




## Article

# Understanding Consumers' Convenience Orientation. An Exploratory Study of Fresh-Cut Fruit in Italy

Riccardo Testa , Giorgio Schifani  and Giuseppina Migliore \* 

Department of Agricultural, Food and Forest Sciences, University of Palermo, Viale delle Scienze, 90128 Palermo, Italy; riccardo.testa@unipa.it (R.T.); giorgio.schifani@unipa.it (G.S.)

\* Correspondence: giuseppina.migliore@unipa.it; Tel.: +39-091-23896618

**Abstract:** In Western society, the fresh-cut fruit market is experiencing significant growth, especially in Italy, where, in 2019, the fresh-cut fruit sales volume increased by 35% compared with the previous year. This study aims to understand Italian consumers' demand for fresh-cut fruits and to explore whether this trend is also affected by the prevalence of healthy lifestyles. Health orientation seems, in fact, to be a growing trend in the food sector. Research has recognized that consumers' orientation towards products that are ready to be consumed is not only related to saving time. Sociodemographic factors and psychometric variables, including values and lifestyles, play important roles in understanding consumer demand for convenience products. For this purpose, the food-related lifestyles (FRLs) tool was used to profile consumers. The FRLs tool is a useful instrument that describes different ways in which people use food to achieve their values in life. Data were collected by using an online survey carried out with Italian consumers of fresh-cut fruits. By using a cluster analysis technique, four Italian fresh-cut fruit consumer target groups were identified. The largest target group was represented by uninvolved consumers, who are not inclined to cook or plan meals and who are very influenced by the advertising of food products in their buying decisions. An interesting target group, which may represent a challenge for food enterprises in the sector, was health-oriented consumers, who attach great importance to organic certification and to product information. This target group was also characterized by older consumers with higher net monthly household incomes than other target groups.

**Keywords:** food-related lifestyles; segmentation; minimally processed food; fresh-cut fruits; consumer decision-making



**Citation:** Testa, R.; Schifani, G.; Migliore, G. Understanding Consumers' Convenience Orientation. An Exploratory Study of Fresh-Cut Fruit in Italy. *Sustainability* **2021**, *13*, 1027. <https://doi.org/10.3390/su13031027>

Received: 10 December 2020

Accepted: 19 January 2021

Published: 20 January 2021

**Publisher's Note:** MDPI stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.



**Copyright:** © 2021 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

## 1. Introduction

In the late 20th century, the evolution of society in Western countries, accompanied by increased incomes and general economic growth as well as by changes in family organization due to the increasing female participation in the labor market, led to a shift in dietary patterns [1–3]. This is observable through the growing trend to eat outside of the home and to consume convenience foods [4,5]. The increasing consumer interest in convenience foods reflects the tendency to minimize the time and effort that goes into the preparation of meals [6,7]. According to Capps et al. [8], convenience foods are partially or fully prepared foods associated with a significant reduction in time, cooking skills, and mental effort required to prepare meals. However, convenience foods have also been accused of being co-responsible for society's inclination towards a higher prevalence of obesity and lifestyle diseases, as well as reducing the joy in cooking [9–12]. Consumption of convenience foods, in fact, is associated with a high intake of calories, salt, saturated and trans fats, and sugar [13]. Moreover, these foods are rich in preservatives, flavoring, and artificial coloring, and they lack the micronutrients necessary for the proper functioning of the body.

The connection between eating habits and the intake of fresh fruits and vegetables (hereafter F&V) for health is widely recognized. These foods contribute essential micronutri-

ents as well as dietary fiber, which have positive effects on the human body [14]. According to the Consumption Monitor of the European Fresh Produce Association [15], the daily consumption of fresh F&V in European countries is below the 400 g recommended by the World Health Organization (WHO). Constraints related to lack of time and convenience are often reported as the main reasons why the consumption of fresh F&V falls below the daily intake recommended by the WHO [16]. Similarly, there seems to be a growing group of consumers who are demanding simpler solutions to achieving a healthy diet [9]. Health orientation seems, in fact, to be a growing trend in the food sector [10]. An example is the increasing interest of consumers in organic and functional food products, which are recognized by consumers as a way to prevent health diseases [11]. In this context, fresh-cut F&V can also represent a solution to meet consumers' demands to have healthy diets with more F&V, while having meals that are convenient to prepare [9,17,18]. As reported by Farina et al. [19] (p. 1), fresh-cut F&V are products that have been peeled, cut, washed, dried, and packaged in plastic trays and are finally sold in refrigerated boxes. In Europe, the fresh-cut F&V market is experiencing significant growth [20], accompanied by wide availability at various stores [21]. In Italy, starting with their first appearance in the early 1980s, sales of fresh-cut F&V have grown quickly, with a turnover of EUR 913 million in 2019. In particular, within the fresh-cut sector, vegetables accounted for most of the sales volume (96%), whereas fresh-cut fruits, despite only representing 2% of total fruit sales, resulted in a turnover of EUR 33 million (4% of fresh-cut F&V sales), showing an increase of 35% compared to the previous year [21]. Furthermore, the increase in sales of fresh-cut fruits in the last year was three times higher than the increase recorded for fresh-cut vegetables [21], suggesting that in the future, the fresh-cut fruit market will grow further and new opportunities could arise for agricultural enterprises [22–25]. Therefore, it is interesting to understand the characteristics of consumers who are feeding the trend of fresh-cut fruit consumption.

Research has recognized that consumers' convenience orientation is not only related to saving time. Sociodemographic factors and psychometric variables seem to play important roles in understanding consumer demand [26]. Among various approaches used to analyze consumers' behaviors, values and lifestyles have been recognized by research as being reliable psychological constructs in understanding the decision-making process of buying food [27,28]. A valuable measure for analyzing consumer demand in the food domain is the food-related lifestyles (FRLs) construct developed by Brunzø and Grunert [29]. FRLs have been adopted in numerous studies in different countries and used to describe various aspects of self-reported food-related behavior [26,30]. However, to the best of our knowledge, few studies have explored the use of FRLs in relation to consumers' food convenience orientation [31,32], and no study has been performed on consumers' FRLs in the domain of fresh-cut fruits in Italy. Moreover, it is not clear whether the demand for fresh-cut fruit is also characterized by people living health-oriented lifestyles. According to scientific literature, in fact, in recent years, consumers seem to have become increasingly attentive to aspects related to health and environmental sustainability, leading to an important sustainable and socially responsible consumption trend [33,34]. To bridge this gap, this study aims to segment Italian consumers of fresh-cut fruits using the FRLs tool in order to reveal whether and to what extent this fast-growing sector of the Italian agro-food industry is also driven by health-oriented lifestyles. The hypothesis underlining the study is that consumers' convenience orientation is also driven by the desire to live healthy and sustainable lifestyles.

