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Analysis of member retention in fitness through satisfaction, attributes perception, expectations and well-being

Keywords: Fitness management, Gyms and health clubs, Consumer behaviour, Physical activity.

Gonçalves, Celina

Instituto Politécnico de Bragança, CIDESD and CIFI2D, Portugal

Diniz, Ana

Faculdade de Motricidade Humana, Universidade de Lisboa, Portugal

Abstract

The objective of this study was to understand how attributes perception, expectations, well-being and satisfaction influence membership retention in fitness clubs. To what extent do the perception of the service attributes by the members; the expectations, what is expected from a certain service; the well-being, pleasant feeling of body and mind; and the satisfaction, contentment of needs and desires, influence retention in fitness clubs.

Data from a sample of 2,250 fitness club members were collected from a Fitness Network; statistical analysis included descriptive and inferential analysis. The inferential study was based on factor analysis involving extraction of principal components with Varimax. Path analysis was subsequently performed, through multiple linear regressions and analytical model representation. It was observed that well-being in the club is the variable with the largest causal effect on membership retention, followed by the facilities and equipment, expectations and, less relevantly, human resources, and finally innovation and services. The results indicate that fitness clubs should focus on club maintenance, offer suitable and modern facilities and equipment, and strive to cultivate strong customer relationships, in order to provide a pleasant experience to club members and increase the duration of their training sessions.

1. Introduction

The growing awareness of the benefits of physical activity and of the relationship between physical inactivity and risk factors, has led to a larger involvement of people with fitness and wellness services. This in turn has led to an increase in the number of fitness clubs, programs and activities. Hence, consumers seek clubs that will fulfil their specific needs, and this demand drives fitness clubs to maintain permanent interaction with their target group in order to achieve their goals.

On the one hand, the quantity and quality of fitness clubs have increased substantially in recent years (Talley, 2008), but on the other hand, this increase is not significant to sustain the business (McCarty, 2007). Furthermore, part of the population has never been a member of a Gym and Health Club (GHC) (Leisure-net Solutions, 2005) and a large percentage of members quit early, complicating the acquisition and retention of members.

For McCarthy (2007), quitting is currently the major problem of the fitness industry, which the author considers a triple loss: it represents a financial loss for club owners, an opportunity loss for club manager and an experiential failure for club members. Therefore, the growth of the industry and the well-being of members are dependent on membership retention. Nothing could more sharply accelerate the continuous worldwide growth of the industry than improvements in this domain. As a result, club fitness managers work constantly towards keeping their existing members: retention.

Although some studies have already investigated perception, expectations and satisfaction of the members in fitness, this study intends to simultaneously relate all the variables and to include the well-being variables in GHC and in life as retention predictors. Thus, the objective of this study is to determine to what extent do positioning: perception of members, expectations: what is expected of the service, the well-being: pleasant feeling of body and mind, and satisfaction: contentment of needs and wishes, influence membership retention in fitness clubs.

2. Literature Review

2.1. Variables that affect retention

The concept of retention in fitness clubs refers to membership retention (Storbacka, Strandvik & Gronroos, 1994) and is fundamental for the profitability of Gyms and Health Clubs (GHC) (Ferrand, Robinson & Valette, 2010). To this end, GHC have tried to understand their customers in order to acquire better members (Green, 2005) - those who will not quit early. However, there are a number of aspects in trying to understand a member that require further research. For Talley (2008), there is no simple solution for the problem of retention, but rather several strategies and processes that can be adopted. Retention management tries to deliver an adequate service to the member through several variables that can affect their retention behaviour. Several efforts have contributed to the understanding of the club member and retention: through the influence of satisfaction (Alexandris, Zahariadis, Tsorbatzoudis & Grouios (2004); Bodet, 2006); through attributes perception (Green, 2005, Alexandris et al., 2004); through expectations (Alexandris et al., 2004; Power, 2008), and through well-being (Diener et al., 1997; Kural, 2010).

2.1.1. Satisfaction

Satisfaction is generally regarded as a key element in the relationship of members with services, demonstrating a positive association between satisfaction and membership retention (Bodet, 2006). Evidence showing that a happy customer is more likely to maintain an established relationship can also be found in the study conducted by Vázquez-Carrasco and Foxall (2006). Howat, Murray and Crilley (1999) also found evidence indicating that customer satisfaction in sports centres is positively linked with service recommendation, repeated use and increased frequent visits.

