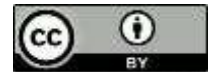# Habits Related to the Sustainable Consumption of Local Food Products: A Case in Portugal

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ABSTRACT

The goal of the present study was to understand consumer behaviour through the assessment of their sustainable consumption habits with regard to local food products. In addition to defining consumption profiles, the aim was to determine the main inhibitors of sustainable consumption. To that end, 125 questionnaires were applied to residents of the Municipality of Lagos, Portugal. The results allowed us to conclude that the items with the greatest importance for sustainable consumption habits, with regard to local food products, were those related to the influence on health and receptiveness towards regional products. There was also a significant correlation between variables related to genetic concerns, support for local producers, and health concerns. On the other hand, monetary barriers were determined as an important inhibitor of more ethical

consumption behaviour. Regarding the transtheoretical model of behaviour change, it was possible to determine that most respondents were in the maintenance phase, which means that more than half of them had already consolidated sustainable consumption habits.

Keywords: sustainable consumption, social marketing, local products, transtheoretical model, behaviour change.

Acknowledgments

INTRODUCTION

Interest in sustainable consumption habits has been gaining prominence, given healthier lifestyles and a growing trend towards valuing 'green products' (Grunert, 2011; Kostadinova, 2016; Schmidt, Guerra & Prista, 2016). This interest extends to the study of consumption habits related to local food products (Tanner & Kast, 2003). Moreover, the small number of studies addressing the adoption of sustainable food consumption behaviours related to local products adds relevance to the topic (Kostadinova, 2016).

The goal of the present study was to understand consumer behaviour through the assessment of their sustainable consumption habits with regard to local food products. In addition to defining consumption profiles, we intended to determine the main inhibitors of sustainable consumption and use the transtheoretical model of behaviour change (Prochaska & DiClemente, 1983; Kotler & Lee, 2008).

In this sense, the present study intended to answer the following questions:

1. What are the main inhibiting factors that discourage consumers from adopting a more sustainable lifestyle focused on the consumption of local food products?

2. What stages of behaviour change are individuals in regarding sustainable

consumption of local food products?

3. What kind of marketing strategies should be implemented in order to encourage behaviour change with regard to more sustainable consumption of local food products?

THEORETICAL BACKGROUND

Factors that influence sustainable consumption behaviour

Over the last few decades, several studies related to the theory of consumer behaviour have focused on the factors that explain different sustainable consumption behaviours (Sachdeva, Jordan & Mazar, 2015). The greater or lesser incentive for this type of consumption can be explained through the influence exerted by personal and contextual factors (Tanner & Kast, 2003; Kostadinova, 2016; Clark et al., 2019; Oke et al., 2020). Figure 1 summarises several examples presented in the literature for this type of factors. In comparative terms, the field of psychology has been emphasising the role of individual factors in behaviour change, to the detriment of contextual factors (Maloney & Ward, 1973; Van Liere & Dunlap, 1981; Hines, Hungerford & Tomera, 1986, 1987).
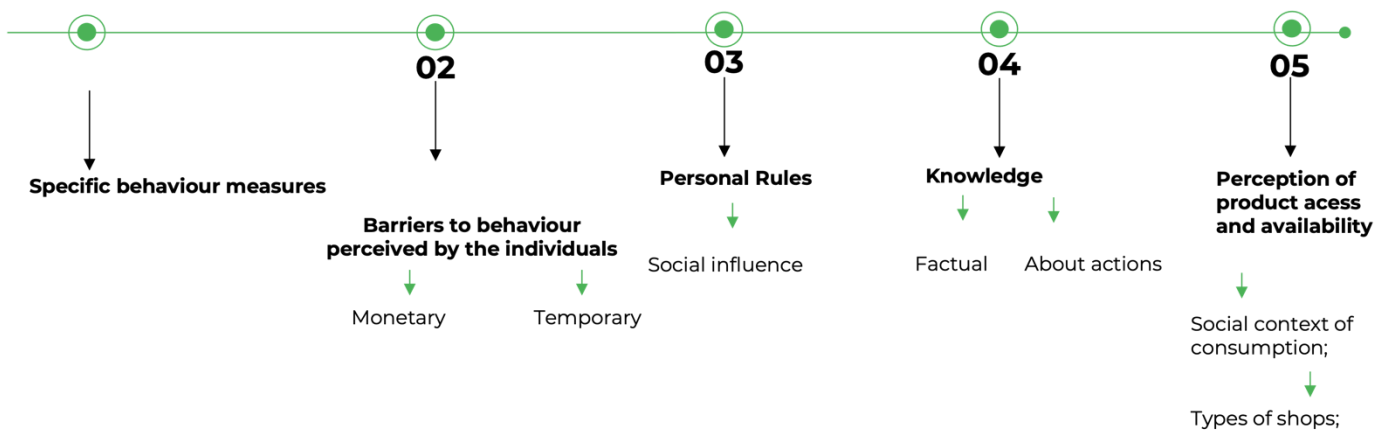

Figure 1. Personal and contextual factors.

Note. Adapted from Tanner & Kast, 2003; Kostadinova, 2016; Clark et al., 2019; and Oke et al., 2020.