Our findings may have a dual purpose. On the one hand, we aim to enrich the body of literature on consumers' convenience orientation. On the other hand, these findings could help food enterprises develop new products through the identification of specific groups of consumers, their preferences, and their values, which is also valuable for designing marketing strategies [35,36]. Moreover, the knowledge of consumers' lifestyles can help international organizations and governments better address health issues linked

to production and consumption systems in order to achieve more efficient consumption of resources and to achieve social and environmental sustainability [33,34].

The remaining part of the paper is developed as follows. In the next section, the role of lifestyles on consumers' food decision-making process is introduced, followed by the Materials and Methods section and then the Results section. After that, a discussion on the main results of the study in light of relevant literature is developed. Conclusions and implications are presented at the end of the manuscript.

#### *Studies on Food-Related Lifestyles of Consumers*

In consumer research, individuals' lifestyles have been shown to play an important role in explaining consumer behavior [37,38]. According to Grunert et al. [39], the lifestyle as a cognitive construct is linked to the personal values concept. In the food domain, the food-related lifestyles (FRLs) tool links food to consumers' achievement of life values. In other words, FRLs are a person-related construct that complements the most popular constructs used to explain the food decision-making process, such as attitudes and beliefs related to products and personality traits [36]. Grunert et al. [38] defined FRLs "as the system of cognitive categories, scripts, and their associations, which relate a set of products to a set of values" (p. 3), and categorized them as an intermediate-level construct between product perception and human values. The FRLs tool describes, in fact, different ways in which people use food to achieve the values of life and represents one of the most elaborate tools for segmenting consumers [37]. The FRLs approach was developed by Brunsø and Grunert [29], who identified five FRL cognitive constructs: ways of shopping, quality aspects of food, cooking methods, consumption situations, and purchasing motives. These five constructs were expressed by 69 attitudinal items measured on a seven-point Likert scale, from "completely disagree" (1) to "completely agree" (7). These 69 items were categorized into 23 dimensions (composed of three items each). The first FRL construct deals with consumer behavior in purchasing situations; it describes how individuals purchase food products, whether their decision-making is characterized by impulse buying or by reasoned actions, the kind of shop at which they buy food, and whether they read labels or trust expert or friend opinions. Quality aspects is the second FRL element and it concerns food attributes that consumers can identify in a specific product, such as whether it is healthy, natural, fresh, and tasty. The cooking methods element includes information on how food is transformed into meals and the time required for preparation, whether it is a spontaneous process that can fit into daily activities, and the reasons that push consumers to cook. The consumption situations element includes the number of daily meals consumed and their distribution and tries to understand the importance of eating outside of the home. The purchasing motives element links food-related activities to a consumer's values by describing the importance that a meal can have and what is expected of it, as well as the importance of social aspects, security, and traditions associated with food.

The FRLs approach is among the most widely validated tools for international segmentation in the food domain, although it appears to be better adapted to Western cultures than other cultures [30].

One of the first segmentations in European countries was proposed by Grunert et al. [38]. They showed, in terms of their relationship with food, that consumers could be segmented into at least five targets: "careless food consumers" [38] (p.220), that is, consumers who have little interest in cooking and give convenience products high importance; "adventurous food consumers," consumers who are very involved in shopping and cooking and have strong interest in health, taste, freshness, and organically produced foods; "conservative food consumers," consumers who are adverse to innovations and are highly price-sensitive; "rational food consumers," a group of consumers who love meal planning and who have a strong interest in product information; and finally, the "uninvolved" target, which includes consumers who are generally indifferent to food and have little involvement in cooking. Along the same line, other segmentations have been carried out with other European countries, including Great Britain [32,37], Poland [40],

Spain [41], and the US [42,43], and the same consumer target groups were identified in reference to the purchasing of different product categories (e.g., snacks, lamb meat, local and organic foods). In a recent study in Spain using the FRLs tool, Montero-Vincente et al. [26] distinguished fresh fruit consumers into four clusters. The first, named “total indifference,” represented consumers with no interest in innovation, nutrition, or consumption. The second cluster, called “little time to cook,” revealed the consumer target group with the largest consumption of fresh fruits and with a high level of interest in nutrition and health as well as a high inclination to undergo extra domestic consumption. The third group, named “cooks and preference for natural products,” included consumers with a medium–high consumption of fresh fruits who cooked at home and who were interested in natural products and the price–quality ratio. The last target group, called “unconcerned,” included consumers with the lowest level of fruit consumption and the least interest in natural products compared with other targets.

Within the scientific studies that have adopted the FRLs approach, a few studies have tried to segment consumers of ready-to-eat products [31,32]. In particular, a study conducted in Great Britain by Buckley et al. [32] distinguished six clusters of consumers according to their FRLs associated with convenience foods. The first target group of consumers was named “snacking food consumers” and included consumers who showed less enjoyment in meal preparation compared with other target groups. The other target groups of consumers were in line with those proposed by Grunert et al. [38], that is, “careless food consumers,” who attributed less importance to food as a way of achieving their life values than most other target groups of consumers; “adventurous,” including consumers of ready-to-eat products who were very interested in cooking and experiencing new ways of cooking compared with other groups; “conservative,” represented by consumers who were more price-sensitive and less interested in novel food products; “rational,” including consumers who were highly interested in product information and who were more greatly influenced by advertising in terms of their food purchase decisions than other consumer groups; and finally, “uninvolved,” including consumers who showed the least interest in food and food-related activities.

To the best of our knowledge, no study has explored target consumer groups related to fresh-cut fruits. Further knowledge is needed to better profile consumers of fresh-cut fruits, which represents a fast-growing sector in the food market.

