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Men's and women's attitudes toward organic food consumption. A Spanish case study

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Abstract

The study of the behaviour of food consumers in general and of organic food in particular, is revealed as the key element for agrofood business in its strategy to accommodate supply to consumer needs and desires. In research on organic food consumer behaviour, various papers suggest the existence of differences between men and women in their preferences, purchase, consumption and willingness to pay. Proposing to determine whether differences between men and women in the consumption of organic food come from their lifestyles, a series of surveys was conducted in the metropolitan area of Madrid in December, 2006. The results obtained through structural equation analysis indicates the model for men (χ^2/df = 1.76 $p < 0.01$, CFI = 0.907) as well as the model for women (χ^2/df = 1.87 $p < 0.01$, CFI = 0.857) can be considered acceptable, they suggest that women are more proactive in the consumption of organic food. While women are more motivated due to eating a healthy diet, men are more influenced by their social circumstances. In conclusion the basic commercial strategy for increasing organic food consumption in Spain would be for businesses as well as the government to conduct communication campaigns addressed basically to women, the clear promoters of healthy eating in the home.

Additional key words: consumer behaviour; gender; marketing strategy; modelling; structural equation.

Resumen

Actitudes de hombres y mujeres hacia el consumo de alimentos ecológicos. Estudio de un caso español

El estudio del comportamiento del consumidor de alimentos en general, y de ecológicos en particular, se revela como el elemento clave en la empresa agroalimentaria en su estrategia de acomodar su oferta a las necesidades y deseos de los consumidores. Dentro del estudio del comportamiento del consumidor de alimentos ecológicos, distintos trabajos sugieren la existencia de diferencias entre hombres y mujeres en sus preferencias, compra, consumo y disposición al pago. En este sentido, con el objetivo de determinar si las diferencias en el consumo de alimentos ecológicos entre hombres y mujeres proceden de sus estilos de vida, se realizaron una serie de encuestas en el área metropolitana de Madrid, en diciembre de 2006. Los resultados, obtenidos mediante análisis de ecuaciones estructurales, que se pueden considerar aceptables, tanto en el modelo de los hombres (χ^2/df = 1,76 $p < 0,01$, CFI = 0,907) como en el de mujeres (χ^2/df = 1,87 $p < 0,01$, CFI = 0,857), sugieren que las mujeres son más proactivas en el consumo de alimentos ecológicos, ya que mientras éstas están más motivadas por seguir una dieta sana, los hombres por las circunstancias sociales en las que se encuentran. Como conclusión, la estrategia comercial básica para incrementar el consumo de alimentos ecológicos en España pasa por realizar, tanto por las empresas como por la Administración, campañas de comunicación dirigidas fundamentalmente a las mujeres, claras impulsoras de la alimentación sana en el hogar.

Palabras clave adicionales: comportamiento del consumidor; estrategia de marketing; género; modelos de ecuaciones estructurales.

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Abbreviations used: CFI (Comparative Fit Index); GFI (Good Fit Index); NGO (Non-Governmental Organization); NNFI (Non-Normed Fit Index); RMSEA (Root Mean Square Error of Approximation); SEM (Structural Equation Modelling).

Introduction

Fear unleashed in consumers due to periodic food scandals as well as to certain technological advances such as genetic manipulation and food irradiation have resulted in serious concern and growing consumer demands for food safety, quality guarantees and additional information about food production methods.

These consumer requirements result in the demand for quality and health guarantees especially in new products. This is causing agrofood businesses to adapt to satisfy such demands while simultaneously trying to become differentiated so they can defend their competitive status in the market.

Among the various ways agrofood businesses have to differentiate the food they produce, differentiation through the organic icon is acquiring more importance every day since the environment is respected at the same time as high quality food is obtained (Bourne & Prescott, 2002; Lockie, 2002; Magkos *et al*., 2003; Benbrook *et al*., 2008; Benbrook, 2009).

Therefore, from a commercial standpoint, the organic characteristic can be established as an element of food differentiation (Brugarolas & Rivera, 2001; Aguirre *et al*., 2003; Sanjuán *et al.,* 2003; Chang & Zepeda, 2004; Armstrong *et al.,* 2005; De Boer *et al.,* 2006) because organic food has a positive image among consumers.

