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Research article

Pasta experience: Eating with the five senses—a pilot study

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Abstract: *Dried pasta* is the Italian food "par excellence". Traditional foods have characteristics that can stimulate or evoke in the consumer sensorial stimuli and experiences, especially when these foods are consumed in a *typical-traditional* restaurant. Traditional restaurants can use sensory marketing as a promotional advantage, creating a unique and original atmosphere that can represent their main way of differentiation. The aims of this paper are to know consumer liking with regard to two high quality types of Sicilian pasta, common dried pasta, and whole-wheat pasta, consumed in three different venues of a typical-traditional Italian franchised restaurant, and to measure the influence of *environmental* factors of the venues on consumers' acceptance. Results showed that consumers are able recognize when the atmosphere of a restaurant is integrated and consistent with the food on offer and they appreciate more the contexts wherein they find this coherence. Moreover, the high degree of quality of the two types of pasta tasted was recognized by consumers that appreciated its gustative equilibrium, confirming that the gustatory sensations are not affected by the context in which a food is consumed. Finally, the study highlighted the importance of Olfactory marketing to influence the evaluation of the customer on restaurant's atmospherics.

Keywords: sensory marketing; traditional restaurant; sensory test; product congruence; atmosphere; quality food; consumer preferences; Focus Group

1. Introduction

Besides the sensorial attributes of food (e.g. taste, visual appearance, odor, etc.), which are always the most important drivers for consumers to evaluate the quality of a product, there is another aspect to be considered for understanding sensory consumers' preferences with regard to foodstuffs: the hedonic pleasure of eating well, or at least, to eat what everyone likes [1–3]. The likings and preferences of consumers with regard to some food types and origin are often related to personal values, tradition, education and socio-cultural factors [4–9]. Italy is the world's largest country consumer of pasta, that is, typically, commercially available in dried form, but several fresh pasta typologies are commonly produced in Italy and used for traditional local culinary uses [10]. Dried pasta is a staple food in the daily meals of Italians, because of their culinary tradition and culture; it is the Italian food "par excellence", like Pizza, and Italians like it because of its sensory characteristics, because it is inexpensive, readily-available and *versatile* [11,12]. Dried pasta is made with durum wheat [*Triticum turgidum* (L.) Thell. ssp. *lurgiclum* conv. *durum* (Desf.) MacKey] flour mixed with water. In its simplest formulation, pasta is an ancient food that dates back to the Etruscan population of the fourth century BC. However, the pasta as dried pasta in the form of *spaghetti* or *macaroni*, is native to Sicily (Island of Southern Italy) and it has its first reference dating to 8th Century. In fact, in Trabìa, a village very close to Palermo (Sicilian capital), a special flour food was made in the form of strands, called with the Arabic word "*itriyah*" (still known in Palermo as "the *vermicelli* of Tria"), which suggests that the spaghetti pasta type is an Arabic invention, used mainly by sailors during navigation [13]. Today, pasta is the most popular food in the world. Italy is first in the world for the industrial production of pasta, with 3.36 million tons of pasta produced, and also first in the ranking of exports with 1.9 million tons exported [14]. In recent years, other countries outside the EU are also greatly increasing their production capacity, in fact, the case of Turkey should be noted in which the production of pasta has grown by 77% in just 5 years, going from 850,000 tons to over 1.5 million [14].

In spite of all this, in recent years, the Italian trend in the consumption of dry pasta was negative: per capita consumption decreased from 26.0 kg in 2011 to 23.5 kg in 2016 [15]. The main reason of this decreasing trend may be the changes in consumption patterns of Italians, more and more oriented, like in other industrial countries, towards healthier diets [16] that require less carbohydrate consumption, a better balanced consumption of vegetables and animal proteins present in some foods (like fish, poultry, eggs, dairy products), and a rarer use of red meat and saturated animal fats [17–19]. More specifically, Italian consumers are increasingly oriented to follow the Mediterranean Diet [20,21], recognized in 2010 by UNESCO as a protected good [22], and included in the list of oral and intangible heritage of humanity.

Food consumption habits have evolved due to changes in lifestyles that lead to have less time to eat and cook at home, and due to knowledge of different culinary cultures that fragmented and influenced consumers' preferences. Therefore, also dried pasta is being progressively repositioned among all the possibilities of available foods. In addition, alongside common *durum wheat* dried pasta, Italian consumers are progressively encouraged by producers' advertising messages to purchase and consume also other types of dried pasta, like the *whole-wheat* pasta, the *organic pasta*, the pasta produced with *local grains* or that produced with *ancient grains* (cvs *Urria 12, Margherito, Scorsonera, Timilia, Bidì, Ruscia, Inglesa, Tunisina, Regina, Manto di Maria, Chiattulidda, Russello, etc.*). These types of pasta may satisfy different consumer's Needs (e.g. Social, Esteem and

Self-actualization Needs) than those of eating common *durum wheat* dried pasta [23–25]. In fact, producers often implement specific advertisements that evoke the context of origin of the product, i.e. its territory, traditions, culture, production methods, etc., because these elements may influence positively consumer purchasing decisions, which have been demonstrated to be strongly context dependent [26]. Cooking quality of pasta is the characteristic of greatest importance to consumers and, therefore, of greatest importance to durum wheat producers, breeders and processors. During cooking, a weak or discontinuous protein matrix results in a protein network that is too loose and permits a greater amount of exudate to escape during starch granule gelatinization [27]. Exudate forms a surface starch and the paste becomes sticky [28], with a tendency to clump. The variation in pasta cooking quality is due in part to the amount of protein present in semolina samples and in part to the intrinsic characteristics of these proteins (i.e. quality). There is a general agreement that protein content is the primary factor influencing pasta quality and that gluten strength is an important secondary factor [29,30]. Other components aside from gluten protein (e.g. starch and enzymes) may also play important roles in determining the cooking quality of a given semolina.

Although pasta is traditionally produced using only durum wheat flour, it is possible to use durum wheat flour and other ingredients to produce mixed pasta with a specific brand name, for example, in Italy, soft (*Triticum aestivum*) wheat flour is used exclusively for the production of fresh pasta [10]. It is also feasible to incorporate dietary fiber ingredients into pasta which may increase its nutritional value to the consumer, compared to conventional pasta [31]. Therefore, the development of enriched pasta with a higher dietary fiber content would be a good way to increase the fiber intake and reduce the glycemic index of pasta, which would result in a product for specific nutritional purposes.

Sensory and consumer science emerged in the first half of the 20th century and rapidly grew because of the development of food industry, until the end of the 20th century confirmed it as a scientific discipline [32], establishing correlations between chemical, instrumental and sensory measurements. Research showed that consumers are able to accurately evaluate the sensorial characteristics of a product [32], and also marketing research started to focus on the influence of sensorial stimuli able to induce specific emotional effects in the individual, such as pleasure and excitement, which impact her/his behavior. After Kotler's findings (1973) [33] that demonstrated the influence of atmospherics on customers, and highlighted the importance for the retailer to create a shopping environment able to induce specific emotional effects in the individual which impact his/her behavior, such as pleasure and excitement, an extensive literature in this field, throughout the years, studied the dimensions of "Atmospherics" (i.e. the physical characteristics of the store such as architecture, layout, signs, displays, color, lighting, temperature, noise, and smell [34–37]. These dimensions where identified as:

1. Ambient cues (referring to the multi-sensorial stimulation based on sound, smell, sight, touch, and taste);
2. Design cues (based on architectural and layout features, e.g. store interior and exterior design);
3. Social cues (referring to the interaction with other customers and salespeople);
4. Artistic cues (i.e. the introduction of artworks and live art performances in the shopping environment).