## 2. Materials and Methods

In order to reach the aim of the present study, a segmentation based on FRLs and sociodemographic variables was carried out with a convenience sample of Italian consumers who had purchased fresh-cut fruits during the last 12 months. Data were collected through an online survey carried out between February and May 2020 with 537 Italian consumers, of which 201 stated that they had purchased fresh-cut fruits in the last 12 months. Despite online surveys not providing a fully representative sample, we chose this technique, as it avoided direct interactions between the researcher and interviewee and guaranteed the safety of interactions during the COVID-19 pandemic [44].

The questionnaire was structured in three sections: In the first section, information about the frequency of fresh-cut fruit consumption, the place of purchase, and the occasions at which fresh-cut fruits were consumed was gathered. The second section contained 42 items related to 14 of the 23 dimensions of FRLs described by Brunsø and Grunert [29]. We chose to reduce the original number of FRLs dimensions, 69 items, to shorten the duration of the interview, as in an online setting, having a large number of questionnaire items may discourage participants from completing a survey [45,46]. Therefore, to characterize the main targets of fresh-cut fruit consumers, the FRL dimensions chosen were those that best aligned with the aim of the study, in particular, the importance of product information, attitude to advertising, specialty shops, price criteria, health, novelty, organic products, taste, freshness, interest in cooking, looking for new ways, convenience, planning, and security (Table 1). Finally, the last section of the questionnaire was constructed to collect

the sociodemographic characteristics of the participants, such as age, family size, education (expressed in four categories: primary school, lower secondary school, upper secondary school, and university degree or higher), and net monthly household income, measured in EUR.

**Table 1.** Food-Related Lifestyles dimensions, items used for Italian consumers of fresh-cut fruits, and dimension mean scores.

Dimensions	Items	Mean Scores	St. Deviation
Importance of product information	To me product information is of major importance. I want to know what the product contains.	4.8	1.4
	I compare labels to select the most nutritious food.		
Attitudes to advertising	I compare product information labels to decide which brand to try.	3.7	1.8
	I have more confidence in food products that I have seen advertised than in unadvertised products.		
	I am influenced by what people say about a food product.		
Specialty shops	Information from advertising helps me make better buying decisions.	4.6	1.3
	I do not see any reason to shop in specialty food stores. (Reversed)		
	I like buying food products in specialty food stores where I can get expert advice.		
Price criteria	I like to know what I am buying, so I often ask questions in stores where I shop for food.	5.0	1.4
	I always check prices, even on small items.		
	I notice when products I buy regularly change in price.		
Health	I watch for ads in the newspaper for store specials and plan to take advantage of them when I go shopping.	5.5	1.3
	I prefer to buy natural products, i.e., products without preservatives.		
Novelty	To me the naturalness of the food that I buy is an important quality.	5.1	1.5
	I try to avoid food products with additives.		
Organic products	I love to try recipes from foreign countries.	2.8	1.8
	I like to try new foods that I have never tasted before.		
	Well-known recipes are indeed the best. (Reversed)		
Taste	I always buy organically grown food products if I have the opportunity.	4.6	1.0
	I make a point of using natural or organic products.		
	I don't mind paying a premium for organic products. (Reversed)		
Freshness	I find the taste of food products important.	5.8	0.9
	When cooking, I first and foremost consider the taste.		
	It is more important to choose food products for their taste rather than for their nutritional value.		
Interest in cooking	I prefer fresh products to canned or frozen products.	3.5	1.8
	It is important to me that food products are fresh.		
	I prefer to buy meat and vegetables fresh rather than pre-packed.		
Looking for new ways	I like to have ample time in the kitchen.	4.9	1.4
	Cooking is a task that is best over and done with.		
	I don't like spending too much time on cooking. (Reversed)		
Convenience	I like to try out new recipes.	3.5	1.5
	I look for ways to prepare unusual meals.		
	Recipes and articles on food from other culinary traditions make me experiment in the kitchen.		
Planning	I use a lot of frozen foods in my cooking.	2.6	0.9
	We use a lot of ready-to-eat foods in our household.		
	I use a lot of mixes, for instance baking mixes and instant soups.		
Security	What we are going to have for supper is very often a spontaneous decision. (Reversed)	4.1	0.8
	Cooking needs to be planned in advance.		
	I always plan what we are going to eat a couple of days in advance.		
	I dislike everything that might change my eating habits.		
	I only buy and eat foods that are familiar to me.		
	A familiar dish gives me a sense of security.		



In order to carry out a segmentation of the sample of fresh-cut fruit consumers on the basis of FRLs, we calculated the score of the 14 FRL dimensions obtained by Brunso and Grunert [29] through the mean of the scores that consumers gave to each item in each FRL dimension, after having appropriately reversed some item scores in order to make them uniform. The means of the scores related to the 14 FRL dimensions used in this study are reported in Table 1. For the segmentation, a cluster analysis was carried out; however, due to the limited number of observations (201 consumers), to simplify the interpretation of fresh-cut fruit consumer target groups on the basis of the 14 FRL dimensions and the sociodemographic variables, before the cluster analysis, a principal component analysis (PCA) with Varimax rotation was run. The purpose of the PCA was to reduce the amount of information contained in the 14 FRL dimensions into a smaller number of macro-dimensions or components. More precisely, the PCA analytically transforms a set of correlated variables into a smaller number of independent macro-variables, minimizing the loss of information.

The PCA can be expressed by the following general formula:

$$Y_i = w_{i1}X_1 + w_{i2}X_2 + \dots + w_{ip}X_p \quad (1)$$

where  $Y_i$  is the  $i$ -th new variable,  $X_1, X_2, \dots, X_p$  are the standardized original  $P$  variables and  $w_{i1}, w_{i2}, \dots, w_{ip}$ , are the values of the loading weights associated to each of them.

Factor scores were also calculated for each principal component to express the contribution of each observation on the composition of the components. The factor scores were used for the subsequent cluster analysis, which was designed to group participants on the basis of the FRLs and sociodemographic characteristics, such that consumers in the same group were similar to each other and, similarly, consumers in different groups were different from each other. K-means is one method of cluster analysis that groups consumers by minimizing the Euclidean distances between them. The algorithm randomly assigns  $k$  initial centers defined by all  $n$  variables. It then iteratively assigns each observation to the nearest center by computing the new center for each cluster as the mean of the centroid of the variables. This process is repeated until a new iteration no longer reassigns any observations to a new cluster; therefore, the algorithm is considered to be convergent, and the final clusters constitute the clustering solution [47]. The choice of the number of clusters was supported by analyzing the clustering dendrogram.

