-value, all items loaded on their respective hypothesised dimensions, and the parameters estimates were 10 to 20 times as large as the standard errors (Anderson & Gerbing, 1988). Discriminant validity was assessed by calculating the shared variance between pairs of constructs and verifying that it was lower than the average variances extracted for the individual constructs (AVE) (Fornell & Larcker, 1981). The shared variances between pairs of all possible scale combinations indicated that the variances extracted were higher than the associated shared variances in all cases except in one. In the interest of thoroughly discriminant validity, an additional test was examined, supporting this assumption since the confidence interval (± 2 standard errors) around the correlation estimate between any two latent indicators never includes 1.0 (Anderson & Gerbing, 1988). The constructs correlation matrix, shared variances, AVE and composite reliability are showed in Table 1.

Results

Competitive models analysis

Once the psychometric properties of the measures had been checked, the next step was the evaluation of the competitive models mentioned in the literature as representative of the cognitive-affective satisfaction process. Two new path analyses were accomplished considering the restrictions of the relationships among the constructs of each model (Figure 1).

A chi-square difference test (Anderson & Gerbing, 1988) was achieved to evaluate the competitive models. Anderson & Gerbing (1988) recommend this procedure to compare nested models; a nonsignificant change in chi-square between the two models would lead to the acceptance of thte more parsimonious model. The results of the test showed a significant

Table 1.
Summary of the results of the confirmatory factor analysis

	DIS	PLE	ARO	SAT	LOY
Disconfirmation (DIS)	.747	.194	.213	.341	.334
Pleasure (PLE)	.441	.745	.736	.323	.209
Arousal (ARO)	.462	.858	.514	.508	.318
Satisfaction (SAT)	.584	.568	.713	.616	.593
Loyalty (LOY)	.578	.457	.564	.770	.611
Composite reliability	.855	.897	.759	.865	.823

Note: Intercorrelations are presented in the lower triangle of the matrix. The Average Variance Extrated (AVE) is depicted on the diagonal. Shared variances are given in the upper triangle of the matrix.

change (difference of chi-square: 75.01; df: 1; $p < .001$), when the Model 2 was tested. Thereby if arousal and pleasure are considered as independent factors this model is a better reproduction of the observed data. This can be supported when other fit indices are evaluated (Table 2); the Model 2 has more adequate fit indices: RMSEA, RNI, CFI and DELTA2. Furthermore, the difference of PNFI (James et al. 1982) between the two models is above .09, a critical value recommended by Hair et al. (1999) as a significant gain of parsimony. Finally, Model 2 explains more variance[4] in consumer satisfaction ($R_i^2 = .624$) and in consumer loyalty ($R_i^2 = .384$) (Table 2).

"There is a positive and significant direct relationship between disconfirmation and loyalty."

Therefore, considering the emotions as an independent factor in the customer satisfaction process involves a better explanation of satisfaction and loyalty. Although Model 2 is well grounded and appears to be robust, the potential for model re-specification needs to be considered (Anderson & Gerbing, 1988). The objective is to increase the degree to which the conceptualization captures the data and, in turn, to improve the validity of the conceptualization (Brady & Cronin, 2001). An examination of the modification indices suggests a new relationship in the model: There is a positive and significant direct relationship between disconfirmation and loyalty. Thus, Model 2b is the final model considered after re-specification of Model 2.

To complete the evaluation, the paths among the constructs were examined. As it is shown in Table 3, all paths hypothesized were significant except the relationship between pleasure and satisfaction. The results indicate that disconfirmation and arousal have a positive and significant influence on customer satisfaction as independent factors, and the intensity of the relationship between arousal and satisfaction is stronger than disconfirmation. Also, a strong relationship between satisfaction and loyalty is shown.

The direct path between disconfirmation and loyalty is one of the major results of the study of Bigné & Andreu (2002)[5] after the re-specification of their theoretical model. These authors found that cognitive evaluation exerted a positive influence on willingness to intensify the service usage. From a theoretical perspective, the new path shows the importance of cognitive elements in the future behaviour intentions, supporting the dual nature of satisfaction (Bigné & Andreu, 2004).