Sachdeva et al. (2015) classify these factors (individual and contextual) into endogenous, exogenous, and structural. Whilst the first two relate to values,

behaviours, perceptions, and the individuals' own identities, the latter refer to external factors, which may refer to social rules or to the so-called conspicuous conservation. Social rules are conventionally defined as 'behaviour prescriptions', i.e., they should meet the expectations of what is a convenient behaviour (Gabler, Butler & Adams, 2013). In turn, conspicuous conservation and the behaviours associated with it are characterised by indicating whether or not individuals are willing to incur personal costs to the detriment of the common good. Finally, structural factors relate to the context in which consumer choices are effectively made (Sachdeva et al., 2015).

In addition, there are stimuli that positively affect the change of scenery, i.e., information feedback and information framing. When subjects receive negative feedback and are compared to other individuals, they are more likely to increase their green behaviours (Roberts, 1996; Sachdeva et al., 2015).

Human beings live in society and are susceptible to influence and be influenced within the scope of the groups to which they belong. Rules (social) limit individual actions, through expectations of collective behaviour (Cialdini & Trost, 1998). Social influence is therefore an important source of pro-environmental behaviour influx (Minton & Rose, 1997; Kim & Choi, 2005).

Oke et al. (2020) suggest that an important motivation for young adults to consume in a more sustainable manner is the perceived value they receive in terms of health. Pro-environmental behaviour is a function of pro-social and moral values relating to the environment. There is a relationship between consumption behaviour and the individuals' self-improvement values. These values can have a positive or negative effect on consumption behaviour, depending on the consumers' ultimate goals, i.e., health (Kareklas, Carlson & Muehling, 2014; Vantamay, 2018)

The individuals' perceptions of themselves are included in the list of factors. Ethical food consumption behaviour is an integral part of the 'self' that defines the identity of young adults. One of the most relevant motivations for the individuals is the ability to contribute to a greater cause, such as the preservation of the ecosystem and the protection of animal rights. When

individuals have this type of behaviour, feelings of personal satisfaction and self-fulfilment emerge (Gabler et al., 2013; Rehman et al., 2013; Clark et al., 2019).

Regarding the sensitivity towards prices, the high monetary value of the products represents an inhibitor of sustainable consumption. Most pro-environmental consumers are willing to pay more for sustainable, organic and/or local products, as they recognise added value in these products. However, when considering new consumers, price can be an inhibitor of this type of consumption (Tanner & Kast, 2003).

The perception of accessibility to and availability of ethical products should also be considered as another explanatory factor of sustainable food consumption behaviour (Oke at al., 2020). In this case, marketing strategies represent limited access to and availability of sustainable/local food (Oke at al., 2020). Table 1 systematises the main factors found in the literature as influencers of sustainable consumption behaviour.

Table 1. Factors that influence sustainable consumption behaviour.

Factors	Authors
Endogenous:	
Values, behaviour and identity	Sachdeva et al. (2015)
Perceived effectiveness and hope	Sachdeva et al. (2015)
Exogenous:	
Social rules	Sachdeva et al. (2015)
Conspicuous conservation	Sachdeva et al. (2015)
Structural:	
Environmental concern	Clark et al. (2019); Schultz (2000)
Behaviour towards green products	Clark et al. (2019); Chang (2011)
Green consumption behaviour	Clark et al. (2019)
Social/Regulatory Influence	Clark et al. (2019); Gabler, Butler & Adams (2013); Rehman and Bin Dost (2013)
Personal:	
Measures of specific behaviours	Tanner & Cast (2003)
General behaviour measures	Tanner & Cast (2003)
Barriers to behaviour perceived by the individuals (temporal and monetary)	Tanner & Cast (2003)
Ecological knowledge	Kostadinova (2016); Peattie (2010)
Behaviour towards food products	Tanner & Cast (2003)
Personal rules	Tanner & Cast (2003)
Consumers' perception of effectiveness	Kostadinova (2016)
Personal health and well-being	Oke et al. (2020)
Effects of information and knowledge	Oke et al. (2020)
Self-perceptions	Oke et al. (2020)
Concern for animal well-being	Oke et al. (2020)
Environmental concern	Kostadinova (2016); Ajzen (1989)
Contextual:	
Socioeconomic characteristics	Kostadinova (2016)
Life conditions	Kostadinova (2016)
Social consumption context/Types of shops	Kostadinova (2016)/ Oke et al. (2020)

Note. Prepared by the authors.

Transtheoretical model of behaviour change

Social marketing has been studied and applied in the most diverse fields of study, with the aim of raising awareness and changing behaviours for the benefit of society in general. The transtheoretical model of behaviour change (Kotler & Lee, 2008) is one of the most discussed behaviour change models in the health literature and transferred to the social marketing approach (Prochaska & DiClemente, 1983). This model derives from the interaction of several constructs of multiple theories related to behaviour change, considering in its design cognitive, social, and environmental factors (Guedes et al., 2006).

The transtheoretical model encompasses two dimensions, namely, the stages and the processes of change. Stages include the temporal, motivational, and fidelity aspects of specific behaviours; whereas change processes are related to the intervention events that can induce changes in individual experiences and the environment (Guedes et al. 2006; Kotler & Lee, 2008).

Changing behaviour in terms of food consumption habits has become increasingly relevant, given its impact both on individuals' quality of life and the environment. Based on the theoretical pillars of social marketing, Kotler and Lee (2008) suggest six stages for the transtheoretical model of behaviour change, namely: (1) pre-contemplation; (2) contemplation; (3) preparation; (4) action; (5) maintenance; and (6) termination (Figure 2). This model has been applied by several authors. It allowed predicting the process of changing eating behaviours with greater accuracy, such as the regular consumption of fruits and vegetables (Laforge et al., 1994; Nitzke et al., 2007; Toral & Slater, 2007; Greene et al., 2008).