### 3. Results

Of 537 Italian consumers surveyed, 201 declared that they had purchased fresh-cut fruits during the last 12 months (about 37% of all consumers surveyed on social networks). The data elaborations revealed three categories of consumption frequency: 23% of the 201 Italian consumers had purchased fresh-cut fruits less than twice in the past 12 months, about 35% had purchased them at least once a month, and about 28% consumed fresh-cut fruits often (at least once every 15 days). The remaining 14% of surveyed consumers said they did not remember their fresh-cut fruit consumption frequency in the last 12 months. Fresh-cut fruits were mainly purchased in supermarkets (38% of cases), bar-restaurants (32.5% of cases), and gourmet boutique shops (16.5% of cases). Other places of fresh-cut fruit purchases included greengrocers, snack vending machines, and canteens (for the remaining 13% of surveyed consumers). About 78% of the interviewees stated that they consumed fresh-cut fruits for meals away from home, whereas the other 22% consumed them as meals at home. The average age of the surveyed consumers was 49 years, ranging from 27 to 65 years. Most of the participants lived in families of three or four people (41% and 38% of cases, respectively), and the incidence of singles was about 15%. The educational level of the consumers interviewed was quite high: More than one-third of the survey participants (35.6%) had a secondary school diploma, and nearly one-third of them had university degrees (32.8%). The prevailing average net monthly income of families (in 47% of cases) was between EUR 2160 and 3860, ranging from EUR 540 to EUR 8000 (Table 2).

**Table 2.** Sociodemographic characteristics of the participants.

	No.	Percentage
Age		
27–39	60	29.8
40–49	65	32.1
50–59	54	27.1
60 or older	22	11.0
Household Size		
1 person	30	14.9
2–3 persons	103	51.3
4–5 persons	61	30.2
More than 5 persons	7	3.6
Education		
Primary school	3	1.6
Lower secondary school	28	14.1
Upper secondary school	71	35.5
University degree or higher	66	32.8
N/A	32	16
Net Monthly Household Income		
<EUR 540	1	0.6
EUR 540–2159	17	8.5
EUR 2160–3860	94	47.0
EUR 3861–5561	47	23.2
EUR 5562–8000	11	5.6
N/A	30	15.1

The application of the PCA allowed us to reduce the initial number of FRL dimensions (14) and sociodemographic variables (4) into six principal components, which accounted for 68% of the total variance (Table 3). The first principal component, which accounted for about 21% of the total variance, was named the “critical consumption.” It was characterized by FRL dimensions that outlined the features of a consumption trend defined in the literature as critical consumption, namely, an interest in organic and natural products, health aspects of food, product information, and buying in specialty shops.

**Table 3.** Results of PCA with a Varimax rotation.

Principal Components/ Macro-Dimensions	Dimensions	Factors Loading
Critical consumption	Organic products	0.921
	Health	0.921
	Freshness	0.742
	Importance of product information	0.683
	Specialty shop	0.522
Convenience consumption	Convenience	0.772
	Attitudes to advertising	0.752
	Interest in cooking	−0.706
Neophilic consumption	Looking for new ways	0.846
	Novelty	0.839
	Security	−0.495
Pragmatic consumption	Taste	0.680
	Planning	0.585
	Price criteria	0.531
Age and Income	Age (continuous variable)	−0.583
	Income (categorical variable)	−0.554
Educational level and Family size	Education (categorical variable)	0.728
	Family size (categorical variable)	−0.709

The second principal component accounted for about 12% of the total variance. Although foods in the category of F&V fresh-cut products were chosen for their intrinsic convenience characteristic, this component was named “convenience consumption,” as there are FRL dimensions characterizing consumers with extensive use of frozen foods and ready-made soups and low interest in cooking who are highly influenced by advertising. The third principal component was called “neophilic consumption,” as it was positively characterized by consumers looking for new methods of food consumption and novelty dimensions, emphasizing those with interest in new recipes and unusual meals. Moreover, this component, which accounted for about 11% of the total variance, was negatively characterized by the security dimension, highlighting a propensity towards new food experiences that could also change eating habits.

The fourth principal component extracted was named “pragmatic consumption” and was positively characterized by taste, planning, and price criteria dimensions. In other words, this component, accounting for about 9% of the total variance, was characterized by items emphasizing the importance of food taste, planning cooking, and the importance of price in buying decisions. The fifth principal component extracted, accounting for 8.7% of the total variance, was called “age and income,” and it was negatively characterized by the age and income of participants—the younger participants were, the lower their net monthly household income was, and vice versa. The sixth and last component extracted was named “education and family size,” and it was characterized by sociodemographic variables highlighting the educational levels and family sizes of participants, indicating that among the participants, those with high educational levels had families with fewer members.

#### *Target Groups of Fresh-Cut Fruit Consumers*

As previously emphasized, to find the targets of fresh-cut fruit consumers, a cluster analysis using the K-means technique was performed with 201 Italian consumers who had purchased fresh-cut fruits during the last 12 months. After exploration of the cluster dendrogram, four consumer clusters were identified whose final centers of clusters are reported in Table 4.

**Table 4.** Final centers of the clusters.

Principal Components	Consumer Targets			
	Neophiliacs (18.9%)	Uninvolved (34.7%)	Value Seeking (28.7%)	Health Oriented (17.7%)
Critical consumption	−0.11461	0.08052	−1.10679	0.84397
Convenience consumption	−0.66067	0.99250	0.48203	−0.41389
Neophilic consumption	0.65696	0.14651	−0.23914	−0.72298
Pragmatic consumption	−0.20955	−0.68436	0.76042	0.29234
Age and Income	−0.28179	−0.03575	−0.03474	0.55982
Education and Family size	−0.21745	−0.36555	0.50561	−0.08673