Table 2.
Fit indices and statistics for the models

	(χ^2)[d]	df	RMSEA	CFI; RNI[e]	DELTA2	PNFI	R_i^2SAT	R_i^2LOY
Models								
Model 1[a]	248.253	84	.109	.865	.868	.650	.420	.256
Model 2 [b]	173.245	83	.078	.926	.927	.687	.624	.384
Model 2b [c]	169.393	82	.078	.928	.930	.681	.605	.448

[a] Emotions as mediator
[b] Emotions as independent factor
[c] Model 2 after respecification (Emotions as independent factor with a direct relationship between disconfirmation and loyalty)
[d] Minimum Fit Function Chi-Square
[e] When RNI is between 0 and 1 (both models tested), CFI equals RNI

Table 3.
Path analysis (Model 2b)

	DIS	PLE	ARO	SAT
SAT	.337[a]***	- .226	.752***	-
LOY	.193**	-	-	.658***

[a] Standardized loadings
** $p < .05$ *** $p < .001$

Analysis of the moderating effect of sport motivation

Cluster analysis (Ward's method) was achieved to obtain categories for the moderator variable. Due to the low sample size (137), the more appropriate solution was making two groups of individuals, being each sub-sample was higher than 50 individuals[6]. The final solution grouped 70 subjects in the first cluster and 65 in the second[7]. Both clusters are clearly differentiated by the scores of all motivation factors. Only the "physical exercise" factor showed a high value in the two groups. To verify the differences among the clusters on the eight motivation dimensions, a MANOVA with cluster group membership as the independent variable and the eight motivations as the dependent variables was conducted. As expected, the MANOVA approximate F (34.190) was significant ($p < .001$)[8]. All of the univariate tests[9] were significant ($p < .05$) except for the motivation: "physical exercise" (Table 4). Individuals pertaining to cluster 1 showed high levels of motivation in all elements (with medium and large effect sizes), and subjects pertaining to cluster 2 had significantly lower levels. Nevertheless, "physical exercise" is a common motive for playing sport for both groups with an important value for all runners.

Once the variable "motivation" was categorized and the individuals were grouped in high and low motivated, a series of LISREL analyses were conducted to study the moderating effect on satisfaction process. In a first stage, the Model 2b was replicated in the two subsamples, and the results showed differences in the significance of relationships (Table 5). For the high motivated subjects, there is a strong influence of arousal on satisfaction and also a direct relationship between disconfirmation and loyalty. On the other hand, for the low motivated individuals there is a significant effect of arousal and disconfirmation on satisfaction, but there is no relationship between disconfirmation and loyalty. Both models showed a strong relationship between satisfaction and loyalty and a non-significant effect of pleasure on satisfaction.

The next step was the re-estimation of the model with the restriction of equal regression coefficients in both groups. Thus, if the moderator effect exists, the model structure will be affected and a significant

Table 4.
Motivations by cluster group membership

	Mean		Brown-Forsythe	*p*	Effect	
	High motivated	Low motivated	statistic	value	size[1]	Power
Factors positive affect	4.23	3.70	6.69	< .05	.24	.75
Social contact	3.53	2.25	56.07	< .001	.57	1.00
Body image	3.44	2.98	6.67	< .05	.23	.71
Competition	3.47	2.25	33.36	< .001	.47	1.00
Challenge	4.57	3.81	20.93	< .001	.40	.99
Physical exercise	4.65	4.59	.24	n.s.	.04	.07
Entertainment	4.44	3.40	32.82	< .001	.48	1.00
Coping strategy	3.52	2.07	48.62	< .001	.54	1.00

[1] Effect size conventions for the F test (Cohen, 1988); small: 0.10; medium: 0.25; large: 0.40

Table 5.
Results of the two sub-sample models

	High motivated (n=70)	Low motivated (n=65)	Dif. χ^2 (df)
DIS-SAT	- .078 [a]	.365***	12.254 (1)***
PLE-SAT	- .178	-.156	.028 (1)
ARO-SAT	.970**	.727***	.148 (1)
DIS-LOY	.363***	.184	1.525 (1)
SAT-LOY	.530***	.776***	.039 (1)

[a] Standardized loadings
** $p < .05$ *** $p < .001$

Modification Index (MI) will be generated in the output of the analysis. This means there is a significant change in the chi-square ($p < .05$) between the two models tested. Therefore, five models were estimated with different restrictions in the paths. The results of the chi-square difference test have been reflected in Table 5, and indicate a moderator effect of motivation on the relationship between disconfirmation and satisfaction. Hence, the importance of the cognitive element in the satisfaction formation is crucial for the low motivated individuals. Nevertheless, high motivated runners base their satisfaction judgement only on one emotional element, the level of arousal. For this kind of runners the feeling of excitement during the service experience will be a synonymous of satisfaction degree.