Previous studies show that some attributes are more important to the quality and satisfaction than others (eg. Carvalho, Buchmann & Gonçalves, 2014; Bodet, 2006), referring that not all the attributes have the same relevance for members. Therefore, it is imperative that an analysis in different contexts periodically could be made (Gonçalves, Meireles & Carvalho, 2014) to clarify fitness managers concerning the attributes that are to maintain, modify or even withdraw. Furthermore, the literature also refers to the indirect influence of satisfaction on the intention to repurchase (Ferrand, 2010) and, thus, in the retention, as a mediating variable.

However, the authors argue that satisfaction, although necessary to achieve customer loyalty, is not enough. To Howat, et al. (1999), it is the value that customers feel they are receiving, more than their level of satisfaction that makes them stay. In fact, not all attributes carry the same weight, and consequently do not have the same influence on satisfaction. Indeed, there is no general consensus over which service attributes lead to satisfaction. Satisfaction therefore acts as a mediating variable in the intention to

repurchase (Ferrand et al., 2010). Furthermore, in the study by Ferrand et al. (2010) on the intention to repurchase in the fitness industry, no significant influence of satisfaction on the intention to repurchase was found. This leads to the hypothesis that retention is positively influenced by satisfaction (H1), which works as a mediating function from other variables towards the retention.

2.1.2. Perception of service attributes in fitness clubs

Perceived positioning by members is based on perceptions, on what consumers think or feel about the identity of the service (Beech & Chadwick, 2007). However, these perceptions differ according to the type of customer who seeks a specific service (Parks & Quaterman, 2003).

Research on the perception of the attributes of services in fitness clubs has been extensive. Chelladurai, Scott and Farmer-Haywood (1987) identified five dimensions, measured by their scale of attributes of fitness services (SAFS). Parasuraman, Zeithaml and Berry (1994), also identified several attributes that consumers consider relevant and classified them into 5 dimensions in the SERVQUAL model. The QUESC model (Kim & Kim, 1995) proposes eleven dimensions. This model was developed for fitness centres in South Korea to measure the dimensions of quality in fitness centres.

Chang and Chelladurai (2003) proposed a model for the analysis of quality in fitness clubs, where nine dimensions were identified by the model (SQFS). Similarly, Brady and Cronin (2001) had previously proposed a model that conceptualises quality services based on three dimensions that influence the attitude of members, and Alexandris et al. (2004) applied this model to the fitness industry.

However, several researchers have added service attributes such as the design and price of membership, facilities, equipment, good atmosphere, the status of the brand (Shank, 2002), safety, responsibility, trust, empathy, sensitivity, and the service itself (Zeithaml & Britner, 2003). Lentell (2000) includes results, staff and secondary services. Among the attributes included in fitness studies, MacIntosh and Dohety (2005) emphasise the importance of passion for fitness in membership retention.

In a study conducted with customers of a Health Club in Greece, Alexandris et al. (2004), in addition to the attributes identified in the literature, included other applied to the fitness context (atmosphere and behaviour). Ferrand et al. (2010) also described a list of important attributes to be found in research, such as cleanliness, reliable services and safety; although there is no clear agreement on what is important in the specific context of fitness services. For this reason, it is necessary to establish which attributes are important to consumers, before understanding their impact on the intention to stay and become a loyal member, contributing to retention. This framework brings us to the following hypothesis: retention is positively influenced by perception of service attributes (H2); furthermore, satisfaction is positively influenced by attributes of service (indirectly influencing retention) (H3).

2.1.3. Expectations and well-being

Expectations are what consumers expect of a given service based on their needs, desires and motivations, together with their previous experiences, word of mouth, advertising in the media, price of membership and image (Robinson, 2006). The author correlates retention with the members' expectations of the services that are offered, and states that members use their expectations to determine if the service is acceptable or not.

Specifically, Power (2008) describes how people expect to have computerised systems (user-friendly gym equipment), helpful human resources (pleasant and professional staff) and detailed information regarding their GHC (easy to memorise training routines). Furthermore, consumers always want the service to improve over time and always expect more from these services, never less. If the fitness organizations do not offer what the partners want and need, that is, if the partners are not satisfied, by not

getting the services they expect, or even not exceeding their expectations, probably the organizations will not be able to retain (Talley, 2008). This leads to the following hypothesis: retention is positively influenced by member expectations (H4); and satisfaction is positively influenced by member expectations (indirectly influencing retention) (H5).