In particular, the first cluster, composed of 18.9% of the consumers participating in the survey, was characterized by individuals with little inclination to use frozen foods and ready-made soups and who showed some interest in cooking. Similarly, these consumers also showed neophilic consumption, that is, a high interest in new products and recipes as well as unusual meals. They were named “neophiliacs” because they seemed to approach fresh-cut fruits as a way to experience new products and new ways of making meals. The second target group of consumers participating in the survey, representing the largest group of consumers surveyed (34.7%), was called “uninvolved.” This group was characterized



by FRL dimensions indicating that these consumers extensively used frozen foods and ready-to-eat soups, had little inclination to plan meals, were strongly influenced by the advertising of a product, and had poor attitudes to cooking. The third target group of consumers identified (28.7% of participants) were named “value-seeking consumers.” These consumers attached great importance to the taste of food and its price and liked to plan meals in advance. Furthermore, this group of consumers did not attach importance to organic foods, the presence of preservatives and additives in food, or to the freshness of food or product information. This group was characterized by consumers with a high educational level and living in a family with more members. The last target group of fresh-cut fruits consumers, representing the smallest group of consumers (17.7%), was called “health oriented,” as it was characterized by consumers who attached great importance to organic foods, the freshness and healthiness of food, and product information. They were found to often purchase food in specialty shops and were less inclined to try new recipes or to change eating habits. This segment was characterized by older participants with higher net monthly household incomes than other segments.

#### 4. Discussion

The findings of our study identified four target groups of fresh-cut fruit consumers with distinct food-related lifestyles: neophiliacs, value seeking, health oriented, and uninvolved.

The largest cluster was the “uninvolved” consumers, a group of consumers characterized by a lack of interest towards food and food-related activities, who were found to be highly influenced by the advertising of a food product. It was not a surprise to identify this target group of consumers as being among the major users of fresh-cut fruits, which are, by convention, easy to consume and do not require effort for their preparation. This target group of consumers was also identified by Buckley et al. [32] in their study on consumer convenience orientations in Great Britain, highlighting that uninvolved food consumers are the biggest users of ready meals [32]. In line with other studies, uninvolved consumers had no confidence in their cooking skills and therefore turned to ready-made foods as a meal solution [37,38,41–43]. These consumers had little involvement in meal planning, and their food consumption was often a last-minute decision. The low level of interest in food makes these consumers highly influenced by advertising, which directs their emotions and food choices [48,49]. However, no specific sociodemographic variable was found to characterize this group, suggesting that this target group includes Italian consumers of all age groups, education levels, family members, and income brackets. This is in contrast to what has been shown by other studies, in which uninvolved consumers were classified as having specific sociodemographic characteristics. In fact, they were described as being young and less educated [32], and in some cases with medium–high incomes [50,51] and living in multi-member families [52].

The value-seeking target group representing the second cluster (28.7% of consumers surveyed) was characterized by consumers pushed by a pragmatic approach to consumption. They loved to plan meals and paid attention to price, quality, and sensory traits. Similar to Yeo et al.’s study [53] with Korean consumers, in this cluster, price is an important criterion for choosing food as well as quality and sensory traits [42]. However, unlike these two previous studies, our group of consumers did not seem to consider product information and its freshness as decisive parameters for buying convenience products. They were looking for a reasonable compromise between quality and convenience. This was also shown in other studies regarding F&V [54]. This is in line with a target group of consumers that emerged in a recent study by Fang and Lee [55], in which consumers were found to be very sensitive to the price/quality ratio and taste but not to health and ecological products. Moreover, this target group is comparable to that identified by Zakowska [40] among Polish food consumers, which attributed great importance to taste, safety, and price and did not care about product labels. Regarding sociodemographic variables, consumers

grouped into this cluster, in line with Yeo et al. [53], showed high education levels, although neither income nor age seemed to affect their attitudes towards fresh-cut fruits.

The remaining respondents were almost evenly divided between neophiliacs (18.9%) and health-oriented targets (17.7%). Neophiliacs were characterized by wanting to discover new products and taste new foods. They seemed to perceive new food products in a positive light and wanted to experience them [56]. Moreover, this target group of consumers was found to confer little importance to health and environmental issues [57,58]. It is also interesting to note that neophiliacs were not found to be exclusively younger consumers, unlike in other studies [59,60].

Conversely, the health-oriented target group was essentially characterized by critical consumption behavior, including the consumption of organic products and healthy foods. These consumers were, in fact, not only concerned with the freshness of products, but also considered the consequences of their consumption practices on their health and the environment, highlighting the growing consumer interest in sustainable and socially responsible issues [33,34,61]. For this reason, consumers in this group preferred to buy foods in specialty shops in order to get advice on their decision-making processes, and they were found to attribute significant importance to product information. Health-oriented consumers were also identified in other studies analyzing consumers' perceptions of environmentally friendly and healthy products. For these consumers, in fact, health and environmental issues are key determining factors in their food decision making processes [62,63]. For this reason, they prefer to shop in specialty stores to be supported in their purchasing decisions and attach great importance to product information. For these consumers, a key factor for food enterprises is having an adequate and effective marketing strategy. This was widely discussed by Nyilasy et al. [64], who showed how effective green advertising positively affects consumers' perception towards a food product, helping to increase food enterprise competitiveness.

In line with other studies in the food domain [31,65,66], the health-oriented consumers identified in the present study were older participants with higher net monthly household incomes than consumers in other target groups.

However, despite this being the first study to analyze consumer demand for fresh-cut fruit, some limitations of the study need to be considered when interpreting the results. The exploratory nature of the study and the convenience sample used did not allow us to describe the demand for fresh-cut fruit in Italy in a conclusive way. A further limitation is linked to the timing of the data collection—in the middle of the COVID-19 pandemic. As shown by the literature [67], the COVID-19 pandemic has impacted food choices around the world and has probably also affected the convenience orientation of consumers. Therefore, further research needs to be carried out in order to understand the consumer lifestyles that characterize the convenience orientation of consumers more clearly.

## 5. Conclusions

In Italy, the fresh-cut fruit sector has experienced fast growth, with a 35% increase in the turnover of products in 2019 compared to the previous year. This study tried, through an explorative analysis on consumers' FRLs, to shed light on consumer demands for fresh-cut fruit in Italy by understanding whether and to what extent this demand also includes health-oriented consumers.

Our findings reveal that the largest target group of Italian consumers of fresh-cut fruits is uninvolved consumers, who have little inclination to plan meals and who do not pay particular attention to the information contained on the label. Their attention to advertising is very high, suggesting that for these consumers, marketing communication through advertising or influencers may represent a successful marketing tool to help enterprises be competitive in the fresh-cut fruit market.