While individuals classified as pre-contemplators tend to be more defensive, have greater difficulty in changing behaviours, and make less use of change processes, individuals classified as contemplators seriously think about changing their behaviours, making use of increasing awareness to gather as much information as possible about the behaviour in question. Self-reassessment is used more frequently in the contemplation and action phases, as individuals are more committed to making behaviour changes in the latter phases (Prochaska & DiClemente, 1983).
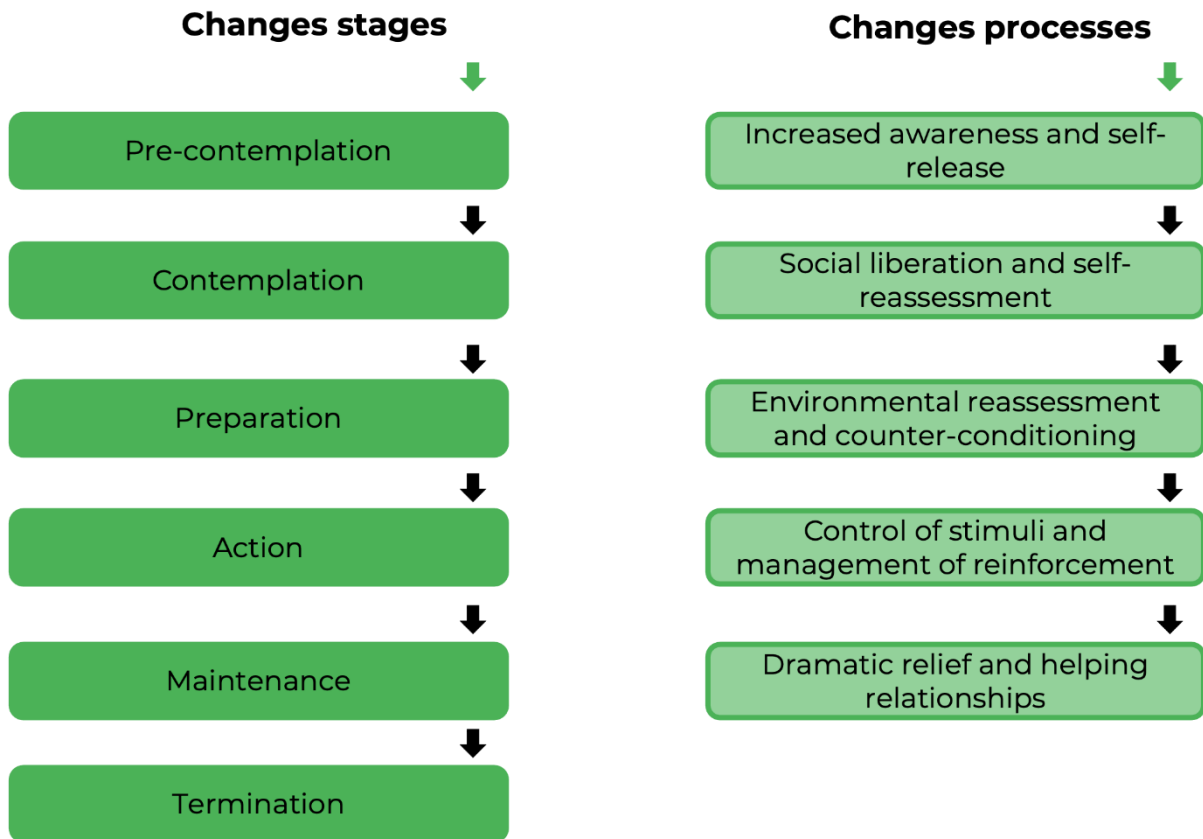
Changes stages

Changes processes

Changes stages	Changes processes
Pre-contemplation	Increased awareness and self-release
Contemplation	Social liberation and self-reassessment
Preparation	Environmental reassessment and counter-conditioning
Action	Control of stimuli and management of reinforcement
Maintenance	Dramatic relief and helping relationships
Termination	

Figure **2.** Transtheoretical model of behaviour change. *Note.* Adapted from Prochaska and DiClemente (1983) and Kotler and Lee (2008).

In the action phase, the individuals seek an effective change of habits, making great use of the counter-conditioning and stimuli control processes, which are also used in the maintenance phase (Prochaska & DiClemente, 1983; Kotler & Lee, 2008). It is worth noting that the strategies to be applied should be appropriate depending on the stage of change in which each individual is positioned, as well as other factors that may influence it (e.g., sociodemographic and psychographic variables). Education, for example, is a relevant factor in behaviour change, and a strong ally and driver of critical thinking. Nitzke et al. (2007) reinforce the idea that to achieve significant and more lasting changes in terms of eating habits in individuals, educational interventions are needed in stages, as suggested in the transtheoretical model.

METHOD

Questionnaire design and sample

The present study was based on the application of an online questionnaire to citizens residing in the Municipality of Lagos, Portugal, for more than a year and aged over seventeen years. A five-point Likert psychometric scale was chosen for the analysis of closed-ended questions, with individuals indicating their level of agreement or disagreement with the statement, similar to assessments performed in previous studies (Tanner & Kast, 2003).