According to the environmental psychology stimulus-organism-response (SOR) process [38], these environmental stimuli (i.e. store atmospherics cues) modify customer emotions (i.e. affective state of pleasure and arousal), which impacts his/her behavior in the sense of approach or avoidance (purchase

decision and amount, preferences and attitudes, time spent, willingness to come back, etc.). Environmental factors such as the presence of other people, location, portion size, time of consumption, smell, color, physical setting and television viewing also seem to influence food intake and food choice. Consumption places, therefore, seem to influence food choice by creating expectations among consumers about food quality and consumption experiences, especially in certain places. Previous research has applied the Mehrabian and Russell model (1974) [38] to examine the role of environmental stimuli in the creation of emotions and consumer behaviors. Subsequent studies investigated with empirical examinations, the different effects each stimulus has on emotions and behavioral intentions in a restaurant consumption context, providing an extended model of the bipolar Mehrabian-Russell (1974) [38] encompassing the diverse aspects of stimuli in the contexts of products and services. The extended model of Jang and Namkung (2009) [39], adopted a unipolar approach to emotional responses and tested the role that each emotion plays (Figure 1), in other words, the unipolar approach observes additional constructs (i.e. product and service stimuli) along with atmospherics stimuli are considered to create a more comprehensive evaluation [39].

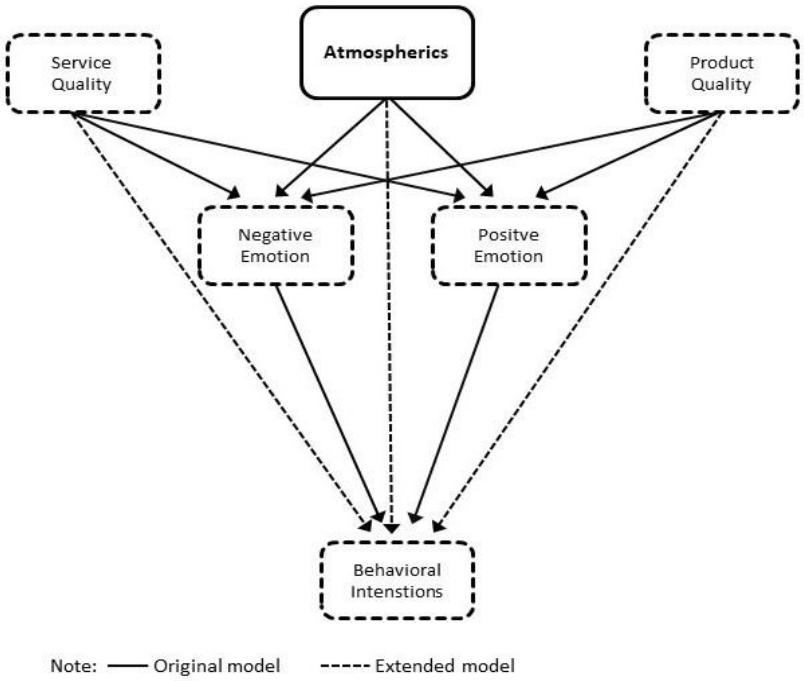

Figure 1. Redrawn schematic model based on Jang and Namkung (2009) extended MR Model.

However, for retailers to successfully differentiate their retail venue from competitors, these different types of atmospheric cues should not be considered separately but holistically, and they must be aligned with a brand-dictated *theme* [40]. Foster and McLelland (2015) [40] have found that using a brand-dictated theme results in a more satisfying, interactive, immersive, and authentic shopping environment for the customer and the retailer gains recognition in the marketplace.

Classic marketing is based on the idea that the customer is rational; by contrast, sensory marketing put the experiences lived by the consumers and his feelings in the process [41]. These experiences have sensorial, emotional, cognitive, behavioral and relational dimensions, not only functional. The experience becomes an image, forming the mental conceptions and perceptions of

interactions and inputs in the service process, which constitutes the final outcome of the multi-sensory experience within a brand perspective [41]. Multi-sensory brand-experience is significant in differentiating, distinguishing and positioning a brand in the human mind as an image.

Sensory marketing offers a firm the opportunity to differentiate and express a brand as image through sensorial strategies, including sensors, sensations, and sensory expressions, based on cognitive, emotional, or value-based elements in relation to the human mind and senses [41]. In this regard, smell, sound, vision, taste or touch can reinforce a positive feeling, following the experiential logic, that generates a certain value to the individual [42] and creates a brand image [41]. Through this process, with its sensory imprints, a good or a service becomes the experience which is based on individual and personalized perceptions. Therefore, sensory marketing is a complex concept that deals with the unconscious of the consumers: Their perceptions, feelings and tastes. This approach is allows observing and controlling the atmosphere factors.

Food consumption out of home can be grouped into two distinct main categories: *Collective* and *commercial/traditional* catering. The first one tries to offer meals at the lowest possible price to as many people as possible (for example: Restaurants in schools, hospitals, companies, etc.).

The second group includes *traditional* restaurants, *theme* restaurants (e.g. Chinese, Italian, French, Japanese, Mexican, Thai, etc.), with specific *lifestyle* or *product* (e.g. vegetarian food, sushi bar, organic food, etc.) and *fast food*. The evocative power of *theme* restaurants is undoubtedly very strong for consumers, who immerse themselves, for lunch or dinner, in a perfectly authentically replicated environment but certainly very attractive to the five senses.

Also the *typical-traditional* restaurants propose traditional foods facing with the challenge to attract and retain customers through the offer of products and services placed in a context of great familiarity with the country of origin, namely that of *distinctiveness*. Italian typical-traditional restaurants recall Italian tradition through the presence of distinctive elements, such as pictures, photos, furnishings typical of Italy and of Italian design; in these restaurants it is promoted the gastronomic culture and tradition of Italy through the offer of original food prepared using traditional recipes (often with the presence of an Italian chef) and high quality raw material used. Products with certifications like, "Product Denomination of Origin" (PDO) or "Product Geographic Indication" (PGI) should be offered, and the *durum pasta* is an essential food of these restaurants because it is and essential food of Italians. Moreover, often these restaurants use also the Italian language, together with English language if located in other countries, to communicate, in order to emphasize the Italian identity of the restaurant, also organizing specific initiatives, such as theme nights, wine tastings, books presentations, magazines, cookbooks, guides, etc. Finally, the name recalls the Italian origin of the restaurant. These restaurants can increase and retain their clientele by making the most of their strengths, such as the types of food offered and the high quality raw materials used. There are many common marketing tools used in the catering and in the *Hotel/Restaurant/Caf è* (Ho.Re.Ca.) sector [43], that is one of the fastest ones growing in Europe; however, typical-traditional restaurants must constantly add new tools to their marketing actions to gain a real competitive advantage in the marketplace. Experiential marketing and sensory marketing were partially used in the commercial/traditional catering sector so far: Many restaurants, fast-foods and bakeries try to lure customers' five senses only with artificial systems. Sensory marketing, linking the quality of the product to the attractiveness of the restaurant, may be an effective tool to consolidate the positioning of this type of restaurants, making them unique and at the same time powerfully attractive to customers.