Organic agriculture, considered in the past as a marginal element destined to cover a determined market segment, is experimenting growth nowadays because, besides offering the possibility of producing safer food, it advocates a responsible attitude from the environmental standpoint[1].

Nevertheless, although the surface area for organic agriculture in Spain has expanded remarkably in recent years, this situation has not corresponded to a noticeable increase in consumption. Therefore, exportation is practically the only outlet for organic food produced in Spain.

Due to Spanish consumers' low consumption and spending on organic food[2], the study of organic food consumer behavior is acquiring greater importance. For, it seems to show specific characteristics that need to be discovered with the aim of proposing different commercial solutions which will further organic food consumption and stimulate local production as a source of income and jobs.

Differences between men and women in research that related gender to food were found by Rappoport *et al*. (1993). For instance, women tended more towards healthy food while men placed more importance on a food's intrinsic pleasure. Fagerli & Wandel (1999) discovered that women were more disposed towards changes in diet than men and also possess greater knowledge of the effects of food on health. In turn, several studies suggest the existence of differences in consumer preferences, purchase, consumption and willingness to pay for organic food depending on gender.

Napolitano *et al.* (2010) estimated that women had greater preferences for organic food consumption than men. Rimal *et al.* (2005) indicated that women bought organic food more frequently than men. Isenhour & Ardenfors (2009) found that women probably consumed more organic food and were more interested in leading a sustainable life than men. Lastly, Ureña *et al.* (2008) came to the conclusion that while women's attitude toward the purchase and consumption of organic food was more favorable, men were inclined to pay a higher price for it.

Due to the existence of differences in behaviour between women and men regarding organic food, this research has the objective of determining the influence of men and women's lifestyles in their attitude toward organic food consumption by means of the structural equation analysis. The original contribution of this paper in comparison with other studies is that by means of a multi-group Structural Equation Modelling (SEM) analysis it studies the different attitudes toward organic food consumption in Spain depending on gender.

[1] This type of agriculture furthers the use of renewal resources and recycling which restores nutrients from residual products to the soil. It respects the very mechanisms of nature for controlling pests and disease in crops and animal raising while avoiding the use of pesticides, herbicides, chemical fertilizers, growth hormones and antibiotics to a great degree. So it contributes to ecosystem maintenance and reduces contamination.

[2] Spending for organic food in Spain during 2007 was 0.7% of the total food expenditure, € 441 million, an annual expenditure of € 10 per capita (Fuentes & López de Coca, 2008). In the mean time, this outlay was higher in other European countries. According to data from 2005, the Swiss consumer spent the most on organic food yearly, € 108 per capita. They were followed by the Danes, Austrians and Swedish with around € 60 per capita (Willer & Yussefi, 2007).

Theoretical framework and hypothesis specification

Consumer lifestyle, understood as the conduct that individuals follow in the way they live, spend their money and use their free time, is one of the most important aspects in organic food consumption when analysing food consumer behaviour (Gil *et al.,* 2000; Sanjuán *et al.,* 2003).

Organic food consumers in general strongly associate health with diet (Schifferstein & Oude Ophuis, 1998; Squires *et al.,* 2001). Zanoli & Naspetti (2002) found that health is the consumer's most important motivation for buying organic food. Thus, health turns out to be the main reason for buying organic food in several studies (Lockie *et al.,* 2002; Magnusson *et al.,* 2003; Zanoli, 2004; Chryssohoidis & Krystallis, 2005; Padel & Foster, 2005; Yiridoe *et al.,* 2005; Roitner-Schobesberger *et al.,* 2008). Torjusen *et al.* (2001) found that attitudes towards the health attribute of organic foods have been statistically significant to explain organic foods choice. Chryssohoidis & Krystallis (2005) indicated that the most important motives behind the purchase of organic products are healthiness and better taste of the organic food. Padel & Foster (2005) concluded that consumers buy organic food products because they perceived them to be better for their health. De Magistris & Gracia (2008) came to the conclusion that consumers who tried to follow a healthy diet and well-balanced lifestyle tend to have more positive environmental attitudes. They considered organic food healthier and higher in quality than conventional food.