The questionnaire was composed of three groups of questions. Group I included the factors that influence sustainable consumption behaviour. It consisted of eight questions, seven of which assessed different explanatory factors of sustainable consumption behaviour, and an eighth question that was representative of this behaviour. Group II represented the transtheoretical model of behaviour change. It consisted of two questions. One was intended to assess the stage of change in which the individuals under analysis were positioned. The second was an open question for understanding the kind of incentives that could increase consumption of local food products. Finally, Group III was aimed at collecting sociodemographic information about the sample. The following table summarises the scales and sources used in the preparation of the questionnaire.

Table 2. Scales and sources used in the preparation of the questionnaire.

Item	Scale	Source
Group I - Factors that influence sustainable consumption behaviour		
Behaviour towards food products	Five-point Likert scale	Tanner & Kast (2003)
Health	Five-point Likert scale	
Regional products	Five-point Likert scale	
Barriers to behaviour perceived by the individuals (temporary and monetary barriers)	Five-point Likert scale	
Personal rules	Five-point Likert scale	
Confidence in the product labels	Five-point Likert scale	
Types of shops	Five-point Likert scale	Kostadinova (2016)
Frequency of purchase of local food products	Ordinal	Bond et al. (2009)
Group II - Transtheoretical model of behaviour change		
Transtheoretical model of behaviour change	Ordinal	Prochaska and DiClemente (1983); Kotler and Lee (2008)
What aspects do you think could help encourage you to buy more food products in local markets in the Municipality of Lagos?	Open answer	
Group III - Sociodemographic data		
Age	Open question	
Sex	Nominal	
Marital status	Nominal	
Work status	Nominal	
Parish of residence	Nominal	
Gross monthly income estimate	Interval scale	
Academic qualifications	Nominal	
Responsible for food preparation	Nominal	Nitzke & Kritsch (2007)
Responsible for food purchasing	Nominal	Laforge et al. (1994)

Note. Prepared by the authors.

A convenience sample was selected for the specific case of the present study. In total, 141 responses to the questionnaire were obtained, of which 125 met the eligibility criteria. Exclusion criteria were: (1) Not residing in the Municipality of Lagos for more than one year; and (2) being aged less than 18 years. After the preparation of the first final version of the questionnaire, a pre-test was performed. It allowed performing some adjustments to the questionnaire in the structure and spellings in order to ensure a clear understanding of it, avoiding possible bias in the results. The data collection period lasted 10 days, from 18th June to 28th June 2021.

Statistical techniques used

The data of the present study were collected using the software 'Microsoft Forms'. The statistical treatment of the data was performed using the statistical package for the social sciences (SPSS software). The descriptions of consumer behaviour towards different consumption habits were performed using descriptive statistics. The assessment of the relationship between consumer sustainable consumption behaviour and the factors that inhibited the actual consumption of the respondents was performed using Spearman's correlation coefficients. The transtheoretical model of behaviour change also made it possible to categorise all respondents in a given stage of consumption (e.g., pre-contemplation; action; maintenance). Finally, a content analysis was performed for the open question.

RESULTS

Analysis of internal consistency

Cronbach's alpha was calculated in order to determine the internal reliability of the central variables of the present study. This statistic was applied to the seven factors that influenced consumers' sustainable consumption behaviour, namely: (1) behaviour towards food products; (2) behaviour towards the influence of health on sustainable consumption behaviour; (3) consumers' behaviour towards regional products; (4) barriers to behaviour perceived by the individuals; (5) social rules; (6) consumer confidence in the labels of the products; and (7) types of shops. Internal consistency was not calculated for the latter, given that it was not a latent variable. The following table illustrates the values for this statistic.

Table 3. Results of the analysis of internal consistency of variables

Item	Cronbach's alpha
1. Behaviour towards food products.	0.739
2. Behaviour related to the influence of health on sustainable consumption behaviour.	0.802
3. Consumers' behaviour towards regional products.	0.809
4. Barriers to the behaviour perceived by the individuals.	0.765
5. Personal rules.	0.541
6. Consumers' confidence in the labels of the products .	0.822

Note. Prepared by the authors; adapted from SPSS.

Demographic characterisation of the sample

Figure 3 summarises the demographic characteristics of the sample assessed in the present study. The respondents were mainly young female adults, single, employed, and with low average monthly incomes. They were responsible for purchasing and cooking their own foods.
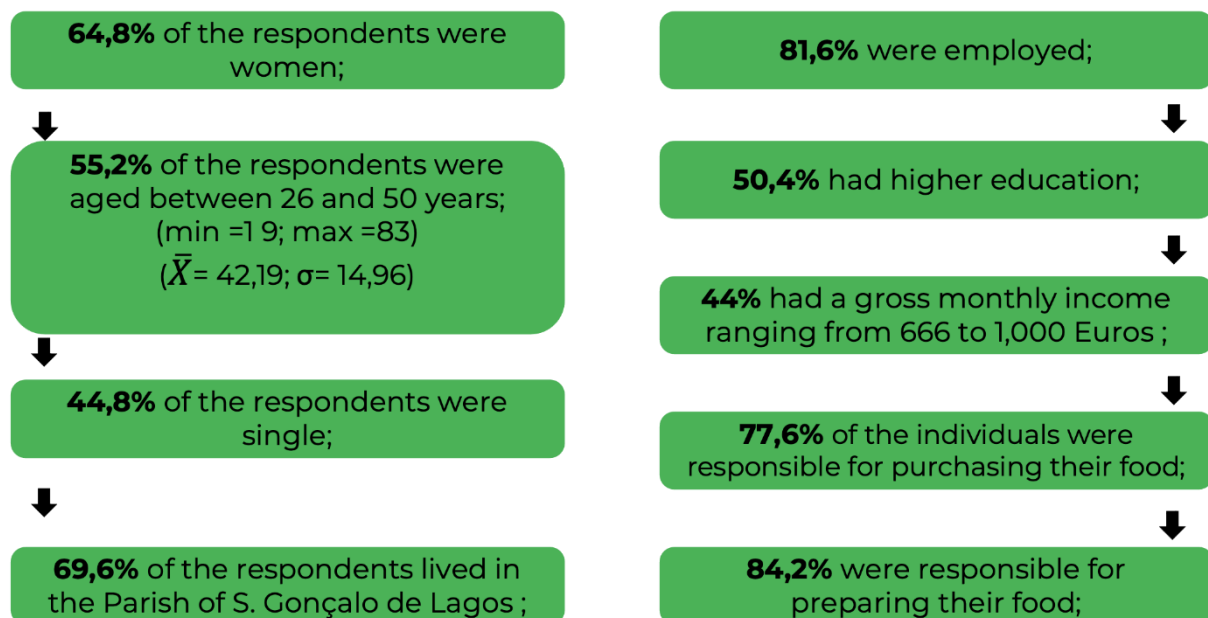