The aim of this paper is to measure Italian consumers' preferences for *quality Sicilian durum wheat dried* pasta and *whole-wheat* pasta consumed at Italian typical-traditional restaurants, with regard to sensorial and experiential variables. More particularly, by the use of sensorial and evocative stimuli we wanted to measure the influence on consumer preferences of a consumption atmosphere coherent with the product (namely, context: Franchised Italian typical-traditional restaurant; food: q*uality Sicilian durum wheat dried* pasta and *whole-wheat* pasta).

2. Materials and methods

2.1. Experimental design and rationale

According to the research objectives, a qualitative research method is more suitable in this case in order to collect information through discussion of selected individuals and gather information in depth exploring feelings, motivations, values and consumption drivers in a restaurant. Moreover, for this study the used methodology should be exploratory research, because the aim is to discover the important variables, in a given situation, that will help to define the problem and suggest hypotheses, instead of providing accurate and valid representation of known variables (as it is the case descriptive research). Finally, thanks to the use of scores combined with qualitative judgements, it has been possible to apply some quantitative techniques in order to try to identify the causality, between two or a few variables, where independent and dependent variables are defined.

One of the most widely used qualitative research methods to understand consumer preferences and buying and consumption behavior is the Focus Group (FG). This methodology is suitable to collect information about the processes of choice of individuals through interaction among participants that have the opportunity to see and taste the product under analysis and simultaneously discuss about it and exchange opinions and beliefs [44]. The method is even more valid if the participants, although not knowing each other, have common interests that help them interact. According to literature [45] FGs tasks can be distinguished in terms of the research purpose they serve, the types of information and knowledge they produce, their scientific status, and methodological factors: Exploratory; clinical and experiential. Exploratory tasks for theory applications include generating theoretical constructs, causal relationships, models, hypotheses, and theories. Despite FGs have some limitations, due to the small size of respondents, on the other side people convened to discuss in a FG should be carefully selected for demographic, psychographic or other considerations, so that the sample is often required to be inhomogeneous [45]. The degree of member homogeneity desired may be best determined in light of the task or problem the group is asked to address. Therefore, for this study, the choice of the FG participants based on well-defined profiles, and that of restaurant (place of consumption) appear very important.

Pasta is the most widely consumed food in Italy, both at home and away-from-home and among Italians it is unanimously preferred for both taste and versatility. Pasta in Italy is consumed by everyone, in every possible place of consumption, daily or weekly, as a simple food within the daily meal and on special occasions of consumption (events, holidays). Therefore, a heterogeneous population of individuals, identified as reference Universe, appeared suitable for this study, to be then properly stratified basing on some segmentation criteria.

2.2. Segmentation criteria and reference population

Following the marketing literature [46] it is essential to define the consumer target on the basis of variables that identify specific characteristics related to particular preferences or needs. The target can therefore be a group that shares similar needs, or is oriented in the choices in a homogeneous way, or a group where the components result in very heterogeneous behaviors and choices. When choosing the group, it is therefore necessary to consider the variables that influence the consumption of the product and play an important role in the choice of purchase.

On this basis, a heterogeneous population of individuals was chosen, within five well-identified *Profiles* that were categorized by the research group (Table 1), basing on predefined segmentation criteria according to marketing literature and previous works [47,48]. The five different profiles are different, for *Socio-demographic characteristics*, *Consumption behavior*, and *Lifestyles*.

Table 1. Profiles of Focus Group participants.

Profiles	Socio-Demographics characteristics	Consumption behavior	Lifestyles
(1) Six participants	Ages 18–30; gender: One man and one woman; students; singles.	Place of consumption: Both outside and at home; frequency of consumption: Daily.	One sedentary and one practicing sport.
(2) Six participants	Ages 30–40; gender: A man and a woman; employed; a single and a cohabitant with children; occupation: Public and/or private employees.	Place of consumption: Both outside and at home and mainly in the home; frequency of consumption: Daily and weekly.	One sedentary and one practicing sport.
(3) Twelve participants	Age 40–50; gender: Two men and two women; employed; at least one single and at least one cohabiting with children; occupation: Public and/or private employees and freelance professionals.	Place of consumption: Both outside and inside home and at least one predominantly outside; frequency of consumption: Daily and weekly.	Almost one sedentary and one practicing sport.
(4) Six participants	Age: 50–60; gender: One man and one woman; one single and one cohabitee; occupation: One public or private employee and one freelancer.	Place of consumption: Both outside and inside home and mostly outside the home; frequency of consumption: At least one daily.	One sedentary and one practicing sport.
(5) Six participants	Ages 60–70; gender: A man and a woman; life partners; a retired person and a public or private employee.	Place of consumption: Outside of home and predominantly at home; frequency of consumption: At least one daily	Not important.

In order to select the participants for the FGs, the residents in three different Italian cities were chosen as the reference Universe. The cities selected were Palermo (Sicily region capital, Southern Italy), Rome (Lazio region capital, Central Italy) and Milan (Lombardy region capital Northern Italy),

representing the three main geographic regions of the country with differences for *Socio-cultural characteristics*, *Consumption behaviors* and *Lifestyles*.

According to the literature on FGs [45], which prescribes that the number of participants should vary from 8 to a maximum of 12 individuals, each Focus Group was composed of 12 participants, basing on the predefined profiles (Table 1), thus representing a Convenience-Judgment sample. In fact, Judgement samples are selected on the basis of what the researchers think particular sampling units or elements will contribute to answering the particular research question [49]. The individuals were lastly extracted by probabilistic sampling method and had to have the characteristics described by each predefined profile (stratum of the population) (Table 1), excluding, from time to time, those individuals who did not respect, simultaneously, all the predefined criteria, and who did not accept to be included in the FG. Therefore, the samples reflected the Population composition and the predefined segmentation. These participants, due to their pre-selected characteristics, were heterogeneous with each other [50].

Moreover, the selected group was composed of Italian consumers, considered "connoisseurs" for this study, because Italians are persons who have a great deal of knowledge about the pasta cuisine, and may be considered expert judges in matters of taste of pasta prepared following the Italian traditional methods. Moreover, extracted participants, before they could be selected to take part in the focus group, had to declare that they were consuming pasta at least 5 times a week and they were buying pasta of medium-high quality at a price, i.e. from 2.0 to 3.0 euros per kg (generally the common pasta in Italy has the price of about 1.0 euro per kg).

2.3. Description of the Focus Group

The research was conducted from 2017 to 2018. Nine distinct Focus Groups (FG) with different participants (12 for each FG) were carried out in the three selected cities (Palermo, Rome, Milan). Three FGs were carried out in Palermo, three in Rome and three in Milan, with 36 participants for each city and a total of n = 108 participants. The FGs were conducted in the three venues of the of the franchised restaurant named "*Antica Focacceria San Francesco*[1]", which is a typical-traditional restaurant with headquarters in Palermo and with restaurants in other Italian cities. This restaurant is a food retail venue high in experiential and sensorial content, designed on the theme of the typical Italian restaurant and traditional Sicilian food culture. The restaurant was founded in Palermo in 1834 but subsequently other franchised restaurants were opened in Rome in Milan and in the main airports of Rome and Milan, and there is a project for opening other venues in other countries.