Conversely, health-oriented consumers represent the smallest consumer target group found among Italian consumers of fresh-cut fruit. However, although it is not yet a prevalent target group of consumers, health-oriented consumers may represent a very interesting

challenge for agri-food industries, considering the growing demand for healthy eating. This is also observable by the growing consumption of functional, natural, and organic foods that has occurred in the agri-food sector in recent years. This trend suggests that the presence of health-oriented consumers in the domain of convenience food could grow further in the near future and that new opportunities could arise for agricultural enterprises.

These findings may have a dual purpose. On the one hand, they enrich the body of literature on consumer convenience orientation by highlighting that this approach to consumption is also characterized by consumers who are aware of the health consequences of their food choices. On the other hand, these findings may help food enterprises to design new products and marketing strategies in order to better satisfy consumers' needs and expectations by differentiating their offerings and being more competitive in the market.

**Author Contributions:** Conceptualization, G.M.; Introduction section, G.M.; literature review section, R.T.; methodology, G.M.; results section, G.S. and R.T.; discussion section, R.T. and G.M.; Conclusion section; R.T. and G.S. All authors have read and agreed to the published version of the manuscript.

**Funding:** This research received no external funding.

**Institutional Review Board Statement:** Not applicable.

**Informed Consent Statement:** Please add "Informed consent was obtained from all subjects "Not applicable" for studies not involving humans.

**Data Availability Statement:** The data presented in this study are available on request from the corresponding author. The data are not publicly available due to privacy reasons.

**Conflicts of Interest:** The authors declare no conflict of interest.

## References

- Contini, C.; Boncinelli, F.; Gerini, F.; Scozzafava, G.; Casini, L. Investigating the role of personal and context-related factors in convenience foods consumption. *Appetite* **2018**, *126*, 26–35. [CrossRef] [PubMed]
- Dixon, J.M.; Hinde, S.J.; Banwell, C.L. Obesity, convenience and "phood". *Br. Food J.* **2006**, *108*, 634–645. [CrossRef]
- Verlegh, P.W.; Candel, M.J. The consumption of convenience foods: Reference groups and eating situations. *Food Qual. Prefer.* **1999**, *10*, 457–464. [CrossRef]
- Pollard, J.; Kirk, S.L.; Cade, J.E. Factors affecting food choice in relation to fruit and vegetable intake: A review. *Nutr. Res. Rev.* **2002**, *15*, 373–387. [CrossRef]
- Frewer, L.J.; Risvik, E.; Schifferstein, H. (Eds.) *Food, People and Society: A European Perspective of Consumers' Food Choice*; Springer: Berlin/Heidelberg, Germany, 2001.
- Raybaudi-Massilia, R.; Calderón-Gabaldón, M.I.; Mosqueda-Melgar, J.; Tapia, M.S. Inactivation of *Salmonella enterica* ser. Poona and *Listeria monocytogenes* on fresh-cut 'maradol' red papaya (*Carica papaya* L.) treated with UV-C light and malic acid. *J. Für Verbrauch. Und Lebensm.* **2013**, *8*, 37–44. [CrossRef]
- Brown, H.; Williams, J.; Kirwan, M. Packaged product quality and shelf life. In *Food Beverage Packaging Technology*; Blackwell Publishing Ltd.: Oxford, UK, 2011; pp. 108–109.
- Capps, O., Jr.; Tedford, J.R.; Havlice, J., Jr. Household demand for convenience and nonconvenience foods. *Am. J. Agric. Econ.* **1985**, *67*, 862–869. [CrossRef]
- Hyldelund, N.B.; Worck, S.; Olsen, A. Convenience may increase vegetable intake among young consumers. *Food Qual. Prefer.* **2020**, *86*, 1–6. [CrossRef]
- Vecchio, R.; Cavallo, C. Increasing healthy food choices through nudges: A systematic review. *Food Qual. Prefer.* **2019**, *78*, 103714. [CrossRef]
- Aschemann-Witzel, J.; Maroscheck, N.; Hamm, U. Are organic consumers preferring or avoiding foods with nutrition and health claims? *Food Qual. Prefer.* **2013**, *30*, 68–76. [CrossRef]
- Olsen, N.V.; Menichelli, E.; Sørheim, O.; Næs, T. Likelihood of buying healthy convenience food: An at-home testing procedure for ready-to-heat meals. *Food Qual. Prefer.* **2012**, *24*, 171–178. [CrossRef]
- Dhir, B.; Singla, N. Consumption Pattern and Health Implications of Convenience Foods: A Practical Review. *Curr. J. Appl. Sci. Technol.* **2019**, *38*, 1–9. [CrossRef]
- Agruto, A. *Measuring Intake of Fruit and Vegetables*; World Health Organization (WHO): Geneva, Switzerland, 2005; Available online: [https://www.who.int/dietphysicalactivity/publications/f&v\\_intake\\_measurement.pdf](https://www.who.int/dietphysicalactivity/publications/f&v_intake_measurement.pdf) (accessed on 28 May 2020).
- Freshfel. Consumption Monitor. European Fresh Produce Association. Available online: <https://freshfel.org/what-we-do/consumption-monitor/> (accessed on 2 July 2020).