64,8% of the respondents were women;

55,2% of the respondents were aged between 26 and 50 years; (min =19; max =83) ($\bar{X}$ = 42,19; σ= 14,96)

44,8% of the respondents were single;

69,6% of the respondents lived in the Parish of S. Gonçalo de Lagos ;

81,6% were employed;

50,4% had higher education;

44% had a gross monthly income ranging from 666 to 1,000 Euros ;

77,6% of the individuals were responsible for purchasing their food;

84,2% were responsible for preparing their food;

Figure 3. Demographic characteristics of the sample. *Note.* Prepared by the authors.

The component related to behaviours and beliefs is of central importance in the present study, given its role as strong predictor of sustainable consumption behaviours and positive behaviour towards environmental protection, fair trade, and local production (Mainieri et al., 1997; Ebreo et al., 1999; Tanner & Kast, 2003).

In terms of specific consumer behaviour towards food products, the present study confirmed the value given by the respondents in terms of environmental protection and local production (Table 4). The importance of consumer behaviour towards the influence of health on sustainable consumption behaviour was also confirmed in the present study (Table 5). It is worth mentioning that Tanner and Kast (2003) and Oke et al. (2020) found similar results, highlighting health and personal well-being as one of the main incentives for the purchase of ethical food products.

Table 4. Consumer behaviour towards food products.

Item assessed	Average	Standard deviation
1. It is not important to me whether the product was grown organically or conventionally.	2.20	1.070
2. Environmental protection is important to me when shopping.	**4.02**	0.803
3. If I can choose between organic and conventional food products, I prefer organic.	**4.26**	0.822
4. Genetic engineering should be used more in agriculture.	1.90	0.945
5. I am opposed to genetically altered food products due to ethical or moral reasons.	3.70	1.032
6. Genetically manipulated food products are dangerous for humans.	3.86	0.953

Note. Prepared by the authors; adapted from SPSS.

Table 5. Consumer behaviour towards the influence of health on sustainable consumption behaviour.

Item assessed	Average	Standard deviation
1. It is important to me that food products do not contain preservatives.	3.84	0.919
2. I avoid products that contain too much sugar.	3.95	0,851
3. When shopping, I pay attention to whether food products contain healthy substances.	3.90	0.896
4. Health issues play an important role for me when preparing my meals.	**4.09**	0.773

Note. Prepared by the authors; adapted from SPSS.

With respect to consumer behaviour towards regional products, it was observed that supporting national agriculture, farmers, and local products were items of greater importance to respondents than to those previously assessed (Table 6). As Tanner and Kast (2003) found, the present study confirmed the importance of positive behaviour towards local production as a predictor of pro-environmental purchasing.

Table 6. Consumer behaviour towards regional products.

Item assessed	Average	Standard deviation
1. It is important to me to support local producers when I shop.	**4.40**	0.672
2. It is good to support national agriculture by purchasing local products.	**4.61**	0.490
3. Consumers should show solidarity with national farmers.	**4.60**	0.508
4. It is important whether food products are locally grown or not.	4.20	0.842

Note. Prepared by the authors; adapted from SPSS.

Barriers and personal rules

The barriers to behaviour perceived by the individuals and personal rules were two other factors strongly referenced in the literature. Regarding barriers, they were divided into monetary and temporal (Table 7). In view of the results, it was possible to determine that price sensitivity, in the case of the present sample, represented the main inhibitor of a more sustainable consumption behaviour. While effective consumers of local products were willing to pay

more for sustainable, organic and/or local products, as they recognised added value in these products, the same fact was not true for new consumers. In these cases, the price was, in most cases, an inhibitor of green consumption behaviour.

Table 7. Barriers to behaviour perceived by the individuals.

Item assessed	Average	Standard deviation
1. I cannot afford to pay more for organic farming products.	2.98	1.078
2. Green products are still too expensive.	**3.70**	0.967
3. People should not buy green products as they are more expensive.	1.88	0.779
4. I have very little time for cooking.	2.58	1.138
5. I have very little time to prepare meals.	2.63	1.140
6. Due to lack of time, I am dependent on food products that do not take a long time to be cooked.	2.34	1.151

Note. Prepared by the authors; adapted from SPSS.