A pre-evaluation of the level of authenticity of the three restaurant's venues was made by the researchers on the basis of the thematic elements characterizing this restaurants' category using a 5-pt scale to measure the *Level of Appropriateness*:

1 - absolutely inappropriate;
2 - inappropriate/slightly inappropriate;
3 - neutral;
4 - slightly appropriate/appropriate;
5 - Absolutely appropriate.

[1] ©2016. Antica Focacceria S. Francesco S.p.A., subject to management and coordination by EFFE 2005 Gruppo Feltrinelli S.p.A.

Table 2. Themed retailing elements of *Antica Focacceria San Francesco* and degree of authenticity.

Thematization elements*	*Antica Focacceria San Francesco* implementation	Palermo**	Roma**	Milano**
Target market	Men and women, all ages	5	5	5
Merchandise	Italian food and Sicilian traditional food; beverages	5	5	5
Prices	Moderate (10€–15€ for a meal)	5	2	2
Format	Sit-in restaurant and take-away	5	5	5
Brand message	Italian typical gastronomy combined with authentic Sicilian traditional food	5	5	5
Theme: Italian typical and traditional Sicilian food culture, based on	- A highly sensorial experience, induced by a profusion of fragrances, perfumes, aromas and craft food products;	5	3	1
	- Authenticity and legitimacy (an emblematic restaurant, since 1834);	5	3	3
	- Gastronomic syncretism historically influenced by various cultures;	5	3	1
	- Quality and traceability of raw material;	5	5	5
	- Authenticity of the evocative elements of Italy and Sicilian region.	5	3	3
Lighting	Warm, yellow light tones that enhance the traditional feel. Focused lighting at the food preparation corners.	5	5	1
Layout/fixtures	- Italian and Sicilian traditional architectural elements;	5	4	2
	- Central street-food preparation stand;	5	1	1
	- Standard layout for ready-to-eat dishes corner;	5	3	1
	- Seating tables next to the walls all around the dining area.	5	3	1
Entrance/window	- Large open entrance from the street;	5	5	2
	- Kitchen views from the street, through large windows left open;	5	5	1
	- Dining area views from the street, through large windows.	5	5	4
Music	N/A	-	-	-
Scent	Food smells (from the little open food preparation stand within the dining area).	5	3	3
Total score		95	73	51
% of replicated authenticity		100%	77%	54%

***** Evaluations are based on a review of restaurant's website and venues and on store managers' interviews.

****** Palermo (south Italy), Roma (central Italy), Milano (north Italy). Values are means (5-pt scale from 1 = min to 5= max).

Table 2 summarizes the thematization choices made by the restaurant *Antica Focacceria San Francesco*©. The pre-evaluation was made before each FG in order to take into account any possible modification of the characteristics of the three locations during the period in which the study was

carried out. The means of the scores attributed each of the three times by the researchers (on the basis of the appropriateness scale) to the characteristics of the restaurants taken into consideration were calculated and used for this analysis.

The arrangement of the participants and the composition of the tables around which the FGs were held were specially prepared in an equal way at the three different venues for all the nine Focus Groups. Also, in order to reduce external distractions and allow a better involvement of people on the subject for which they were invited, the tables around which the FGs were held were standardized. The components were placed around a square shape table (Figures 2, 5, 8), so that no one could have the feeling of occupying a better or worse place than the others. The places at the table were identified by the presence of a disposable placemat with the design of the restaurant's logo and a recipe for a typical pasta dish. The tables had at their center a composition made with different types of dried pasta placed on a cloth. Some pasta was also spread on the table so that the FG components could touch it and come into contact with it during the discussion [51]. Sparkling water was offered to the participants in transparent glass jugs and served in transparent glass glasses to reset the taste during the testing. Pictures of the restaurants' venues were made before the starting of the Focus Groups (Figures 3, 4, 6, 7, 9, 10).

Figure 2. Palermo restaurant, composition of the table.

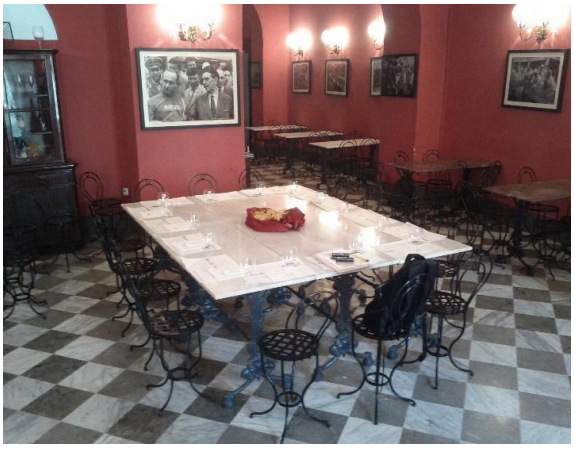

Figure 3. Palermo restaurant (Nord-South view), before the start of the Focus Group.

Figure 4. Palermo restaurant (South-Nord view), before the start of the Focus Group.

Figure 5. Rome restaurant, composition of the table.

Figure 6. Rome restaurant (Nord-South view), before the start of the Focus Group.

Figure 7. Rome restaurant (East-West view), before the start of the Focus Group.

Figure 8. Milan restaurant, composition of the table.

Figure 9. Milan restaurant (Nord-South view), before the start of the Focus Group (the person in the picture is the Moderator).

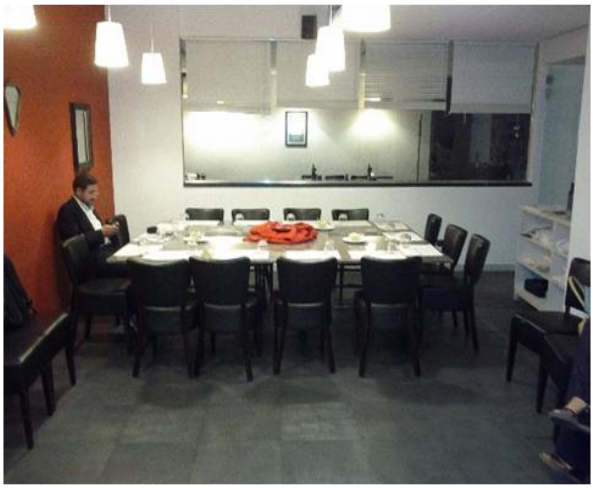

Figure 10. Milan restaurant (East-West view), before the start of the Focus Group (the person in the picture is the Moderator).

2.4. Pasta cooking test

The type of pasta chosen for the test is "Pennette rigate" (also known as "Penne rigate", it is the third most consumed pasta format after spaghetti and macaroni in Italy and abroad). Pasta was cooked in boiling distilled water at 3:10 (w/v) pasta to water ratio, without the addition of salt. Optimum cooking time (OCT) was determined preliminary by removing "Pennette rigate" from the boiling water at 10 s intervals and squeezing it between two transparent glass slides until the white, opaque center core of the Pennetta disappeared, according to the AACC method 16–50 (AACC, 2000). The same sample of pasta was used for the nine Focus Groups.

2.5. Structure and running phases of the Focus Group

In accordance with existing literature on Focus Groups [44] and previous works [21,48,52–54] the research team developed the topics to be covered. The nine FGs were carried out with same structure and running phases.