Well-being is considered a pleasant feeling of body and mind that combines satisfaction with life and happiness. Diener and Lucas (2000) report that well-being and positive experiences have an impact on satisfaction, while Barros and Gonçalves (2009) also argue that the happier a customer is, the more satisfied he will feel at the club.

Several studies report a relationship between physical activity and well-being, although it should be noted that well-being arises from a complex set of factors. However, the growth of the fitness consumer into a well-being consumer is a process of change over a lifetime. In an IDEA study (2000), consumers who were aware of physical fitness were also able to better perceive their own well-being. Individuals who were aware of well-being at the GHC evaluated their experience positively, indicating satisfaction (Barros & Gonçalves, 2009). Following this line, in the present study, well-being is measured in terms of well-being in life, specifically satisfaction with life, and well-being at the GHC.

From this, the following relationships between well-being, satisfaction and retention can be hypothesized: retention is positively influenced by member well-being in life (H6) and well-being in GHC (H7); satisfaction is positively influenced by member well-being in life (indirectly influencing retention) (H8) and satisfaction is positively influenced by member well-being in GHC (indirectly influencing retention) (H9).

3. Methods

3.1. Questionnaire

The research instrument was constructed based on a list of attributes described in the literature, followed by an expert analysis that identified a list of attributes and grouped them into 4 dimensions considered important to study the perception of the quality of services in fitness clubs. Additional formal changes were implemented in order to ensure their adequacy to the fitness club context. A pilot questionnaire was then prepared and pre-tested among college students who had previous experience as members of fitness clubs (30), who were excluded from the research sample. The final version of the research instrument was prepared based on these results, and consisted of different sections aimed at answering the starting question. Part (A) comprised the respondent characteristics, as described in the characterisation of the sample. Part (B) consisted of the 24 items selected for the study of the perception of service attributes in fitness clubs. The importance given by each member to these items was classified using a 5-point Likert-type scale.

Part (C) consisted of expectations and well-being. Expectations were queried through a single measuring item, and well-being was perceived by a list of 5 items suggested by the study conducted by Diener, Suh and Oishi (1997). Therefore, the original items used to assess the well-being of people in life were used, as well as the adaptation of these items to the GHC context. The items were classified by members using a 5-point Likert scale.

The Cronbach alpha coefficient (α) was used to analyse the reliability of the items of variables used, resulting in an excellent reliability coefficient for the 34 variables ($\alpha=0.945$). Hence, the questionnaire possesses the necessary reliability to be a good research instrument.

3.2. Procedures

Regarding the procedures, questionnaires were delivered randomly to members when they visited the club; either handed at the reception area or prior to group classes, and collected at the end of the session by reception staff or instructors. Of the 2,845 questionnaires distributed to members, 2,762 were collected and only 2,250 of these were considered valid. The remaining 512 were considered void due to incorrect data entry or missing values. The collection of data from the questionnaires was carried out through non-probabilistic sampling. The sample was therefore composed of 2,250 members of a Portuguese Fitness network, whose membership stood at 24,608 in 2008.

3.3. Data analysis

Data processing was performed using descriptive statistics and inferential statistics.

The correlation in the predictive study was evaluated using the Pearson correlation matrix. The pre-requisites of the factor model and the quality of the correlations were subsequently assessed using the Kaiser-Meyer-Olkin (KMO) test and Bartlett's test of sphericity. Factor analysis was performed using the method for factor extraction in principal components (PCA) with Varimax rotation. Scree Plot and Kaiser criteria were used in the extraction of causal factors (eigenvalues greater than 1), removing all items with saturation levels below 0.50 (Hair et al., 2005). The internal consistency of each factor was then calculated using the Cronbach alpha coefficient.

The obtained indices were processed as quantitative variables, allowing the use of multiple linear regression models to establish linear cause-and-effect relationships between the variables (path analysis). In this study, models including independent variables, a mediating variable and a dependent variable were represented, and the path coefficients were estimated using standardised regression coefficients (β). To represent the statistical significance of each coefficient, the following key was used: (*) $0.01 \leq p < 0.05$; (**) $0.001 \leq p < 0.01$; (***) $p < 0.001$.