With respect to personal rules (Table 8), they are defined as a feeling of moral obligation, with the power to coerce consumers to act in a certain manner, which they believe to be the most correct. In the present study, the importance of environmental concerns was confirmed (Table 8).

Table 8. Personal rules.

Item assessed	Average	Standard deviation
1. Everyone has the responsibility to contribute to environmental preservation, avoiding packaged food products.	**4.06**	0.850
2. Everyone should contribute to the promotion of sustainable food production, through the exclusive purchase of green products.	3.54	0.946
3. Consumers do not have the right to buy exotic fruits.	1.82	0.883
4. I feel morally obligated not to eat the meat of animals kept inhumanely.	3.63	1.051

Note. Prepared by the authors; adapted from SPSS.

Confidence in products and types of shops

The literature review allowed perceiving the importance that both factors, personal and contextual, had in the adoption of more sustainable consumption behaviour. Contextual factors have the ability to influence purchases, with consumer confidence and availability of shops being the main factors found in the literature (Kostadinova, 2016; Oke at al., 2020).

The results of the present study indicated that there was no consensus on the respondents' position regarding confidence in the labels of the products (Table 9), which could mislead consumers about the items they are buying, as well as cause inhibition in their consumption due to doubts about their credibility. The results also indicated that, when consumers wanted to buy more sustainable products, they mainly turned to local markets (Table 10).

Table 9. Consumer confidence in the labels of the products.

Item assessed	Average	Standard deviation
1. In the shops, I can distinguish between environmentally friendly food and those that are not.	3.21	1.057
2. I feel confident about which eco-labels are trustworthy and which are not.	3.06	1.034
3. Eco-labels are credible.	2.98	0.971
4. I believe in the quality assurance of eco-labels.	3.05	0.941

Note. Prepared by the authors; adapted from SPSS.

Table 10. Available types of shops.

Item assessed	Average	Standard deviation
1. I find sustainable products available at the supermarket.	3.54	0.848
2. It is easy to find products with sustainable certification in supermarkets.	3.10	0.914
3. When looking for sustainable products, I turn to local markets (examples: Mercado do Levante, Vivo Mercado)	**4.07**	0.917
4. When looking for sustainable products, I go to specialised shops.	3.36	1.088

Note. Prepared by the authors; adapted from SPSS.

These results support the idea that marketing strategies can in fact limit access to and availability of sustainable/local food (Oke at al., 2020). Situational factors such as information, price, availability, and accessibility are barriers to ethical consumption behaviour and may indicate lack of perception and personal control related to sustainable consumption behaviour.

Sustainable consumption habits in terms of local food products

Consumer sustainable behaviour was assessed using the variable corresponding to the frequency of purchase of local food products, as in Bond et al. (2009). The correlation of this variable (frequency of purchase of local food products) with sustainable consumption factors was tested using Spearman's correlation coefficients (Table 11). The highest correlations (Table 11) between frequency of purchase of local products and the items of sustainable behaviour analysed were found mainly in concerns about the support of local producers (items 11, 12, and 31), concerns about genetic

issues (items 5 and 6), and health concerns (items 8, 9, and 10).

Concerns about local producers were highlighted in items 11 (to me, it is important to support local producers when I shop), 12 (it is good to support national agriculture by buying local products), and 31 (when I look for sustainable products I resort to local markets). It was confirmed that the frequent purchase of local products was associated with consumers' behaviour related to supporting local producers when shopping, (rejecting H0: $\rho = 0$, with $\rho = 0.589$, sig = 0.000; $\rho = 0.478$, sig = 0.000; and $\rho = 0.474$, sig = 0.000, respectively).

Concerns about genetic issues referred specifically to items that intended to assess consumer behaviour towards food products, with emphasis on items 5 (I am opposed to genetically altered food products due to ethical or moral reasons) and 6 (genetically manipulated food products are dangerous to humans). Spearman's correlation coefficients revealed moderate positive correlations, and the null hypotheses of no correlation were all rejected ($\rho = 0.499$, sig = 0.000; and $\rho = 0.414$, sig = 0,000, respectively).

Finally, the most relevant items were those related to health, i.e., items 8 (I avoid products that contain too much sugar), 9 (when shopping, I pay attention to whether food products contain healthy substances), and 10 (to me, health issues play an important role when preparing my meals). Spearman's correlation coefficients revealed moderate positive correlations, and the null hypotheses were all rejected ($\rho = 0.416$, sig = 0.000; $\rho = 0.446$, sig = 0.000; and $\rho = 0.439$, sig = 0.000).

Table 11. Sustainable behaviour and factors inhibiting consumption.