The study group then structured a series of coherent and consequential questions structured in such a way as to involve the participants in reflecting and discussing, albeit in a flexible manner, on the proposed topics according to a pre-established logic. A moderator (from the University of Palermo, expert in communication sciences), facilitated group discussion and monitored group interaction. The lineup of FG included three steps by which to assess the researched information, which are:

(1) Discussion: The FG was conducted by the same moderator from the research group, participants were invited to discuss about their consumption behaviors and habits with regard to pasta in order to highlight the eventual existing differences among the three focus groups (e.g. consumption methods, reasons for consumption, frequency of consumption, importance of celebrative consumption, consumption of other types of pasta, preparation, etc.);

(2) Sensory test: During the sensory test the moderator provided information about the two types of pasta tasted;

(3) Evaluation: Rationalization of preferences, consumers were requested to fill a questionnaire indicating their evaluation of the sensory attributes of the pasta tasted and on the experiential variables (i.e. environment, atmosphere of the venue).

Discussion (1): The role of the moderator was to provide input to the participants in order to make the individual members of the FGs reflect and speak spontaneously and freely. These inputs, elaborated by the research group according to a precise scheme and order (that was repeated equally in the three cities), concerned the reasons for choosing, purchasing and consuming dried pasta, on the basis of their own experiences and personal beliefs about the product. All members were given an equal number of opportunities to express their opinions, which were discussed by the group. The components were asked to reflect in particular on some intrinsic attributes of the product and on some features capable of evoking particular conditions of consumption or particular moments of life of individual participants. At the end of the discussion, the participants were invited to carry on the Sensory test; (2) with the two types of pasta selected for this study: Sicilian high quality dried pasta, and Sicilian whole-wheat pasta. Before tasting, the participants were informed that the entire production cycle of the pasta to be tasted, from the production of the raw material to the production of the pasta itself, was carried out within the Sicilian territory and with local labor. During the sensory test the moderator provided information about the two types of pasta tasted. These included the fact that they were produced by a Sicilian industry that exclusively uses Sicilian durum wheat with impeccable health and safety characteristics, unlike other producers who use grain imported from other countries where the growing environment is very different.

The moderator also gave indications on the differences between the two different types of pasta, on their composition and on their digestibility, and on how the whole-wheat pasta is produced. In particular, the moderator dwelt on explaining that whole-wheat pasta has a greater amount of protein (around 14.5%) than dry pasta made from durum wheat semolina (about 13.5%), noting that in Italy the minimum limit of protein that pasta must have is 10.5%. Another aspect that characterizes the quality of pasta produced with Sicilian grains is that of *food safety* [55]. In fact, it has been demonstrated that Sicilian grains and those generally produced in southern Italy are mycotoxins free [56]. The moderator therefore emphasized the close link between the territory, Sicily and its inland areas, and durum wheat, which is produced in those areas and used to prepare quality pasta with particular organoleptic characteristics: A wholesome finished product that conveys *ethical values*. The participants were left free to discuss with each other.

The two types of pasta were proposed to participants in a single plate but properly separated by a traditional fresh Italian tomato sauce, so that the sauce covered the central part of the porcelain plate and the participants had the opportunity to eat the two types of pasta with or without the tomato sauce (Figures 11 and 12).

The participants were asked to test the two types of pasta in the following order:

- First the *quality Sicilian durum wheat dried* pasta. Expert consumers were asked to take one "Pennetta" with a fork and observe its consistency and, bringing it close to the eyes, observe its color. Then they were asked to bring it to the nose in order to smell it, and then eat it. The operation could be done later with more than one Pennetta at a time (two or three). After the first tastings, the pasta could be tasted together with the tomato sauce.
- Subsequently, the *whole-wheat* pasta was tasted in the same way of the dried pasta. FG participants were asked to take one "Pennetta" with a fork and observe its consistency and, bringing it close to the eyes, observe its color. Then they were asked to bring it to the nose in order to smell it,

and then eat it. The operation could be done later with more than one Pennetta at a time (two or three). After the first tastings, the pasta could be tasted together with the tomato sauce.

- Finally, the participants were free to test the two types of pasta according to their preferences.

Figure 11. Plates covered with *cloche* before being served.

Figure 12. Plate prepared for the test.

Sparkling water was used in the test mandatorily between one type of pasta and, in any case, freely by the participants if they considered it appropriate. According to the order elaborated by the research group, the moderator invited all the participants to evaluate the sensorial characteristics of the pasta tasted, in particular, first the color, then the smell, the consistency, also deriving from the roughness of the pasta, and lastly on the taste. Moreover, during the tasting, the moderator solicited the discussion among the members about the quality characteristics of the types of pastas tasted.

After the sensory test there was the Evaluation phase (3): During this phase the participants were asked to fill in a questionnaire properly structured for this test in order to obtain more accurate and rationalized responses [32]. The sensory attributes chosen for this test [58], were: (1) visual appearance, (2) odor, (3) consistency, (4) roughness, and (5) taste. The participants were asked to assess the pasta tasted basing on four quality sensory attributes of pasta, using qualitative judgements that corresponded, also, to a 5-pt *Quality scale*, according to their preferences: 1 = Poor; 2 = Fair; 3 = Good; 4 = Very good; 5 = Excellent. At this time, the participants received their sensory sheet and glossary developed by the research team with definitions for the specific attributes to be evaluated. Moreover, respondents were also asked to evaluate their experience in the restaurant, namely *overall coherence* of product-environment, using qualitative judgements that corresponded, also, to a 5-pt a *Satisfaction scale*: 1 = not at all satisfied; 2 = slightly satisfied; 3 = moderately satisfied; 4 = very satisfied; 5 = extremely satisfied; and their liking about the *overall atmosphere* of the location, using qualitative judgements that corresponded, also, to a 5-pt *Familiarity scale*: 1 = not at all familiar; 2 = slightly familiar; 3 = somewhat familiar; 4 = moderately familiar; 5 = extremely familiar.

During the focus group, discussions were recorded by hidden microphones and then transcribed with a rigorous literal style, where every word of the participants, including all fillers (um, er), background noises and non-verbal communication (sighs, laughter, applause, pauses, coughs) are recorded in the transcription with an intelligent literal style, where the fillers, background noises, repetitions and others were not eliminated.

2.6. Statistical analysis

Unlike other FGs in which there are observed only qualitative data and considerations are based on qualitative techniques of analysis, in this study the participants were asked to give a judgment (through a questionnaire), at the end of the discussion, on the sensory and experiential variables observed. Each judgment corresponded to a score of a specific scale, therefore using these scores it was possible to calculate and analyze descriptive statistics (mean values, median values and measure of variability as dispersion around the mean) and to study the significance of the differences between the means of the scores obtained in the three groups (i.e. the three cities in the South, Central and Northern Italy), given the socio-demographic differences existing between Palermo, Rome and Milan (samples from the same population; n = 108 participants for nine FGs).

Experimental data were processed by applying the Analysis of Variance (ANOVA) and means were separated with Tukey's Test, at $P \leq 0.05$. Moreover, in order to discuss the relationships between restaurants' coherence with product and consumers' preferences of restaurant (namely restaurant atmosphere), the Simple Linear Regression (SLR) was calculated to measure individual relationships between the relevant sensory and the experiential variables. Accordingly, the general equation of simple linear regression analysis was used for this research (Model function: $y = \alpha + \beta x$, where the β *estimated value* is $= [Cov(x, y)]/[Var(x)]$). The statistical analysis was carried out using SPSS statistic software v.21 (IBM).