The overall goodness of fit of the model was calculated using the coefficient of determination (R^2), considering that a coefficient value greater than 0.5 is representative of a good fit in social sciences studies (Marôco, 2010). The error, i.e. the proportion of total variance not explained by the model, given by $e = 1 - R^2$, and the path coefficient, given by $\sqrt{1 - R^2}$, were also determined.

Total effects were subsequently calculated, by determining the direct and indirect effects between pairs of variables. Total effects are estimates of the causal relationship between two variables. Thus, the following calculations were performed: the direct effect was calculated using the standardised beta coefficients, while the indirect effect was determined by multiplying the corresponding standardised betas; the total effect was obtained by adding the direct and indirect effects. Finally, the proportion of explained variation was calculated using the ratio between the total effect and the correlation coefficient.

Lastly, the assumptions of the regression models were validated. As a result, the normal distribution of errors, using the Kolmogorov-Smirnov test, the homoscedasticity of errors, using a plot of residual values versus predicted values, the independence of errors, using the Durbin-Watson test, and multicollinearity, using the variance inflation factor (*VIF*), were verified.

4. Results

4.1. Sample

The sample was representative of gender, although the number of women (54.6%; $n=1,228$) was slightly higher than that of men (44.9%; $n=1,010$). The respondents were aged between 10 to 87 years old, with a mean age of 33 years. The majority of the

respondents (56%; *n*=1,259) were in the "20-34" age group, followed by the "35-49" age group (19%; *n*=428). Regarding their marital status, most of the respondents were found to be single (57.1%; *n*=1,285). Regarding education, a significant subset of the respondents possessed higher education qualifications (43.5%; *n*=978) and their occupational status was predominantly active and employed (62.5%; *n*=1,406). The sample included a high number of respondents without minor children (73.5%; *n*=1,654). Regarding the household's net monthly income, the distribution was heterogeneous ranging between €1,000 and €3,000.

4.2. Reduction of service attributes

Significant correlation values were obtained for each pair of variables using the Pearson correlation matrix ($p<0.01$). Regarding the KMO measure (KMO=0.957) and Bartlett's test of sphericity ($p<0.01$), the results indicated a good fit of the application of Factor Analysis (FA).

The Factor Analysis led to four factors that explain a reasonable percentage (59%) of the total variance. Through an analysis of items in each factor, new dimensions were defined (Table 1), excluding items with a value lower than 0.5.

Table 1. Results of the factor analysis on service attributes

Factor 1P	Value	Factor 2P	Value	Factor 3P	Value	Factor 4P	Value
Proper facilities	0.751	Economical prices	0.718	Friendliness of the employees	0.826	Good location	0.832
Hygiene	0.739	Innovative services	0.649	Competent employees	0.792	Easy of access to the GHC	0.750
Quality of the equipment	0.659	Capacity to solve problems	0.592	Communicative	0.592		
Credibility	0.652	Innovative equipment	0.583	Good reputation	0.512		
Spacious changing rooms	0.615	Parking availability	0.574				
Coherent design	0.607	Offered additional entertainment	0.550				
Prestige	0.558	Pleasant environment	0.501				

The internal consistency of each factor was estimated individually using the alpha coefficient of Cronbach (α). *Factor 1P* (Facilities and equipment) showed a good internal consistency (α=0.876), followed by *Factor 2P* (Innovation and services) (α=0.843) and *Factor 3P* (Human resources) (α=0.840). *Factor 4P* (Accessibility) had a lower alpha value (α=0.697) and therefore has lower internal consistency.

4.3. Reduction of well-being attributes

Using the Pearson correlation matrix, significant correlation values were obtained for each pair of well-being variables ($p<0.01$). Regarding the KMO measure (KMO=0.889) and Bartlett's test of sphericity ($p<0.001$), the results indicated the suitability of using Factor Analysis.

The Factor Analysis led to two factors that explain a large proportion (71%) of the total variance. After an analysis of items in each factor, new dimensions were defined that match the original ones (Table 2).