Item assessed		Frequency of purchase of locally sourced products
	Spearman's C. C.	Sig.
Behaviour towards food products		
1. It is not important to me whether the product was grown organically or conventionally.	**-0.334****	**0.000**
2. Environmental protection is important to me when shopping.	**0.389****	**0.000**
3. If I can choose between organic and conventional food products, I prefer organic.	**0.312****	**0.000**
4. Genetic engineering (laboratory food handling) should be used more in agriculture.	**-0.343****	**0.000**
5. I am opposed to genetically altered food products due to ethical or moral reasons.	**0.499****	**0.000**
6. Genetically manipulated food products are dangerous for humans.	**0.414****	**0.000**
Behaviour related to the influence of health on sustainable consumption behaviour		
7. It is important to me that food products do not contain preservatives.	0.220*	0.000
8. I avoid products that contain too much sugar.	**0.416****	**0.000**
9. When shopping, I pay attention to whether food products contain healthy substances.	**0.446****	**0.000**
10. To me, health issues play an important role when preparing my meals.	**0.439****	**0.000**
Consumers' behaviour towards regional products		
11. To me, it is important to support local producers when I shop.	**0.589****	**0.000**
12. It is good to support national agriculture by purchasing local products.	**0.478****	**0.000**
13. Consumers should show solidarity with national farmers.	**0.431****	**0.000**
14. It is important whether food products are locally grown or not.	0.226*	0.011
Barriers to behaviour perceived by the individuals		
15. I cannot afford to pay more for organic farming products.	-0.118	0.189
16. Green products (fruits and vegetables from local organic farming) are still too expensive.	**-0.278****	**0.002**
17. People should not buy green products as they are more expensive.	**-0.312****	**0.000**
18. I have very little time for cooking.	**-0.436****	**0.000**
19. I have very little time for preparing meals.	**-0.394****	**0.000**
20. Due to lack of time, I am dependent on food products that do not take a long time to be cooked.	0.212*	0.018
Personal rules		
21. Everyone has the responsibility to contribute to environmental preservation, avoiding packaged food products.	**0.275****	**0.002**
22. Everyone should contribute to the promotion of sustainable food production, through the exclusive purchase of green products.	0.100	0.269
23. Consumers do not have the right to buy exotic fruits.		
24. I feel morally obligated not to eat meat from animals kept inhumanely.	**0.240****	**0.007**

	0.212**	0.007
Consumers' confidence in the labels of the products		
25. In the shops, I can distinguish between environmentally friendly foods and those that are not.	0.212*	0.017
26. I feel confident about which eco-labels are trustworthy and which are not.	0.074	0.412
27. Eco-labels are credible.	-0.012	0.893
28. I believe in the quality assurance of eco-labels.	0.007	0.938
Available types of shops		
29. I find sustainable products available at the supermarket.	0.072	0.422
30. It is easy to find products with sustainable certification in supermarkets.	-0.163	0.070
31. When looking for sustainable products, I turn to local markets	**0.474**	**0.000**
32. When looking for sustainable products, I go to specialised shops.	0.159	0.076

Note. Prepared by the authors; adapted from SPSS.

Transtheoretical model of behaviour change

The transtheoretical model of behaviour change proposed by Prochaska and DiClemente (1983) allows positioning the individuals under analysis, in terms of their sustainable consumption behaviour, as well as presenting a set of suggestions adjusted to the municipalities under study. Most respondents (60.80%) had been consuming sustainable products for more than six months, which means that they were currently in the so-called maintenance phase. These results are significant, since they indicate that, within the universe studied, there was already a consolidated local consumption habit on the part of consumers (Figure 4).

The present study revealed that 16% of the individuals were in the action phase, which means that they had started consuming local food products in the previous six months. The results also indicated that 14.4% of the respondents were in the preparation phase, suggesting that they intended to start consuming local food products frequently in the next six months. This phase is described by Kotler and Lee (2008) as one in which individuals are just making the last adjustments to move forward.
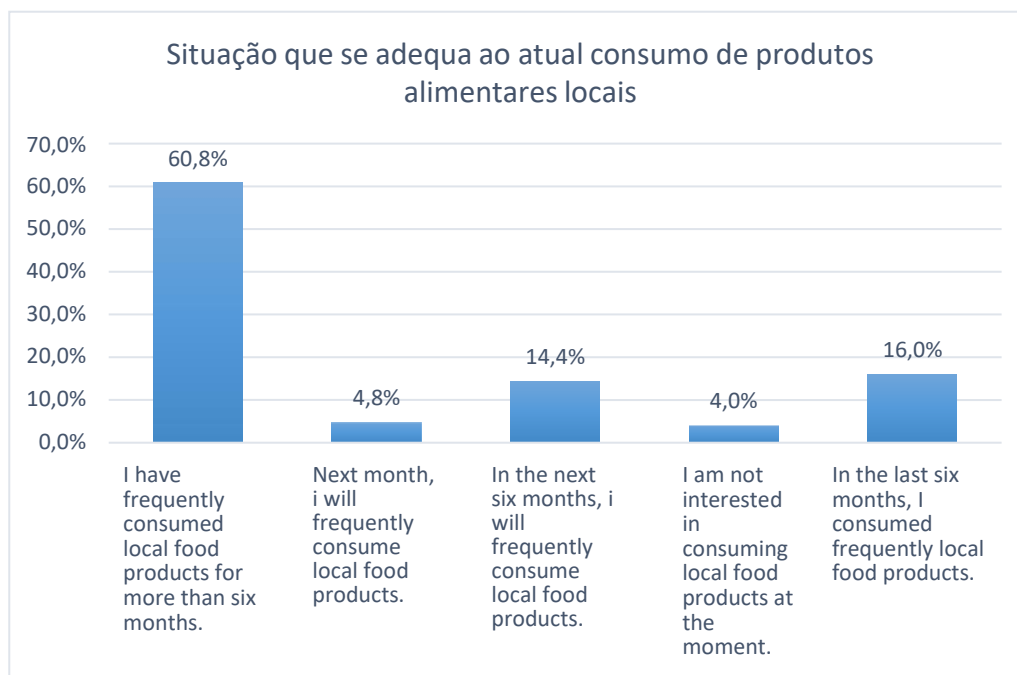
Figure 4. Transtheoretical model of behaviour change.

Note. Prepared by the authors; adapted from SPSS.