3. Results

3.1. Focus Groups

3.1.1. Focus Group discussion

The first part of the discussion of the three Focus Groups was addressed by the moderator in order to understand the relationship between the individual participants and the consumption of pasta (data not shown). In particular, it was ascertained whether there were differences in approach and knowledge, between the three cities located in different geographical areas of Italy, regarding a food widely consumed.

As regards the frequency of consumption, it was found that in Palermo and Rome pasta is consumed during meals mainly on a daily basis (at least 5 times a week), whereas the participants in Milan affirmed that due to lifestyles and healthy diets pasta is not consumed more than 4–5 times per week. The results confirmed that in all focus groups pasta represents a symbolic food of the Italian food culture. However, not much difference emerged with regard to the quantity consumed, always between 80 and 120 grams per meal and in many cases the pasta was the only food consumed in each meal. From the three FGs it is clear that pasta is considered the main food for lunch, attributing it a precise nutritional value that, if consumed in an adequate quantity, can satisfy the needs of each individual. It is therefore clear that all participants in FG have a wide knowledge of the product and in particular of its nutritional properties.

The second part of the discussion, according to the hierarchy established by the working group, was about the recipes used for the preparation of pasta or the condiments with which it is accompanied.

Some of the differences that emerged during the course of the FGs are strongly linked to *historical-cultural motivations*. In Palermo and Rome, compared to Milan, there is a stronger historical gastronomic tradition linked to pasta that has led over time to the development of a large number of recipes for dried pasta (e.g. pasta in tomato sauce, pasta *alla Carbonara*, pasta *all'Amatriciana*, pasta with sausage and mushrooms, pasta in red Sicilian Pesto, pasta *alla Norma*, pasta with sardines, etc.), using different condiments (e.g. tomato, eggs, cheese, fish, vegetable, meat, ecc.). In Milan, on the other hand, gastronomic tradition links the main meal to a variety of recipes not mainly for dried pasta but also for fresh pasta, filled pasta and rice.

This historical and cultural aspect, certainly, influenced the participants' answers: While in Palermo and Rome it is important how to eat pasta, that is the condiment with which it is served, in Milan this aspect is not very important and consumers prefer generally a simple condiment. Therefore, in the FG of Palermo and Rome, the exaltation of pasta has been inferred through a complement, the condiment, while this aspect has not been highlighted in Milan.

The historical and cultural differences among the three Italian cities are reflected in the consumption of pasta in celebratory occasions or during specific occasions (during holidays, on Sundays, for dinner with friends, for traditional celebrations, at restaurant). In fact, according to the results, participants of the FG in Rome and Palermo, declared that the consumption of pasta occurs, certainly, on holidays (including Sundays for religious traditions), and during lunch/dinners with friends, differently, participants in Milan said that pasta represents, always an important food, although not essential, to be chosen at restaurants. There was a greater "*familiarity*" with pasta, as an important food for the meal, among the components of the FG in Palermo and Rome compared to

those of Milan that declared to consume also other types of pasta in addition to dried pasta, such as whole-wheat pasta, spelt pasta, fresh and egg pasta, or pasta with identifiable certification marks

3.1.2. Focus Group sensory test

As far as preferences on sensory attributes are concerned it should be noted, as a matter of priority, that the pasta was cooked for the time necessary to achieve the characteristics described in the paragraph on materials and methods, however, it was observed that the cooking time required to achieve optimal quality was 1 minute less than those indicated on the label of the chosen pasta.

The yellow color of the dried pasta is mainly determined by the carotenoid content of the semolina and by the activity of the enzymes lipoxygenase, which during the production process degrade the carotenoids to colorless compounds. The color of the pasta has never been a priority objective of the national programmers for the genetic improvement of wheat, since for the Italian consumer the quality of the pasta is essentially linked to its textual characteristics (resistance to cooking). Also in this study consumers' preferences confirmed that the *color* of the pasta was not considered an element related to the quality of the product, neither it was important in the choice of pasta according to all participants in the three FGs. The same opinion was expressed with regard to the color of whole-wheat pasta.

The *odor* of the dried pasta was perceived because the pasta immediately after being drained was placed in the plate and left unseasoned. This attribute appeared very interesting particularly for the focus group participants in the Palermo location, in fact, they declared that that scent was very familiar with their personal experience of pasta. Contrarily, although appreciating the scent of the pasta (immediately after being drained) the participants of the FGs in Rome and in Milan declared it was not so relevant. Not relevance of results appear also for the whole-wheat pasta.

The *consistency* of pasta is also important for all participants in the three FGs for each city. All the participants (n = 108) in the nine FGs assessed the consistency of the dried pasta "very good" (mean value); also whole-wheat pasta received good appreciations although lower than dried pasta.

Among the participants at the nine FGs, the *roughness* was considered a very important indicator of quality, because it helps pasta to retain condiments, and also because, in addition, it helps to enhance the smell of cooked pasta. All the participants in the three locations (Palermo, Rome and Milan) declared that the quality of roughness of the two types of pasta tasted was Very good (mean values).

As far as *taste* is concerned, the participants (n = 36) at the FG in Palermo agreed on the goodness of dried durum wheat pasta tasted, defining it an excellent product even if the evaluations were "very good" with mean values higher than 4 (4.4 for Palermo, 4.6 for Rome and 4.3 for Milan). With regard to the whole-wheat pasta, although some people appreciated its better flavor compared to that of national brands, there was a general lower liking as "Good" (mean value). The participants in Palermo were mainly exclusive consumers of normal durum wheat pasta. On the contrary, the participants in the FG in Rome (n = 36) and Milan (n = 36), being consumers also of whole-wheat pasta, appreciated its quality, considering it better than that of the main national brands. More particularly respondents in Milan assessed the taste of the tasted whole-wheat pasta with Very good (mean value).

Table 3. Scores given by the Focus Group participant.

		Dried durum wheat pasta								
		Palermo			Roma			Milano		
		Mean	Median	RSD%*	Mean	Median	RSD%*	Mean	Median	RSD%*
*Sensory variables***										
1.	Color	3.3	3	13.28%	3.3	3	14.13%	3.1	3	15.52%
2	Odor	4.6	5	10.91%	3.7	4	16.89%	2.9	3	12.26%
3	Consistency	3.9	4	8.20%	4.1	4	9.69%	3.6	4	16.84%
4	Roughness	4.3	4	11.03%	4.0	4	10.11%	3.6	4	18.34%
5	Taste	4.4	5	15.63%	4.6	5	13.98%	4.3	5	19.84%
*Experiential variables***										
6	Overall coherence	4.8	5	7.82%	3.2	3	16.77%	2.6	3	25.13%
7	Overall atmosphere	4.9	5	6.5%	3.4	3	20.30%	2.3	2	20.26%
		Whole-wheat pasta								
		Palermo			Roma			Milano		
		Mean	Median	RSD%*	Mean	Median	RSD%*	Mean	Median	RSD%*
*Sensory variables***										
1	Color	3.0	3	9.62%	3.2	3	13.51%	2.9	3	13.79%
2	Odor	3.1	3	17.28%	3.6	4	19.87%	3.5	4	14.35%
3	Consistency	3.7	4	12.82%	3.6	4	13697%	3.8	4	18.07%
4	Roughness	3.8	4	17.67%	4.1	4	11.30%	4.3	5	18.29%
5	Taste	3.2	3	11.97%	3.3	3	16.14%	4.0	4	7.23%
*Experiential variables***										
6	Overall coherence	3.2	3	18.33%	2.7	3	22.94%	2.7	3	27.92%
7	Overall atmosphere	4.7	5	9.24%	3.3	3	13.86%	2.4	2	20.68%

* Rel.Std.Dev (RSD)% = RSD*100 = (σ/μ)*100.