Table 2. Results of the factor analysis on well-being

Factor 1B	Value	Factor 2B	Value
I am happy with the GHC	0.887	I am satisfied with my life	0.876
I rate my experience at the GHC positively	0.874	So far I have gotten the important things that I want in life	0.842
I have accomplished all that I expected at the GHC	0.838	In most ways my life is close to my ideal	0.832
I consider myself happy at the GHC	0.802	The conditions of my life are excellent	0.821
If I could go back I would not switch to another GHC	0.759	If I could live my life over, I would change almost nothing	0.788

The internal consistency of each factor was individually estimated using the alpha coefficient of Cronbach (α). *Factor 1B* (Well-being at the GHC) showed good internal consistency (α=897), and likewise *Factor 2B* (Well-being in life) (α=0.896).

4.4. Verification of the analysis model

Path analysis was performed, starting from the saturated analysis model, with indices resulting from the Factor Analysis of retention. $RET = \beta_1 SAT + \beta_2 FE + \beta_4 IS + \beta_6 HR + \beta_8 A + \beta_{10} EXP + \beta_{12} WBL + \beta_{14} WBGHC + e_1$.

When analysing the results, the best model for retention was:

$RET = 0.331 \, SAT + 0.072 \, FE + 0.061 \, HR + 0.052 \, EXP - 0.059 \, WBL + 0.328 \, WBGHC$. The coefficient of determination of the model was R^2=0.512 (acceptable fit) and the error was determined by e_1=1-0.512, resulting in e_1=0.488. The path coefficient of e_1 is given by $\sqrt{1-0.512}$, resulting in 0.699.

The linear correlations between the constructs of the variable well-being and retention, and between the variable satisfaction and retention were statistically significant (p<0.001), while between the variable expectations and retention and the constructs of the service attributes and retention were less significant ($0.001 \leq p < 0.01$).

The model built for retention has five elements with a positive direct effect on retention: the variable satisfaction has a direct effect on retention (β=0.331); the constructs of the service attributes, facilities and equipment (β=0.072) and human resources (β=0.061); the expectations (β=0.052) and well-being at the GHC (β=0.328). Well-being in life has a significant negative influence (β=-0.059).

The model for the satisfaction was then constructed:

$SAT = \beta_3 FE + \beta_5 IS + \beta_7 HR + \beta_9 A + \beta_{11} EXP + \beta_{13} WBL + \beta_{15} WBGHC + e_2$.

When analysing the results, the best model obtained for satisfaction was:

$SAT = 0.137 \, FE + 0.143 \, IS + 0.072 \, HR + 0.126 \, EXP + 0.413 \, WBGHC$. The coefficient of determination of the model was R^2=0.559 (acceptable fit) and the error was determined by e_2=1-0.559, resulting in e_2=0.441. The path coefficient of e_2 is given by $\sqrt{1-0.559}$, resulting in 0.664.

When analysing the correlations, there were significant positive linear correlations between the dependent variable and each of the independent variables, comprising expectations, well-being at the GHC and service attributes (p<0.001). However, the construct of service attributes, human resources, was less significant ($0.001 \leq p < 0.01$).

The model built for satisfaction shows that five elements have a positive direct impact on customer satisfaction and, consequently, an indirect effect on retention: the constructs corresponding to service attributes, Innovation and services (β=0.143), Facilities and equipment (β=0.137) and Human resources (β=0.072); the variable expectations (β=0.126) and the construct well-being at the GHC (β=0.413).