From the all above-mentioned research, it seems that the more interested consumers are in eating a healthy diet, the more organic food they will consume and the more conscientious they will be toward the environment. In this sense the following can be established as a first hypothesis:

H_1. Eating a healthy diet promotes respect for the environment (H_{1a}) and the consumption of organic food (H_{1b}).

The consumer socially concerned for the environment appeared at the end of the 60's and beginning of the 70's of the last century, partly as a consequence of the general mistrust of industry and technology and partly as a sub product of the first petroleum crisis (Grunert & Juhl, 1995). Nowadays it is thought that concern for the environment and the purchase of products, such as organic food, which respect the environment are positively influenced (Grunert & Juhl, 1995; Ramanaiah *et al.,* 2000; Grankvist & Biel, 2001; Squires *et al*., 2001; Soler *et al.,* 2002; Sanjuan *et al.,* 2003; Brugarolas *et al.,* 2008).

According to the above, the following can be established as a second hypothesis:

H_2. Respect for the environment promotes the consumption of organic food.

Bearden *et al.* (1989) indicated that group influence is an important determinant of individual behavior. They based this belief on product consumption being a social act that besides, is subject to approval by leaders. This means that a special interpersonal influence exists in the consumer (Bandura 1977, 1986, 1989). In this process, human expectations, beliefs and cognitive abilities are developed and modified by social influences, including family and friends (Cheah & Phau 2005).

Triandis (1993) and McCarty & Shrum (1994) stated that sociable individuals tend to be more respectful toward the environment that individualists, since sociability involves group cooperation in relation to the individual. Torjussen *et al.* (2001) indicated that many consumers consider social aspects in their choice of organic food, associating personal norms with behaviour toward the environment (Osterhuis, 1997). In turn, Sanjuan *et al.* (2003) indicated that consumer participation in society is a factor that can explain organic food consumer lifestyle in Spain. In this sense, Chryssohoidis & Krystallis (2005) declared the existence of a strong positive, statistically significant relationship between individuals' self-respect and enjoyment of life with their consumption of fresh fruit and organic vegetables.

And so, the third and final hypothesis of the model can be established as:

H_3. The individual's sociability promotes respect toward the environment (H_{3a}) and organic food consumption (H_{3b}).

Causal relationships between respect for the environment, healthy diet, sociability and organic food consumption are shown in Figure 1.

Material and methods

The sample

In this study, 420 organic food consumers were surveyed from the metropolitan area of Madrid during the month of December, 2006. For the sample design, population data for the Community of Madrid was taken from the year 2005 Madrid Community Statisti-

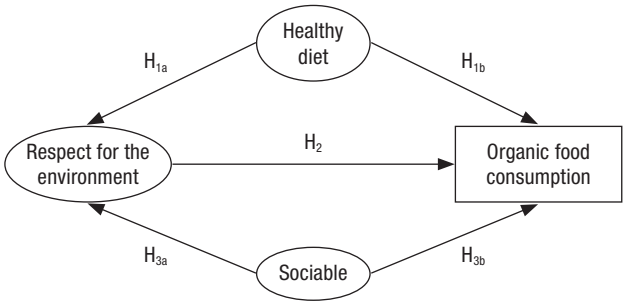

Figure 1. Proposed model for organic food consumption.

cal Institute (MCSI, 2006). Random, stratified sampling (Parasuraman, 1991) was done by population[3], gender and age group (from 18 to 24 yr old, 25–34, 35–49, 50–64 and over 64) on individuals about to buy food for their own consumption in the home. The margin of error was under 5% at a 95.5% level of confidence ($p = q = 0.5$; $k = 2$) (Table 1).

Surveys were distributed in the area surrounding three hypermarkets (Alcampo, Carrefour, Hipercor) and at the Market in Ventas district, since, according to the Madrid Community Organic Agriculture Committee (MCOAC, 2006), these are the main establishments for organic food sales to the public.

The surveys were carried out at ten different centers. Seven were located in the capital of Madrid in the districts of Moratalaz, Fuencarral, Arganzuela, Hortaleza, Latina, San Blas and Ventas and three were in the surrounding municipalities of Leganés, Pozuelo and Alcobendas.