** 5-pt scales from 1 = min to 5 = max.

The tasted Sicilian dried durum wheat pasta was appreciated and defined as a good product even superior of some commercial national brands, known and marketed also in foreign countries. Moreover, participants recognized the origin of the raw material as an added value. Nevertheless, the information given by the moderator before the tasting, about the better digestibility of the whole-wheat pasta and how it is produced, shifted the discussion of the participants of the FG in Rome and especially Milan on this product. On the contrary, in Palermo the discussion has been more prolonged on dried wheat pasta and only a little time has been dedicated to whole-wheat pasta.

The whole-wheat pasta received lower judgments than dried pasta for most of the sensory variables, however a slight higher appreciation from FG respondents in Milan was found for the variables *odor, consistency and roughness* (Table 3). Moreover, the analysis of results, highlighted differences of judgments for the sensory variable *odor* of the durum dried wheat pasta among the three cities (Table 3). Due to the fact that the consumers' evaluations of the variable *overall*

atmosphere during the taste of the durum dried pasta were similar to those given during the taste of the whole-wheat pasta, it is possible to affirm that the type of pasta tasted did not influence consumers' perception of the overall atmosphere.

3.2. Results of statistical analysis

Thanks to the use of the scores combined to each qualitative judgment assigned by consumers, it was possible to use quantitative data (scores) to process the ANOVA with the aim to investigate differences in the evaluations of the sensorial variable *odor* and of the experiential variables *overall c* and *overall atmosphere*, among the three FGs of consumers (in the different Italian cities) for the dried durum wheat pasta.

Table 4. Analysis of Variance.

	Dependent variable	Squares sum: Type III	Squares mean	F	Sig.
Adjusted model	Overall coherence of Restaurant	96.796[a]	48.398	169.551	0.000
	Overall Atmosphere	121.167[b]	60.583	229.234	0.000
	Odor	53.407[c]	26.704	105.036	0.000

Differences are calculated inside and among groups. Groups are represented by the 3 different cities/locations: Palermo $n_1 = 36$; Rome $n_2 = 36$; Milan $n_3 = 36$; $n_1 + n_2 + n_3 = n = 108$.
a: $R^2 = 0.764$ (adjusted $R^2 = 0.759$); b: $R^2 = 0.814$ (adjusted $R^2 = 0.810$); c: $R^2 = 0.667$ (adjusted $R^2 = 0.660$).

Table 4 shows that differences are significant at 5% level as the *p* value is less than 0.05 (Sig. = 0.000; *p* value is 0.000; Tukey's Post-Hoc Test is significant at $p = 0.05$). Results highlight a statistically significant difference among the three groups for the experiential variables *Overall coherence of Restaurant*, *Overall Atmosphere* and the sensory variable *Odor*. Therefore statistical Null Hypothesis is rejected the alternative hypothesis that the differences are due to the diverse perceptions of atmospherics by consumers is accepted. Having already observed significant differences between the groups (cities) for the experiential variables, it was, also, calculated the SLR between the experiential variable *overall atmosphere* and the sensory variable *odor* that appeared the most interesting in the light of the results. SLR was calculated considering the nine groups together (namely n = 108 participants) with predictor *overall atmosphere* and response variable *odor* (Tables 5 and 6); then, conversely, with *odor* as predictor and response variable *overall atmosphere* (Tables 7 and 8).

Table 5. Regression analysis descriptive statistics.

Descriptive statistics				
Model	R	R-squared	Adjusted R-squared	Standard Deviation Error estimate
1	0.626[a]	0.392	0.386	0.678

a: Predictor variable: Overall Atmosphere.

Table 6. Regression analysis coefficients.

Coefficients[a]					
Model	Non-standardized coefficients		Standardized coefficients	t	Sig.
	B	*Standard Deviation Error*	*Beta*		
1 Overall Atmosphere[b]	0.459	0.056	0.622	8.233	0.000

a: Response variable: Odor.

b: Predictor variable: Overall Atmosphere.

As a result of simple regression analysis, it is confirmed the influence of restaurant atmosphere's on the consumer's perception of food smell (B = 0.459; *Beta* = 0.622). This analysis is meaningful (Sig. value = 0).

Table 7. Regression analysis descriptive statistics.

Descriptive statistics				
Model	R	R-squared	Adjusted R-squared	Standard Deviation Error estimate
1	0.626[a]	0.392	0.386	0.924

a: Predictor variable: Odor.

Table 8. Regression analysis coefficients.

Coefficients[a]						
Model		Non-standardized coefficients		Standardized coefficients	t	Sig.
		B	*Standard Deviation Error*	*Beta*		
1	Odor[b]	0.853	0.103	0.629	8.262	0.000

a: Response variable: Overall Atmosphere.

b: Predictor variable: Odor.

Moreover, these results highlights that consumers' perception of the restaurant's *overall atmosphere* depend on odor of food (B = 0.853; *Beta* = 0.629), that creates predictive expectations about food quality based on previous consumption experiences (this analysis is meaningful, Sig. value = 0).

4. Conclusions

Before proceeding with the discussion of the results obtained, it is useful to make a brief comment on the limits and advantages of this study.

In spite of the limited number of participants, the FG methodology was applied because it provides good results for pilot studies thanks to the accuracy with which the participants were selected specifically for the purposes of this study. Regardless of the high initial inhomogeneity of the Focus Group participants, the variability of judgments attributed to sensory attributes is low. This is probably due to the fact that in the FG the participants have the opportunity to discuss the topics, to exchange opinions, clarify doubts and try out the product during the discussion, naturally

influencing each other without positions of dominance of one or more participants over the others but in a position of equality. In fact, the choice of a group with a number of participants with different balanced profiles [49], allows to guarantee an enrichment of the group as a whole and to reach the final objective of the focus groups, which is to obtain a single opinion of the group on the product tested through a group exploratory process, unlike other focus groups appropriately planned with participants with similar characteristics and aimed at obtaining the opinion of a specific market segment that they represent. Obviously, this type of methodology has the limit that sample surveys (with large sample size) do not have, but, objectively, those surveys requires greater time and costs. However, obtaining a common opinion by focus groups, appears very effective in pilot studies of sensory marketing [32], and this is the case, because researchers may have an initial more precise vision of the problem studied, suitable to correctly address future insights.

After having made this necessary premise, we move on to comment on the results and to conclude. The analysis of discussion shows a different type of preferences and consumption habits among consumers of pasta in Palermo and Rome compared to those in Milan due to different food traditions and perhaps also to different lifestyles. In Southern Italy the relationship with pasta is much more familiar and close, with an almost daily consumption and an important element of sharing, so much so that it is almost always present in convivial moments both with relatives and friends, both at home and outside the home. This link is weaker among consumers in Rome even if for them the pasta is still the main food around which to build a meal. There was less attachment to pasta on the part of FG consumers in Milan, in fact even though they are aware that pasta is a product that expresses the "Made in Italy" food and the *Italian spirit*, it is considered one of the possible elements of the meal, without a connotation of conviviality.