Figure 1. Analysis model
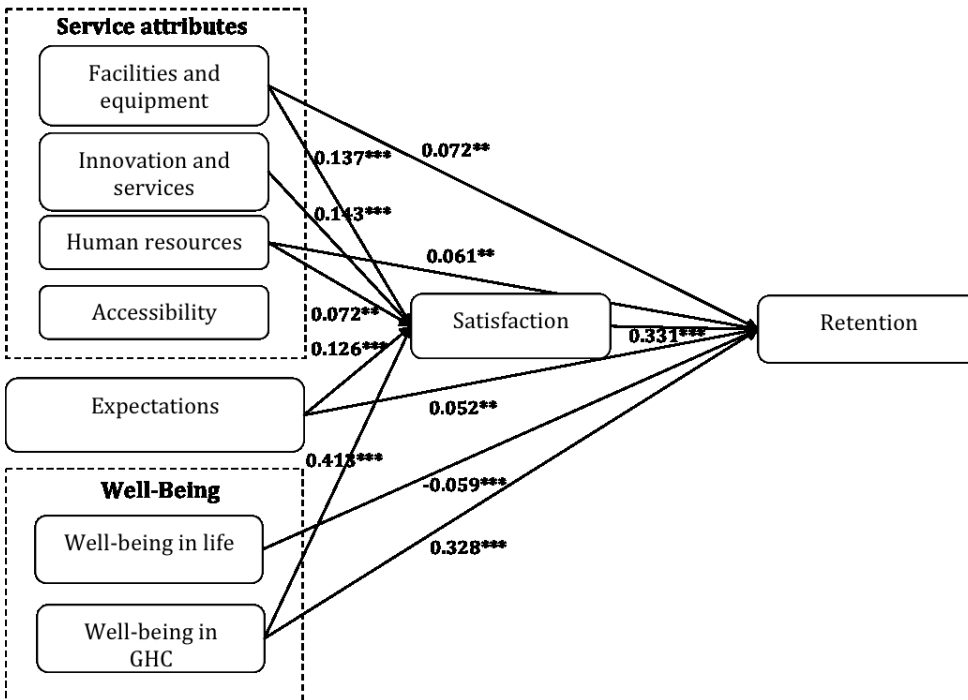
The calculation of the direct effects, indirect effects, total effects, and the proportion of explained variation were performed next, with the results shown in the following table.

Table 3. Direct/indirect effects and proportion of explained variation

Retention	Direct effect	Indirect effect	Total effect	Proportion of explained variation
Facilities and equipment (FE)	0.072	0.045	0.117	22%
Innovation and services (IS)		0.047	0.047	9%
Human resources (HR)	0.061	0.023	0.084	16%
Accessibility (A)				not significant
Expectations (Exp)	0.052	0.042	0.094	21%
Well-being in life (WBL)	-0.059		-0.059	not significant
Well-being at the GHC (WBGHC)	0.328	0.136	0.464	72%

Comparing the total effects with the corresponding proportions of explained variance, it appears that the variables with the highest causal effect on *Retention* are *Well-being at the GHC* (72%), *Facilities and equipment* (22%) and *Expectations* (21%).

Next, the assumptions were validated. The normal distribution of errors was not verified by the Kolmogorov-Smirnov test for the retention model ($p=0.000$) but was verified for the satisfaction model ($p=0.353$). The homoscedasticity of errors was verified using a plot of residual values versus the predicted values for both models (more or less random distribution around zero). The independence of errors was verified by the Durbin-Watson test for the retention model ($p=1.961$) and for the satisfaction model ($p=2.035$). The non-existence of multicollinearity was verified using the variance inflation factor (VIF) for each variable of the retention model ($1.103<VIF<2.396$) and for each variable of the satisfaction model ($1.471<VIF<2.974$).

Therefore, as predicted, satisfaction has a very significant influence on retention. Simultaneously, retention is directly influenced by the service attributes constructs (facilities and equipment, and human resources), by expectations and by the construct of well-being at the GHC. Satisfaction is influenced by the service attributes constructs (facilities and equipment, innovation and services,

and human resources), by expectations and by the construct of well-being at the GHC, directly influencing retention. However, well-being in life has a direct negative influence on retention.

5. Discussion

This study examined the influence of service attributes, expectations, well-being and satisfaction on membership retention in fitness clubs.

The results suggest a strong influence of satisfaction on retention, supporting hypothesis (H1). As such, a reference that proposes satisfaction as a direct positive factor with influence on retention is added to the body of academic literature (Bodet, 2006; Gonçalves, Biscaia, Correia, & Diniz, 2014). These results contradict previous studies where no significant influence of satisfaction on the intention to repurchase was found (Ferrand et al., 2010), and those that report satisfaction as having a moderate effect on retention (Liu, 2006). This framework suggests that further research on the topic of satisfaction in different fitness contexts is required, since one of the possible explanations for the different results reported in various studies might be the different variables used.

The present study establishes that, regarding the influence of service attributes on retention, not all attributes have an influence on retention and satisfaction. Thereby, service attributes shows two constructs with direct influence on membership retention and satisfaction: facilities and equipment, and human resources. The construct which most influences retention corresponds to facilities and equipment. In this regard, Chelladurai, Scott and Farmer-Haywood (1987) also suggest that the facilities and equipment have a direct influence on the decision-making process of joining a fitness club. Similarly, Alexandris, Dimitriadis and Kasiara (2001) describe the tangible factors of services as having a direct impact on the intention to repurchase.