The final questionnaire was addressed to organic food consumers as well as to potential consumers, that is, to those who are not consumers at present but who demonstrated favorable willingness to consume. It was structured and divided into five sections: 1) characteristics of organic food consumption, 2) maximum willingness to pay, 3) purchasing attitudes, 4) various statements about consumer lifestyles and 5) consumer socioeconomic characteristics.

Table 1. Technical card

Ambit	Metropolitan area of the capital city of Madrid
Universe	Adult organic food consumers
Survey size	420 surveys
Survey error	< 5.0%
Level of confidence	95.5% ($k = 2$)
Sampling	Random stratified with proportional fixation by population, gender and age
Control	Of coherence and stability
Preliminary questionnaire	Pretest to 25 individuals
Field work	December, 2006

Data analysis

Consumers evaluated indicators on a 7-point Likert scale where 7 represented the highest level of agreement. The indicators (I_1-I_{12}) were as follows: I try to eat low-fat food; I am concerned about my health; I try to eat food without artificial additives; I eat fruit and/or vegetables daily; I control my salt intake; I eat red meat in moderation; I collaborate with Non-Governmental Organizations (NGOs); I belong to an association for the defense of nature; I prefer a vegetarian diet; I see friends frequently; I dedicate my free time to travel and I practice sports regularly.

Organic food consumption was determined by using a 5-point Likert scale, depending on the probability of consumption. Number 1 corresponded to the least probability of consumption and five, to the greatest.

The total sample finally used for the analysis was 353 surveys, once the best measure of model fit was obtained. Gender was measured as a discrete variable (man = 1, n = 176, mean = 3.56 ± 1.72; woman = 2, n = 177, mean = 3.54 ± 1.70).

To analyse the factors affecting the attitudes towards organic food consumption, a SEM approach has been used. This approach has been selected because some of the factors influencing the organic food consumption such as, healthy diet, respect for the environment and sociable lifestyles cannot be directly observed, but can be considered latent variables measured by one or more items. Moreover, the SEM allows analysing simultaneously the relationships between dependent and independent variables in the organic food consumption model in the same way as SEM was used before in other studies of agro-food products (Grunert *et al*., 2003; Honkanen & Verplanken, 2004; Kim & Boyd, 2004; De Magistris & Gracia, 2008; Yee *et al*., 2008; Martínez-Poveda *et al*., 2009).

[3] The stratified sampling by population was performed according to the resident census in each of the 21 districts of the City of Madrid (305 surveys). In the municipalities of Leganés, Pozuelo and Alcobendas the total census was used (115 surveys).

The graphics used was Amos 17.0 (SPSS 2009) to apply the model of structural equations (SEM) to the proposed model. This way the invariance of the factor in men and women could be determined (Costa-Font & Gil, 2009).

The confirmatory factorial analysis was performed by means of a multi-group or multi-sample analysis to assess the measurement model (Steenkamp & Baumgartner, 1998). The factor loading model for each indicator was constrained to be equal throughout the groups (Byrne, 2001).

Lastly, for this level of invariance, the model of salient and non-salient factor loadings for the measurement model was verified to be the same in the various segmented groups (Steenkamp & Baumgartner, 1998).

The process was carried out in two stages. In the first one, measurement models were estimated separately before the simultaneous evaluation of measurement and structural models (Anderson & Gerbing, 1988). In the second stage, measurement models were estimated for the healthy diet, respect for the environment and sociability constructs, and for the observed variable, organic food consumption. Each estimate was made simultaneously in men and women in order to evaluate the validity of each model.

Parameters for diagnosis of the model were: the Chi-square (χ^2), the root mean square error of approximation (RMSEA), the goodness of fit index (GFI), the adjusted goodness of fit index (AGFI) and the comparative fit index (CFI). The Confirmatory Multigroup Analysis (MGCA) and the structural model (Schermelleh-Engel *et al.,* 2003) were also considered as indicators of the quality of fit of the model.

Respondents' socioeconomic characteristics are shown on Table 2.