As regards the group's attitude to the information provided by the moderator on the high quality of the pasta tasted, namely original Sicilian production, exceptional sanitary and healthy characteristics of the product, protected farm environment, traditional production methods, ethical values, results highlighted the positive reaction of consumers, that manifested interest in the territory of production, and the organoleptic characteristics of the tested pasta [7]. Moreover, consumers were interested in the differences between the two types of pasta, with regard to their composition and different digestibility, and to the production process of the whole-wheat pasta [59].

Results of the sensory test revealed that *Consistency* of pasta was confirmed to be a determining factor in the evaluation of its quality. The presence of this attribute combined with that of the *roughness* of the pasta is what emphasizes the smell of pasta and give it its attitude to retain condiments. The pasta used for the test evoked the memory of the handcrafted pasta respect to the industrial one that is not very rough. As far as *taste* is concerned, the differences of judgments of consumers in Milan on the whole-wheat pasta may be explained with the differences of participants on lifestyles and consumption behaviors.

The types of pasta tasted (dried/whole-wheat) appeared uninfluential with regard to the experiential variable *overall atmosphere*, this confirm the independence the gustatory evaluation of the product to this experiential variable. This indicates that the judgments about the quality of a food are not influenced by external variables and this quality consists of, firstly, *product sensory qualities*, secondly *intrinsic qualities* (nutritional properties), thirdly *credence attributes* (such as origin, production methods environmentally friendly or that take into account livestock and human health), and finally *preparation methods*. These results are an interesting starting point for further studies on the link between food, perfumes, places and consumer satisfaction for other food products.

Interesting results have emerged with regard to the *odor*, that is the characteristic that may generate positive affective states or impulses of avoidance on consumers.

The interpretation of results highlighted, also, that *odor*, *overall coherence of product with the restaurant* and *overall atmosphere of the restaurant* are significantly affected by the venue wherein participants carried out the test (i.e. environment, context, atmosphere). Differences in retail atmospherics between the three venues—Palermo, Milan and Rome—identified before the FG test (Table 2) may explain the variation in our results. In the case of the Palermo venue, we see a possible positive impact of atmospherics. This venue is the original one existing since 1834, strongly appreciated by the locals and also by tourists for its characteristics of authenticity and distinctiveness. Contrarily, in the Rome and Milan locations of *Antica Focacceria San Francesco* all the atmospherics dimensions—i.e. ambient, design and social cues, etc.—did not reproduce authentically the typical cues of an Italian restaurant and much less those characteristics of the Sicilian tradition. For instance, at the social dimension of retail atmospherics, salespersons in the Palermo location speak Italian with some Sicilian accent and pronunciation, an important element in the perception of *Sicilianess*, contrarily, salespersons in Milan and Rome speak Italian (even with some Roman and Milanese accent and pronunciation). At the ambient and design levels of retail atmospherics, Sicily-evoking sensory stimuli, such as specific smells, aromas, and colors, as well as Italian and Sicilian traditional architectural elements found in the traditional restaurant layout, were better replicated the Palermo venue than in the Milan and Rome ones, where the restaurant have few elements inspiring to Italy and Sicily.

This is a case that sometimes happens in the franchising model because its primary disadvantage is quality control. The franchisor wants the firm's brand name to convey a message to consumers about the quality and consistency of the firm's product in the same way. The consumer must experience the same quality regardless of location. In fact, a customer who had a bad experience at one franchise may assume that they will have the same experience at other locations. But unfortunately sometimes this does not happen. Results revealed that, if the location is authentically replicated, then the consumers will perceive a better overall atmosphere and a stronger overall congruence between the product (high quality pasta) and the venue (Italian typical-traditional restaurant). These results are in line with previous studies that demonstrated the influence of *experience* sensory cues on consumers' perception of a food [60] and the influence of food smells at restaurants on consumers' preferences of restaurant and vice-versa [61]. More particularly the influence of overall atmosphere on sensory acceptance smell, and in the opposite direction the influence of foods smells at the restaurant on the consumers' restaurant preference [61,62]. Smell and odor can have a positive/negative influence on the general liking of the place where a food is eaten or where it is purchased. These relationships are interesting particularly with regard to Olfactory marketing for food products; in fact, always the scents of food or spices, typical of a food market or a restaurant/local, have positively attracted consumers, leading them to enter, buy or consume. The difference among the three cities for the variable *odor* may be explained with the fact that consumers in Palermo probably associated the odor of the Sicilian pasta tasted to some previous personal experience of other Sicilian pasta types. Moreover, results may be explained also with the fact that the restaurant in Palermo was full of delicious scents of foods, more than the other two and in Palermo the perceived congruence between odor of dried pasta and restaurant overall atmosphere was stronger.

This paper highlighted the association between the perceived overall atmosphere and odor, confirming the influence of odors on individual reactions and demonstrating that the congruence between odor and product positively influences consumers' likings of a restaurant. Contrarily, the perception of a not congruent context adversely influenced consumer *positive affectiv*e state [41]. As is widely known, positive experience builds customer loyalty. Traditional restaurants should reproduce authentically the contest of the territory they represent, in furnishings, in colors, in foods, in perfumes, in service personnel, also in other territorial contexts and let the customers experience the territory through the foods and the emotions felt inside the restaurant. The typical traditional restaurants must focus on this aspect, activating sensory marketing, perfectly reconstructing inside the restaurant a corner of territory in a contest totally far away. Traditional catering is characterized by an enormous competition between many different actors on many different possible positions. So, today, traditional restaurants have to face the obligation of attracting more and more customers, keeping them loyal and at the same time maintaining their brand image for the customer.

This pilot study highlights how even classic or traditional catering in Italy can use sensory and experiential marketing to increase the satisfaction of Italian consumers and strengthen loyalty, provided that the experiential elements proposed locally propose food and contexts in which the territoriality and tradition are clearly recognizable and genuinely authentic.

Therefore, it would be interesting to carry out future research to know whether the managers of traditional restaurants are aware of the effectiveness of Sensory marketing as a tool to strengthen market competitiveness and the entity of investment in sensory marketing strategies and tactics. In fact, Olfactory marketing and Auditory marketing (use of language sound, sounds and music), may be techniques very effective for traditional restaurants to affect consumers' expectations and impression about the venue.

Moreover, this type of restaurants may be a very important channel for conveying traditional quality products originating from a country in foreign countries, these products, also in this study, were appreciated by knowledgeable consumers [63,64]. Italy is known for the varied quantity of typical high quality certified products (such as, Parmigiano Reggiano PDO cheese, Grana Padano cheese, Prosciutto di Parma PDO ham, etc.), that are produced aiming at quality rather than quantity [65,66], and these products should be commercialized in place of the counterfeit ones to unaware consumers.

The findings of the present study have important implications with regard to the marketing of traditional high quality agricultural products, produced accounting sustainability and responsibility, in fact typical restaurants, in this case Italian typical restaurant may be very effective to vehicle food quality products in the country of origin and outside. Typical restaurants, may be able to offer the best artisan products cooked according to original recipes at reasonable prices, and create a direct relation between producers and consumers, in this case the restaurant's clients, also in foreign countries, similarly to the case of the special store Eataly (Eat-Italy): "eating Italian food, living the Italian way" [67].

Further research is recommended to investigate socio-cultural characteristics of consumers, though sampling surveys, with larger sample size, in order to know whether and how perception of overall atmosphere of a typical restaurant and its correlation to sensorial stimuli is influenced by age, gender, life-style etc. of consumers.

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Conflict of interest

All authors declare no conflicts of interest in this paper.

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