Only about 4% of the respondents were in the first stages, i.e., pre-contemplation and contemplation, which means that the proportion of those who had not yet started preparations for behaviour change was small. This situation can be solved applying some strategies that may encourage this type of consumption.

Since one of the barriers to the consumption of more sustainable products was related to price (monetary barriers), there are several marketing and communication strategies that can change the perception of value that consumers attribute to sustainable local products. The thematic analysis of contents performed with the responses to the open question, about the aspects that could contribute to encouraging the consumption of food products in local markets, made it possible to determine two factors, i.e., price/quality ratio, and communication and marketing strategies, as the most important to that end. This diagnosis is extremely useful in terms of a marketing management tool. In this sense, the Municipality of Lagos should perform as

an agent of change, since it will define and apply several integrated marketing strategies in order to persuade consumers to change their behaviour.

The concepts of consumer experience and relationship marketing are extremely important, since it is expected that their understanding and consequent applicability can have a direct influence on the consumption of sustainable local products. Consumption experience is described by Poulsson and Kale (2004) as an act of involvement and co-creation between providers and consumers, in which the consumers perceive value at the moment they find it and in the memory that remains after that encounter. The value or usefulness of the experience derives from the intensity and feelings associated with it. Schmitt (1999) highlights the multidimensional essence of consumer experience, composed of internal and external factors that shape and influence consumers' experiences.

On the other hand, the objective of relationship marketing is to create long-term value for customers/consumers, and the measure of success is given by their degree of satisfaction (Mações, 2019). According to Ferreira (2002), marketing is no longer focused on products and companies as business units, but oriented towards individuals, companies, and the social processes that link the two parties, giving real importance to customers' needs and consequently offering benefits superior to those of competitors. It is worth mentioning that the typology of products in question (sustainable local products) stands out for the proximity between consumers and sellers, since purchasing, in the present study, was preferably done in local markets.

Taking into account the suggestions of incentives will allow improving consumer experience and the relationship with the customers exponentially. Consequently, value will be added to sustainable local products. Once again, there are several recommendations that can be made to the Municipality of Lagos, meeting the aforementioned concepts, i.e., the development of communication and marketing strategies aimed at increasing the consumption of sustainable products and the perception of

their value.

The objective of integrated marketing communication is to create communication programmes that systematise all communication activities, thus building a consistent and understandable message for all target audiences (Mações, 2019), which combined with the rationale of social marketing can help encourage the sustainable consumption of local food products (Kotler & Lee, 2008).

Conclusion

The main goal of the present study was related to the need to understand consumer behaviour, through the analysis of sustainable consumption habits, focusing on local food products. The aim was to define the consumption profile of residents in the Municipality of Lagos, Algarve, Portugal, in order to define determinants and inhibitors and, thus, design strategies to increase the consumption of sustainable local food products in the municipality.

It was possible to conclude that the main inhibitor of more sustainable consumption habits was associated with monetary barriers, since they represent an impediment and cause difficulties in the actual performance of conscious sustainable consumption. Personal rules, on the other hand, did not seem to be significant enough, similar to the results obtained by Tanner and Kast (2003).

Results regarding consumer confidence in product labelling were undefined. The analysis indicated a lack of sufficient knowledge to differentiate between green and non-green products, which can largely lead to wrong consumption behaviours. Lack of information and limited knowledge are important barriers to green consumption behaviour. Without adequate information, conditions cannot be met so that consumers can change their behaviour (Oke et al., 2020). It was also possible to conclude that the preferred means for performing sustainable purchases of local/green products were local markets.

The correlation between the items that measured the relationship between consumer sustainable behaviour and those that measured factors that inhibited consumption indicated that the frequent purchase of local products was strongly related to the importance that consumers gave to supporting local producers when they made purchases, as well as the consideration they placed on supporting national agriculture and the importance given to the health factor.

The transtheoretical model of behaviour change (Prochaska & DiClemente, 1983; Kotler & Lee, 2008) indicated that the majority of the respondents were in the maintenance phase, which means that they were taking care to maintain the new behaviours. However, they need to be reminded, with some frequency, of the inherent benefits. In this sense, social marketing strategies (Kotler & Lee, 2008), which encourage behaviour change for the benefit of oneself and society as a whole, are relevant. This means that, when designing communication campaigns, one of the focuses should be reinforcing the benefits that the consumption of sustainable local products brings (health, well-being, environmental concern, incentive to the circular economy), also taking into consideration the existing barriers.

In the action phase, as a primary resource, individuals use the processes of counter-conditioning and stimulus control in order to fight the desire to return to unhealthy behaviour (Prochaska & DiClemente, 1883; Kotler & Lee, 2008). Contemplators, as well as respondents who were in the preparation phase, resorted to raising awareness by gathering as much information as possible about the behaviour in question. In this sense, the application of integrated communication plans will ensure the necessary stimuli so that behaviour changes last longer (Kotler & Lee, 2008).

Oke et al. (2020) concluded that some conditions should be met for consumers to change their behaviour in the context of more sustainable food consumption, namely: (a) access to adequate information (product availability, costs, price-quality ratio, and associated benefits); and (b) promotional actions highlighting personal, social, economic, and

environmental commitments of ethical food consumption behaviour, given that the consumption of sustainable food products is influenced by the perception of the benefits associated with this behaviour.

In terms of implications for marketing management and in general, we can affirm that the various factors considered as the main inhibitors of ethical consumption behaviours can be overcome with the set of solutions/strategies mentioned above being adopted by local decision makers.

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