Results and discussion

In the proposed model for organic food consumption, "Organic food consumption" is measured by one observed variable. Healthy diet was measured by six observed variables related to following a healthy diet ("I try to eat low-fat food", "I am concerned about my health", " I try

Table 2. Sample socio-economic characteristics of the subjects participating to the consumer panel (%)

Variable	Levels	Population (*)	Sample
Gender	Male	53.0	51.0
	Female	47.0	49.0
Age (in years)	18-24	13.1	12.9
	25-34	21.5	21.2
	35-49	27.0	28.6
	50-64	19.6	19.0
	> 64	18.8	18.3
Education	Grade School	26.4	26.7
	High School	43.9	43.1
	College	29.7	30.2
Work role	Businessman	7.7	6.4
	Employee	52.5	51.2
	Housewife	11.6	13.8
	Student	5.8	10.0
	Retired	11.2	13.8
	Other	11.2	4.8
Monthly family income (€)	< 900	11.5	10.2
	900 to < 1,500	26.6	27.6
	1,500 to < 2,100	16.6	32.2
	2,100 to < 3,000	19.0	18.8
	> 3,000	26.3	10.2
Habitat	Madrid City	73.7	75.7
	Metropolitan area	26.3	24.3

(*) Source: INE (2006); MCSI (2006).

to eat food without artificial additives", "I eat fruit and/or vegetables daily", "I control my salt intake" and "I eat red meat in moderation"), respect for the environment was measured by three observed variables related to individual environmental conservation practices ("I collaborate with NGOs", "I belong to an association for the defense of nature"; and "I prefer a vegetarian diet") and sociable was measured by three observed variables related to activities to enjoy in their free time ("I see friends frequently", "I dedicate my free time to travel" and "I practice sports regularly"). The differences between men and women about the indicators which form the constructs in the model are shown on Table 3.

Measurement model

The main parameters to test the robustness of the construct (Hair *et al.,* 1999; Kline, 2005) show acceptable results for the multi-group model (Table 4).

The reliability of the indicator loading was acceptable (Hair *et al*., 1999; Kline, 2005). In turn, all *t* values associated to the loading were significant. Discriminant validity was obtained. The model's quality-of-fit measures were good. So the convergent validity was considered successful and acceptable (Byrne, 2001).

Internal model consistency was obtained since the composite reliability was greater than 0.70 (Bagozzi & Yi, 1988)[4], the extracted variance was over 0.50 (Hair *et al.,* 1999) and the discriminant validity was less than 0.85 (Bagozzi & Yi, 1988).

The model yielded good fit measures for the multi-group confirmatory model, indicating that the conceptual model fit the data, applying the basic rules for evaluation criteria (Schermelleh-Engel *et al.,* 2003).

In this sense, Chi-square is significant (less than 3), so it is considered a good fit of the model. The root mean square error of approximation (RMSEA) is less than 0.05, which is considered a good fit. The good fit index (GFI) was 0.91 and the comparative fit index (CFI), 0.89, which is a good fit, both being approximately 0.90. Considering the confirmatory factorial analysis for the samples of men and women, the good fit measures are acceptable for both models.

Finally, results for the group invariance analysis indicated that configural invariance was obtained by both genders. That is, salient and non-salient factor loadings in the measurement model are the same for both genders (Steenkamp & Baumgartner, 1998).

Structural model

The most appropriate way to test invariance across groups is first to obtain the best model fit separately for each gender (Byrne 2006). In the first place, an equality

Table 3. Descriptive statistical indicators for consumer lifestyle

Construct	Indicators	Men		Women	
		A[1]	SD[2]	A[1]	SD[2]
Healthy diet (C_1)	I_1: I try to eat low-fat food[3]	4.65	± 2.10	4.92	± 2.02
	I_2: I am concerned about my health	5.38	± 1.61	5.52	± 1.55
	I_3: I try to eat food without artificial additives	4.45	± 1.98	4.59	± 2.03
	I_4: I eat fruit and/or vegetables daily[3]	5.55	± 1.75	5.75	± 1.60
	I_5: I control my salt intake	4.55	± 2.27	4.71	± 2.27
	I_6: I eat red meat in moderation[3]	4.47	± 2.05	4.72	± 2.07
Respect for the environment (C_2)	I_7: I collaborate with NGOs	2.18	± 2.19	2.06	± 2.04
	I_8: I belong to an association to defend nature[3]	1.50	± 1.50	1.39	± 1.33
	I_9: I prefer a vegetarian diet	1.73	± 1.45	1.70	± 1.42
Sociable (C_3)	I_{10}: I see friends frequently	4.45	± 2.03	4.56	± 2.11
	I_{11}: I dedicate my free time to travel	3.35	± 1.95	3.47	± 2.04
	I_{12}: I practice sports regularly	3.96	± 2.25	3.90	± 2.22

[1] A: Average. [2] SD: Standard deviation. [3] Indicates the existence of significant differences for a maximum error level of 5%.