Finally, although the influence of disconfirmation on loyalty is significant for high motivated individuals, the examination of MI does not confirm the moderator effect of sport motivations. Figure 2 shows the final model estimated

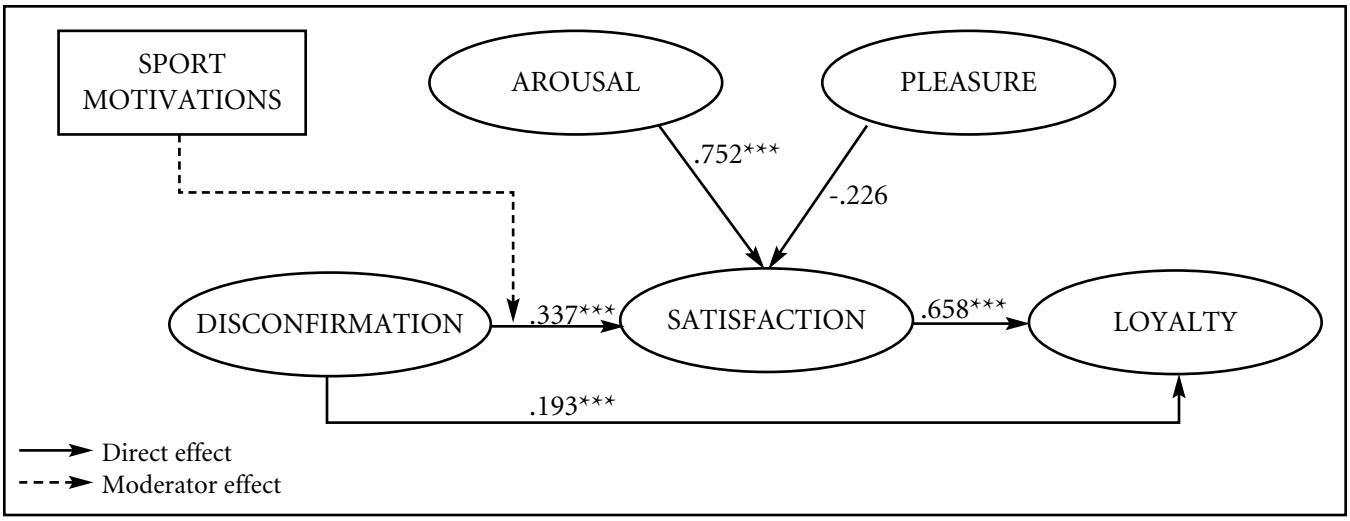
Discussion

This study has investigated the runner satisfaction process in a yearly race and the moderator effect of sport motivations on the cognitive and affective relationships. The discussion has addressed four major issues. First, two conceptual models of satisfaction have been presented after the literature revision, one with the emotions as a mediator between disconfirmation and satisfaction, and another one considering the emotions as an independent factor. These models have been empirically tested to compare their level of fit. The results provide empirical support for the latter conceptualization; the emotions are independent of the cognitive evaluations of a service, in line with the studies of Westbrook (1987) and Koelemeijer et al. (1995).

Second, the path analysis showed a nonsignificant effect of pleasure on satisfaction. Although generally positive emotions have been found to enhance satisfaction, it is also possible to combine high satisfaction with feelings that in other circumstances would have invoked dissatisfaction (Liljander & Bergenwall, 1999). The distinction between reactive and goal-directed emotions (Bagozzi et al., 1998; Koelemeijer et al., 1995) can help to understand that fact. The nature of the service analyzed, in this case a popular race, is distinguished by goal-directed emotions. The runner can feel negative emotions related to negative pleasure, as the suffering for making a great physical effort or the anxiety for the fulfilling of the expectations about athletic performance; however, the individual can be satisfied because these feelings are consciously sought to experience.