As previously reported by McCarthy (2007), this study also describes an influence of the human resources construct on retention. These results are also suggested in studies focusing on the intention to repurchase (e.g. Ferrand et al., 2010) and satisfaction (Alexandris et al., 2004; Ferrand et al., 2010). This study also found that human resources have a positive influence on retention. As such, this construct, based on its indirect relationship with retention through satisfaction, and its direct relationship with retention, exhibits a modest explanation of the model.

The construct innovation and services is, in this study, the one that has the highest influence on satisfaction, and consists of the set of attributes associated with primary and secondary services. The same construct is also mentioned in the study by Chang and Chelladurai (2003) has having an influence on satisfaction. Contradicting the results of other studies (Chang & Chelladurai, 2003; Ferrand et al., 2010), it should also be noted that this construct does not have an influence on membership retention, thus making a modest contribution to the explanation of this model. These findings support hypothesis (H2) with facilities and equipment, and human resources attributes, and support hypothesis (H3) with these attributes plus innovation and services.

Regarding the variable expectations, this study supports the direct relationship between expectations and retention, although the values are not very high, hypothesis (H4). This is in agreement with Robinson (2006) and Pedragosa and Correia (2009), who describe the positive influence of expectations on satisfaction. This direct positive influence of expectations on satisfaction has an indirect influence on retention, through satisfaction as a mediating variable. Nevertheless, there are moderate relationships that warrant further research to understand how expectations influence the retention of fitness consumers, hypothesis (H5).

The influence of well-being on satisfaction and retention is still insufficiently studied. Well-being in life is reported as having a direct negative effect on retention and not supporting hypothesis (H6). Unlike the well-being at the GHC which has a very significant direct positive effect on retention and supporting hypothesis (H7). These results are consistent with those reported by McAuley et al. (2005), who describe very high positive responses for well-being in their study focusing on exercise and well-being. In this way, it

can be claimed that people involved in sports activities, who feel good through the positive effect of exercise, stay at the GHC, directly promoting their retention (not supporting hypothesis (H8)). Well-being at the GHC has a direct positive influence on satisfaction, and therefore has an indirect effect on retention through satisfaction as a mediating variable, supporting hypothesis (H9).

6. Conclusions

This study investigated to what extent service attributes, expectations, well-being, and satisfaction influence membership retention in fitness organisations.

Comparing the total effects with the corresponding proportions of explained variance of the model, it can be concluded that the construct with the highest causal effect on retention is well-being at the GHC, followed by the construct facilities and equipment, expectations, and, to a lesser extent, the human resources and innovation and services constructs. These results therefore confirm the presented analytical model.

As such, the model clearly shows the positive and negative influences of the different constructs on retention. Satisfaction has a direct and significant influence on retention. Regarding the service attributes, the facilities and equipment and human resources are the constructs that most influence retention, although with low values. Expectations also have an influence on retention. However, the most influential construct on retention is well-being at the GHC, with great significance. Remarkably, well-being in life has a negative influence, and it would be interesting to conduct an exploratory analysis of the causes.

The constructs that have a positive effect on satisfaction and, consequently, an indirect effect on retention, through satisfaction as a mediating variable, should also be highlighted. Service attributes have an influence on satisfaction through its constructs, in the order of influence, innovation and services, facilities and equipment, and human resources. The expectations and well-being at the GHC constructs have a significant influence on satisfaction, with well-being at the GHC being the most influential on satisfaction.

Concerning the sample size, future research should include a wider sample to comprehend different contexts, since this study only reflects the members of a single fitness network. Another question is that, to define the model, manual calculations of prediction were performed and, although this technique was satisfactory, it may have associated errors difficult to detect. Thus, future research should involve the use of suitable software for a faster and easier computation of structural equation models (e.g. AMOS , LISREL). Moreover, it should comprise other variables proposed in the literature, such as extra services (Howat, Crilley, Absher, & Milne, 1996), price (Ferrand et al., 2010), frequency of use (Ferrand et al., 2010; Meireles, Gonçalves, & Carvalho, 2014) and emotions during the fitness activities (Pedragosa, Biscaia & Correia, 2015), which may be interesting to increase the understanding of members actions in fitness clubs.

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