[4] Composite reliability determines whether it can be assumed that a single common factor is the basis of a set of variables and substitutes Cronbach's alpha due to estimation problems in these models (Raykov, 1998).

Table 4. Reliability of the multigroup confirmatory factorial analysis by gender

Construct	Indicators	Standardized loadings (*t*-value)[a]		Composite reliability (Extracted variance)		Measure of the model
		Men	Women	Men	Women	
C1				0.96(0.79)	0.94(0.73)	$\chi^2 = 221.48$
	I_1	0.78(0.00)[b]	0.68(0.00)[b]			
	I_2	0.74(9.85)***	0.59(6.15)***			df = 122
	I_3	0.68(8.28)***	0.67(6.76)***			
	I_4	0.70(8.77)***	0.53(5.59)***			χ^2/df = 1.82
	I_5	0.62(7.66)***	0.55(5.86)***			
	I_6	0.54(6.78)***	0.61(6.80)***			$p = 0.00$
C2				0.96(0.88)	0.96(0.88)	
	I_7	0.64(0.00)[b]	0.65(0.00)[b]			RMSEA = 0.048
	I_8	0.59(3.80)***	0.40(3.36)***			
	I_9	0.40(3.23)***	0.35(2.91)*			
C3				0.93(0.78)	0.95(0.78)	GFI = 0.91
	I_{10}	0.54(0.00)[b]	0.55(0.00)[b]			
	I_{11}	0.65(3.24)***	0.67(3.86)***			
	I_{12}	0.46(3.60)***	0.42(3.45)***			CFI = 0.89

[a] *** and ** indicate the existence of significant differences for a maximum error level of 0.1% and 1%, respectively. [b] Not calculated, since the value of the weights and the variance of the construct were fixed at 1.0. RMSEA: root mean square error of approximation; GFI: good fit index; CFI: comparative fit index.

test was established without imposing equality constraints on parameters. Subsequently, factor variances and covariances were carried out on loadings, constraining them to be equal in men's and women's samples (Table 5).

Thus, the model for men (χ^2/df = 1.76 $p < 0.01$, CFI = 0.907) as well as the model for women (χ^2/df = 1.87 $p < 0.01$, CFI = 0.857) can be considered acceptable. By using both indices (χ^2 and CFI) for both genders in determining the acceptability of the model through multi-group fit, the results suggest invariance of form, factor loadings, variances and covariances. The Non-Normed Fit Index (NNFI) was approximately 0.90 which is a good fit (Schermelleh-Engel *et al.,* 2003).

Hypotheses verification

Attending to the various hypotheses posed (Figure 2), hypothesis 1, *eating a healthy diet promotes respect for the environment (H1a) and consumption of organic food (H1b),* was accepted by both genders. It proved to be more relevant in the case of women than of men.

This, in turn, corroborates the fact that women are more aware of eating a healthy diet than men. Women are more concerned about their health than men, about consuming low-fat foods without additives and consuming red meat in moderation and fruit and vegetables daily (Table 3).

Table 5. Fit indices for invariant tests

Models	χ^2	df	χ^2/df	NNFI	CFI	RMSEA
Group of men	107.12	61	1.76	0.881	0.907	0.066
Group of women	114.28	61	1.87	0.817	0.857	0.070
Model 1: Unrestricted model	221.41	122	1.82	0.853	0.885	0.048
Model 2: Model 1 with factor loading restrictions	240.53	134	1.80	0.857	0.877	0.048
Model 3: Model with factor loading and variance / covariance restrictions	242.04	136	1.78	0.860	0.878	0.047
Model 2 – Model 1	19.12	12	–0.02	0.004	–0.008	0.000
Model 3 – Model 1	20.63	14	–0.04	0.007	–0.007	–0.001

NNFI: non-normed fit index; CFI: comparative fit index; RMSEA: root mean square error of approximation.