Third, all the rest of the proposed relationships in the model are confirmed. The emotional component (arousal) exerts a stronger influence on satisfaction than cognitive element (disconfirmation). The emotional dimensions associated to sport consumption (Desbordes et al, 2001) could explain these findings. Satisfaction is primary driven by affective responses and they highly influence the customer loyalty. The strength of this link clearly supports the results of other empirical researchers (e.g. Bloemer & DeRyuter, 1998). Additionally, a weak direct relationship between disconfirmation and loyalty has been found after respecification of Model 2 (Model 2b), in line with the results of Bigné and Andreu (2002, 2004). Anderson & Sullivan (1993) suggested that perceived quality influenced positively on disconfirmation, and Bloemer & DeRuyter (1998) demonstrated that quality evaluations were positively related to loyalty. Considering that disconfirmation is based on cognitive evaluations of per-

Figure 2
Final model estimated



ceived quality, the relationship between disconfirmation and loyalty could be handled by these judgements of performance.

Finally, sport motivations have a moderator effect on the cognitive evaluations of consumer satisfaction. For the highly motivated individuals, satisfaction can be explained only by the affective component (arousal). These subjects seek more intensely those benefits associated to emotional states through the sport practice. Motives such as factors positive affect, challenge, or entertainment could drive the consumer to be more sensitive to emotional elements in the sport service consumption. The results of this research support this thought. For the runners with low motivation, arousal is also very important in the formation of satisfaction, and the cognitive factor has a significant but weaker influence on satisfaction. Nevertheless, sport motivations do not moderate the relationship between satisfaction and loyalty; although both groups have different drivers of satisfaction and present differences in the intensity of these relationships, the strength of this link is not moderated by motivations.

"For the highly motivated individuals, satisfaction can be explained only by the affective component (arousal)."

Implications

The findings involve several implications for the management. This study can help the organizers of this type of sport event better understand the customer satisfaction process and improve their performance. We propose the following recommendations.

Firstly, customer satisfaction is driven by cognitive and affective factors where the level of arousal exerts a stronger influence on satisfaction than disconfirmation. This means that managers not only should make an effort to offer a high quality service so as to get a more favourable disconfirmation of expectations, but they should also stimulate the emotions of the runner during the race, adding elements of excitement and surprise in order to enhance the arousal of the runners. For example, the participation of the spectators and their capability to animate the runners could increase the level of arousal. Likewise, the organisers could suggest their employees that they encourage and support the runners in every moment.

Secondly, arousal also has an indirect influence over customer loyalty through satisfaction, like disconfirmation, which also exerts a direct although weak influence. The importance of satisfying the runners so that they come back on the next edition is obvious. Considering the benefits reported for retaining loyal customers, such as the increase of the efficacy of marketing instruments and the less sensibility for a rise in price, organizers have to manage cognitive and affective elements, as it has been mentioned before. However, they have to take the direct influence of the cognitive element on loyalty into account. Although the organization gets to enhance the affective state of the runner, a discrepancy between perceived performance and expectance could influence the future behaviour intentions negatively. To mitigate this negative disconfirmation, managers must improve the quality of the service and, above all, they must adjust the communication strategy to avoid creating false expectations.

And thirdly, there are different clusters of runners with regard to sport motivations. In particular, two large groups can be found; highly motivated runners practice sport to get high levels of psychosocial benefits, as opposed to low-motivated individuals. This more emotional conceptualization of the sporting activities provokes differences in the relationships of the satisfaction model. Managers should segment the market to understand the different motivations of the separate runner groups. High-motivated runners concede essential importance to forming their satisfaction judge on emotional factors and the cognitive element is not significant for them. Therefore, the study of motivations could be a fundamental strategic tool, in order to know the drivers of runner satisfaction.

Limitations and further research

This study has one major shortcoming; in the conceptualization of the satisfaction process: two important antecedents have not been considered, expectation and perceived quality. Although the disconfirmation measure represents an evaluation between expectations and perceived attributes of quality, authors such as Oliver (1993) or Wirtz & Bateson (1999) have proposed a more comprehensive model integrating these variables in the cognitive-affective satisfaction process. The inclusion of these antecedents could help to explain variations in the level of emotions and disconfirmation and it could be valuable for managers to evaluate specific attributes of the service. Furthermore, this more comprehensive model could reveal additional information about the direct relationship between disconfirmation and loyalty.