16. Dinnella, C.; Torri, L.; Caporale, G.; Monteleone, E. An exploratory study of sensory attributes and consumer traits underlying liking for and perceptions of freshness for ready to eat mixed salad leaves in Italy. *Food Res. Int.* **2014**, *59*, 108–116. [[CrossRef](#)]
17. Ricci, E.C.; Banterle, A.; Stranieri, S. Trust to Go Green: An Exploration of Consumer Intentions for Eco-friendly Convenience Food. *Ecol. Econ.* **2018**, *148*, 54–65. [[CrossRef](#)]
18. Nassivera, F.; Sillani, S. Consumer perceptions and motivations in choice of minimally processed vegetables. *Br. Food J.* **2015**, *117*, 970–986. [[CrossRef](#)]
19. Farina, V.; Passafiume, R.; Tinebra, I.; Scuderi, D.; Saletta, F.; Gugliuzza, G.; Gallotta, A.; Sortino, G. Postharvest application of aloe vera gel-based edible coating to improve the quality and storage stability of fresh-cut papaya. *J. Food Qual.* **2020**, *2020*, 8303140. [[CrossRef](#)]
20. Baseliçe, A.; Colantuoni, F.; Lass, D.A.; Nardone, G.; Stasi, A. Trends in EU Consumers' Attitude Towards Fresh-Cut Fruit and Vegetables. *Food Qual. Prefer.* **2017**, *59*, 87–96. [[CrossRef](#)]
21. Nomisma. Mercati, Esigenze, Valori: Il Punto Sulla Categoria. In Proceedings of the IV Gamma Booming, Perché e Fino a Quando? Tuttofood, Milano, Italy, 7 May 2019; Available online: <https://www.freshcutnews.it/2019/05/10/lindagine-nomisma-conferma-spiega-successo-della-iv-gamma/> (accessed on 29 June 2020).
22. Freshfel. Activity Report 2017. Where Is the Fruit? European Fresh Produce Association. Available online: <https://freshfel.org/wp-content/uploads/2017/03/Freshfel-Where-is-the-fruit-report-2017.pdf> (accessed on 10 July 2020).
23. Nassivera, F.; Sillani, S. Consumer Behavior Toward Eco-Labeled Minimally Processed Fruit Product. *J. Int. Food Agribus. Mark.* **2017**, *29*, 29–45. [[CrossRef](#)]
24. Farina, V.; Passafiume, R.; Tinebra, I.; Palazzolo, E.; Sortino, G. Use of Aloe vera gel-based edible coating with natural anti-browning and anti-oxidant additives to improve post-harvest quality of fresh-cut 'Fuji' apple. *Agronomy* **2020**, *10*, 515. [[CrossRef](#)]
25. Farina, V.; Gentile, C.; Sortino, G.; Gianguzzi, G.; D'Asaro, A.; Saletta, F.; Piva, G.; Inglese, P.; Liguori, G. Effects of gellan-based coating application on litchi fruit quality traits. *Acta Hort.* **2018**, *1194*, 335–341. [[CrossRef](#)]
26. Montero-Vicente, L.; Roig-Merino, B.; Buitrago-Vera, J.; Sigalat-Signes, E. Characterisation of fresh fruit consumption in Spain based on food-related lifestyle. *Br. Food J.* **2019**, *121*, 3307–3320. [[CrossRef](#)]
27. Raimundo, L.M.B.; Batalha, M.O.; Sans, P. Consumer Attitudes Towards Convenience Food Usage: Exploring the Case of São Paulo, Brazil. *J. Int. Food Agribus. Mark.* **2019**, *32*, 403–424. [[CrossRef](#)]
28. De Boer, M.; McCarthy, M.; Cowan, C.; Ryan, I. The influence of lifestyle characteristics and beliefs about convenience food on the demand for convenience foods in the Irish market. *Food Qual. Prefer.* **2014**, *15*, 155–165. [[CrossRef](#)]
29. Brunsø, K.; Grunert, K.G. Cross-cultural similarities and differences in shopping for food. *J. Bus. Res.* **1998**, *42*, 145–150. [[CrossRef](#)]
30. Grunert, K.G. International segmentation in the food domain: Issues and approaches. *Food Res. Int.* **2019**, *115*, 311–318. [[CrossRef](#)] [[PubMed](#)]
31. Yi, N.Y.; Choi, B.R.; Chang, H.J. Opinion of commercialization of ready-to-eat Korean foods by food-related lifestyle segments in Koreans and non-Koreans. *J. Korean Soc. Food Sci. Nutr.* **2016**, *45*, 602–612. [[CrossRef](#)]
32. Buckley, M.; Cowan, C.; McCarthy, M.; O'Sullivan, C. The Convenience Consumer and Food-Related Lifestyles in Great Britain. *J. Food Prod. Mark.* **2005**, *11*, 3–25. [[CrossRef](#)]
33. Medina, C.A.G.; Martinez-Fiestas, M.; Viedma-del-Jesús, M.I.; Casado Aranda, L.A. The processing of price during purchase decision making: Are there neural differences among prosocial and non-prosocial consumers? *J. Clean. Prod.* **2020**, *271*, 122648. [[CrossRef](#)]
34. Nova-Reyes, A.; Muñoz-Leiva, F.; Luque-Martínez, T. The Tipping Point in the Status of Socially Responsible Consumer Behavior Research? A Bibliometric Analysis. *Sustainability* **2020**, *12*, 3141. [[CrossRef](#)]
35. Anusha, A.C.S.; Tunung, R.; Kavita, C.; Ribka, A.; Chandrika, M. Ready-to-eat food consumption practices, food safety knowledge and relation to gender and education level of consumers in Kuala Lumpur, Malaysia. *Food Res.* **2020**, *4*, 1537–1544.
36. McQuiston, D. Successful branding of a commodity product. *J. Ind. Mark. Manag.* **2005**, *33*, 345–354. [[CrossRef](#)]
37. Wycherley, A.; McCarthy, M.; Cowan, C. Speciality food orientation of food related lifestyle (FRL) segments in Great Britain. *Food Qual. Prefer.* **2008**, *19*, 498–510. [[CrossRef](#)]
38. Grunert, K.G.; Brunsø, K.; Bredahl, L.; Bech, A.C. Food-Related Lifestyle: A Segmentation Approach to European Food Consumers. In *Food, People and Society*; Frewer, L.J., Risvik, E., Schifferstein, H., Eds.; Springer: Berlin/Heidelberg, Germany, 2001.
39. Grunert, K.G.; Brunsø, K.; Bisp, S. *Food-Related Life Style: Development of a Cross-Culturally Valid Instrument for Market Surveillance*; MAPP Working Paper, no. 12; The Aarhus School of Business: Aarhus, Denmark, 1993.
40. Zakowska-Biemans, S. Polish consumer food choices and beliefs about organic food. *Bri. Food J.* **2011**, *113*, 122–137. [[CrossRef](#)]
41. Bernués, A.; Ripoll, G.; Panea, B. Consumer segmentation based on convenience orientation and attitudes towards quality attributes of lamb meat. *Food Qual. Prefer.* **2012**, *26*, 211–220. [[CrossRef](#)]
42. Witzling, L.; Shaw, B.R. Lifestyle segmentation and political ideology: Toward understanding beliefs and behavior about local food. *Appetite* **2019**, *132*, 106–113. [[CrossRef](#)] [[PubMed](#)]
43. Zepeda, L.; Nie, C. What are the odds of being an organic or local food shopper? Multivariate analysis of US food shopper lifestyle segments. *Agric. Hum. Values* **2012**, *29*, 467–480. [[CrossRef](#)]
44. Geldsetzer, P. Use of rapid online surveys to assess People's perceptions during infectious disease outbreaks: A cross-sectional survey on COVID-19. *J. Med. Internet Res.* **2020**, *22*, e18790. [[CrossRef](#)] [[PubMed](#)]