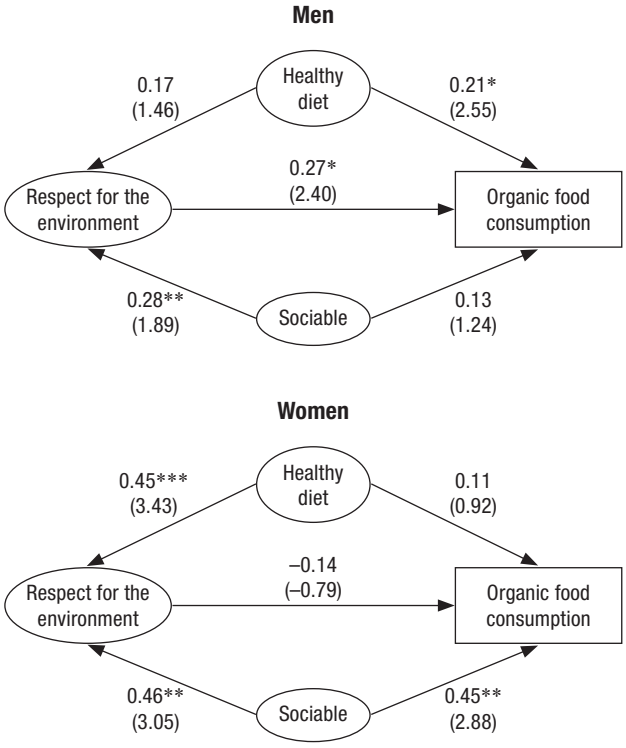

Figure 2. Group sequence diagram for men and women. ***, ** and * indicate the existence of significant differences for a maximum error level of 0.1%, 1% and 5%, respectively. The values above the arrows are the standardised path coefficients and the number in brackets are *t*- values.

Hypothesis 2, *respect for the environment promotes organic food consumption*, was accepted in the case of men ($p < 0.05$) and rejected in the case of women. In this sense, women's respect for the environment did not involve organic food consumption. On the other hand, men were more willing than women to belong to associations to defend nature (Table 3).

Finally, hypothesis 3, *the individual's sociability promotes respect for the environment (H3a) and organic food consumption (H3b),* was accepted by both genders. Nonetheless, it must be pointed out that the different social situations where men might be found were more relevant toward respect for the environment and organic food consumption than women's social situations.

Conclusions

According to the results, organic food consumption can be considered the consequence of an interaction between eating a healthy diet, respect for the environment and the individual's sociability. However, the significance is different between men and women.

In fact, while the main reason for organic food consumption in women is eating a healthy diet, in men it is a social function and to a lesser degree, comes from respect for the environment.

Regarding low organic food consumption in Spain, limiting factors traditionally cited are the higher price and frequent distribution problems of organic compared to conventional food. But a possible additional cause could be the low level of consumer information about the advantages of organic food production systems on health and the environment. That is where the weakness seems to be greater and therefore, where commercial business and institutional strategies should make themselves felt.

The institutional strategy for the promotion of organic food consumption should be generic and addressed to the largest quantity of consumers. It could consist of conducting informative communication campaigns on the advantages of organic food production. Meanwhile, commercial strategies by organic food producing businesses should carry out generic as well as specific communication campaigns.

The general communication campaign would aim to connect the characteristics of good health and respect for the environment with organic food consumption. At the same time, all of the above would be related to the various social characteristics of belonging to a group, self-esteem, enjoyment of life, etc. as well as consumer participation and involvement in the society.

Specifically, campaigns would be carried out through gender-differentiated sales promotions, addressed mainly to women, in places where food is bought, associations and institutions. The consumption of locally produced organic food should be encouraged there also, since distribution is easier, it is less costly and has fewer contaminants.

Lastly, it must be pointed out that the limits of this paper are related to the area where field work was conducted. Although the study is considered representative of Spanish consumers, it would be advisable in the future to carry out similar research in other places to contrast the hypothesis and the existence of differences between men and women. A second stage would be to study specific organic food (wine, cheese, oil, tomato, etc.), since it is possible that results may be different depending on the food at issue. Our future lines of research aim to minimize these limits.

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