Regarding sport motivations, future research should delve more deeply into this topic. The study of the relationships between motivations for participating in an organized sports activity and specific motivations for playing a particular sport should be achieved. The creation of a taxonomy of sport motivations could allow scholars and practitioners to better understand this important variable. From the managerial point of

view, a more exhaustive segmentation could be accomplished than the one which has been done in this article, in order to get more precious information of different clusters of customers.

The moderator effect of sport motivations on satisfaction has been tested in this research but further investigation should analyze other variables in sport services, variables such as the familiarity, involvement, or service participation, which have moderated the satisfaction process in other services (San Martín et al., 2004).

Finally, this research has focused on a single event and it has been conceptualized in an exploratory fashion. Replication would be desirable to provide additional support to the final model estimated. Suggestions would include considering a larger sample size in order to avoid statistical problems (to get a higher ratio between the number of parameter estimates with respect to sample size and to increase the statistical power).

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Endnotes

[1] The distribution of the demographic data of the sample was very similar to the population (runners had to fill out their demographic data in the registration form. This data base was compared with the sample data).

[2] The measurement scales utilized in the study are included in the Appendix.

[3] Item-to-total correlation above .30 (Nurosis, 1993); Cronbach's alfa above .70 (Nunnally, 1978); factors loading exceeding .50 considering this sample size (Hair et al., 1999).

[4] Squared Multiple Correlation for Reduced Form (R_1^2) has been considered. This statistic can be interpreted as the relative variance of the dependent variable explained for by all explanatory variables jointly, unlike the traditional R^2 that overestimates the strength of the relationships for non-recursive systems with more than one endogenous variable (Jöreskog & Sörbom, 2001).

[5] These authors divided the behavioural intentions in short term intentions and long term intentions as differents forms of loyalty. They found a positive and significant relation between disconfirmation and short term intentions.

[6] Minimum sample size required for achieving a LISREL analysis (Hair et al. 1999).

[7] Two cases were not valid.

[8] Although there was a lack of multivariate homocedasticity (Box test: M=108.86; p< .001), the difference between the size of the two groups was not severely large (ratio < 1.5). Thus, the violation of this assumption has a minimum effect (Hair et al., 1999)

[9] Brown-Forsythe statistic was used in the univariate tests to correct the F statistic for the lack of univariate homocedasticity.

Appendix

The measures

Disconfirmation

"Overall, my experience in the race was… ("better/worse than expected" on a 5-point scale)

"Overall, my expectations about the race were… ("better/poorer than I thought" on a 5-point scale).

Emotions

Please circle the number that best reflects your emotions during the race based on a series of adjectives.

"Pleased"	1	2	3	4	5	"Angry"
"Happy"	1	2	3	4	5	"Unhappy"
*"Delighted"	1	2	3	4	5	"Undelighted"
"Glad"	1	2	3	4	5	"Sad"
*"Hopeful"	1	2	3	4	5	"Disillusioned"
*"Amused"	1	2	3	4	5	"Bored"
"Lively"	1	2	3	4	5	"Down"
"Excited"	1	2	3	4	5	"Calm"
"Active"	1	2	3	4	5	"Passive"
*"Surprised"	1	2	3	4	5	"Indifferent"

Satisfaction *(scaling from "strongly disagree" to "strongly agree" on a 5-point scale)*

*This race is one of the best that I have run.

I am satisfied with my participation in this race.

My choice to run this race was a wise one.

Really, I have enjoyed running this race.

I don't regret having run this race.

Loyalty *(scaling from "strongly disagree" to "strongly agree" on a 5-point scale)*

I tell my friends or family my satisfaction with this race.

Probably, I will run in this race next year

I would recommend this race to a friend

*Although the registration price increases, I will participate next year

Sport motivations

Please assess the following factors (from 1 to 5; being 5 the maximum value) as you best believe they identify your motivations for participating in an organized sports activity.

Factors positive affect

Social contact

Body image

Competition

Challenge

Physical exercise

Entertainment

Coping strategy

* Items dropped after exploratory analysis