45. Gargon, E.; Crew, R.; Burnside, G.; Williamson, P.R. Higher number of items associated with significantly lower response rates in COS Delphi surveys. *J. Clin. Epidemiol.* **2019**, *108*, 110–120. [[CrossRef](#)]
46. Toepoel, V.; Das, M.; Van Soest, A. Design of web questionnaires: The effects of the number of items per screen. *Field Methods* **2009**, *21*, 200–213. [[CrossRef](#)]
47. De Lillo, A.; Argentin, G.; Lucchini, M.; Sarti, S.; Terraneo, M. *Analisi Multivariata per le Scienze Sociali*; Pearson Paravia Bruno Mondadori: Piacenza, Italy, 2007.
48. Verma, S. Do all advertising appeals influence consumer purchase decision: An exploratory study. *Glob. Bus. Rev.* **2009**, *10*, 33–43. [[CrossRef](#)]
49. Rabobank. Consumer Trends Defining Packaging Hot Spots. Available online: [https://research.rabobank.com/far/en/sectors/fa-supply-chains/all\\_wrapped\\_up.html](https://research.rabobank.com/far/en/sectors/fa-supply-chains/all_wrapped_up.html) (accessed on 2 July 2020).
50. Stasi, A.; Colelli, G.; Garini, F. Chapter 5—Fruits and Vegetables. In *Innovations in Traditional Foods*; Charis Galanakis, M., Ed.; Elsevier: Amsterdam, The Netherlands, 2019; pp. 101–126.
51. Cassady, D.; Jetter, K.M.; Culp, J. Is price a barrier to eating more fruits and vegetables for low-income families? *J. Am. Diet. Assoc.* **2007**, *107*, 1909–1915. [[CrossRef](#)]
52. Scholderer, J.; Grunert, K.G. Consumers, food and convenience: The long way from resource constraints to actual consumption patterns. *J. Econ. Psychol.* **2005**, *26*, 105–128. [[CrossRef](#)]
53. Yeo, G.E.; Cho, M.S.; Oh, J. Food-related lifestyle segmentation and beverage attribute selection: Toward understanding of sugar-reduced beverages choice. *Br. Food J.* **2020**. [[CrossRef](#)]
54. Ragaert, P.; Verbeke, W.; Devlieghere, F.; Debevere, J. Consumer perception and choice of minimally processed vegetables and packaged fruits. *Food Qual. Prefer.* **2004**, *15*, 259–270. [[CrossRef](#)]
55. Fang, C.H.; Lee, H.J. Food-related lifestyle segments in Taiwan: Application of the food-related Lifestyle instrument. *Am. J. Appl. Sci.* **2009**, *6*, 2036–2042. [[CrossRef](#)]
56. Fenko, A.; Leufkens, J.M.; Van Hoof, J.J. New product, familiar taste: Effects of slogans on cognitive and affective responses to an unknown food product among food neophobics and neophilics. *Food Qual. Prefer.* **2015**, *39*, 268–276. [[CrossRef](#)]
57. Palmieri, N.; Simeone, M.; Russo, C.; Perito, M.A. Profiling young consumers' perceptions of GMO products: A case study on Italian undergraduate students. *Int. J. Gastron. Food Sci.* **2020**, *21*, 100224. [[CrossRef](#)]
58. Verneau, F.; Caracciolo, F.; Coppola, A.; Lombardi, P. Consumer fears and familiarity of processed food. The value of information provided by the FTNS. *Appetite* **2014**, *73*, 140–146. [[CrossRef](#)]
59. Goulart, G.S.; Viana, M.M.; Lucchese-Cheung, T. Consumer perception towards familiar and innovative foods: The case of a Brazilian product. *Br. Food J.* **2020**. [[CrossRef](#)]
60. Nyberg, M.; Olsson, V.; Wendin, K. Reasons for eating insects? Responses and reflections among Swedish consumers. *Int. J. Gastron. Food Sci.* **2020**, *22*, 10026. [[CrossRef](#)]
61. Andorfer, V.A. Ethical Consumers. In *International Encyclopedia of the Social & Behavioral Sciences*, 2nd ed.; Elsevier: Amsterdam, The Netherlands, 2015; pp. 25–30.
62. Caracciolo, F.; Vecchio, R.; Lerro, M.; Migliore, G.; Schifani, G.; Cembalo, L. Natural versus enriched food: Evidence from a laboratory experiment with chewing gum. *Food Res. Int.* **2019**, *122*, 87–95. [[CrossRef](#)]
63. Migliore, G.; Forno, F.; Dara Guccione, G.; Schifani, G. Food Community Networks as sustainable self-organized collective action: A case study of a solidarity purchasing group. *New Medit* **2014**, *13*, 54–62.
64. Nyilasy, G.; Gangadharbatla, H.; Paladino, A. Perceived Greenwashing: The Interactive Effects of Green Advertising and Corporate Environmental Performance on Consumer Reactions. *J. Bus. Ethics* **2014**, *125*, 693–707. [[CrossRef](#)]
65. Stranieri, S.; Ricci, E.C.; Banterle, A. Convenience food with environmentally-sustainable attributes: A consumer perspective. *Appetite* **2017**, *116*, 11–20. [[CrossRef](#)] [[PubMed](#)]
66. Sabbe, S.; Verbeke, W.; Deliza, R.; Matta, V.; Van Damme, P. Effect of a health claim and personal characteristics on consumer acceptance of fruit juices with different concentrations of açai (*Euterpe oleracea* Mart.). *Appetite* **2009**, *53*, 84–92. [[CrossRef](#)] [[PubMed](#)]
67. Borsellino, V.; Kaliji, S.A.; Schimmenti, E. COVID-19 Drives Consumer Behaviour and Agro-Food Markets towards Healthier and More Sustainable Patterns. *Sustainability* **2020**, *12*, 8366. [[CrossRef](#)]