PAPER

NEW CONSUMER TARGETS TOWARDS A TRADITIONAL SPIRIT: THE CASE OF GRAPPA IN PIEDMONT (NORTHWEST ITALY)

V.M. MERLINO, S. MASSAGLIA^{*}, D. BORRA and V. MANTINO

Department of Agricultural, Forest and Food Sciences, University of Turin, Largo Paolo Braccini 2, 10095 Grugliasco, Torino, Italy *Corresponding author: Tel.: +39 0116708622; Fax: +39 0112368622 Email address: stefano.massaglia@unito.it

ABSTRACT

A choice experiment was conducted in Piedmont, Italy, to define purchasing preferences and behaviours of Grappa consumers. A total of 667 individuals were interviewed at different points of Grappa purchase/consumption. The most important attributes considered during Grappa purchase by consumer were defined using the Best-Worst Scaling methodology. The Latent Class Analysis was employed to identify consumer clusters characterized by different Grappa preferences and consumption styles. For Piedmont consumers, Grappa choice was related to previous experience, product knowledge and origin. Conversely, consumers considered "alcohol content" and "packaging" the two least important factors to be considered during purchase. The IClass analysis allowed the identification of four clusters of Grappa consumers that were described in function of socio-demographic variables.

Keywords: Best-Worst scaling, cluster analysis, choice factors, Italian distillate, socio-demographic variables

1. INTRODUCTION

1.1. Grappa history: from illegal product to national symbol

European Union Regulation 110/2008 recognises the intrinsic value of Grappa, in particular as a liquor of unique geographical origin and as the only Italian product derived from the distillation of pomace, according to the production regulations (Ministry of Agriculture, Food and Forestry, Decree 5389, 2011).

Grappa is a traditional and historical Italian alcoholic distillate that became a product to drink around 700, although the first methods of distillation date back to the seventh and sixth centuries BC (VACCARINI and PILLON, 2017; ONOFRI and BOATTO, 2015). However, a precise date of the first Grappa distillation process is still to be defined (ANTONINETTI, 2011). Originally, the pomace distillation for liquor production was considered an illegal operation (BEHRENDT and BEHRENDT, 2000) and the distillation process was usable only in medicine and applied sciences. This could explain the mystery that still surrounds the initial date of this liquor. Various literature proclaims the official birth of the pomace distillation method for Grappa production is attributed to Jesuit studies dating back to the mid 1600s, which refined and improved the practice and tools for this production process'. From there on, Grappa could be legally consumed as it became a symbol for intellectuals during the Italian Renaissance (MCCRACKEN, 1988), the period when the distillation process received the official academic recognition (ANTONIETTI, 2011).

Today, the social image of this product has evolved over the decades from a product consumed exclusively in local taverns or restaurants, from a defined target of consumers, in a liqueur to be enjoyed on several occasions by all (ANTONIETTI, 2011). Grappa became a phenomenon linked to different social classes, consolidating its presence in northern Italy, but opening up to the channel of mass distribution and advertising.

However, Grappa has suffered a sharp decrease in consumption in recent decades. In 1974, there were 39 million litres consumed in Italy, then dropped to 21 million in 1999. Consumption increased to 30 million by 2008 and then plunged back down to 23 million in 2017 (PIGOZZO, 2018; GALLETTO and ROSSETTO, 2005). In the national context, Grappa showed a negative trend in production of 29% from 2006 to 2016, and a drop from 117,000 to 82,000 in anhydrous alcohol (ASSODISTL, 2017). From 2017 Grappa production increased recording a significant change in value (from 42.9 to 44.2 million euros, + 5.9%) with recorded quantity from 27,935 to 30,919 anhydrous alcohol (FEDERVINI, 2017). Nielsen data from 2018 revealed a new positive trend in the Italian market (+ 0.8% in volume) (FEDERVINI, 2018). The exportation remained however limited: the quantities of product exported in 2017 fell by 12% compared to the previous year (from 28.9 to 25.3 in thousand anhydrous alcohols). The most important markets are Germany, which imported bottled Grappa for a value of almost 19 million euro, followed by Switzerland with 6.4 million euro FEDERVINI, 2018).

1.2. Research background and aims

In several literature researches the consumption occasions, as well as the cultural and socio-demographic variables were analysed as drivers for consumer preferences and behaviour definition regarding agro-food and oenological products (DAL VECCHIO *et al.*, 2018; CARSANA and JOLIBERT, 2017; DEKHILI *et al.*, 2011; MERLINO *et al.*, 2017; MU *et al.*, 2017; SCHÄUFELE and HAMM, 2017; BRUWER *et al.*, 2017 BORRA and

TARANTOLA, 2015). Even in the case of spirits such as gin, whisky and vodka, researchers have investigated consumer preferences in recent years, including the characteristics and behaviour during purchasing (CLARKE and KOPTEV, 1992; DUBININA and ALIEVA, 2015; GUY *et al.*, 1989; GAUTHIER and MAZIÈRES, 2013). However, in the case of Grappa, few studies in literature investigate the consumer preferences and buying behaviours for this product.

In general, consumer preferences about liquors, as well as, for Grappa, has been evolved meaning that purchases were no longer based exclusively on objective attributes (such as price or economic availability), but also considering emotional and irrational attributes during the product selection (i.e. brand, place of purchase, link with the territory, packaging, certifications, indications or designations of origin) (LOCK et al., 2006). Moreover, unlike food and other beverages, the nutritional and health aspects of alcoholic beverages lose considerable importance for consumer in favour of other more important aspects (aroma, colour, place of production/origin). In addition to preferences, also the characteristics of the typical prototype of Grappa consumer, mainly low-middle income and exclusively male, have evolved during the '80s, thanks to the enhancement programs and marketing strategies applied by Italian producers, restaurateurs and bars. Some quality aspects of Grappa have been modified and improved to allow the consumer to choose from a wider range of products. For example, producers improved the alcohol content, which has led to a "softer spirit" with an alcohol content of about 40% instead of the usual 50% or 60% alc. This latter aspect has expanded the opportunities for conventional consumers to enjoy Grappa on several occasions (WILSON, 2009; ANTONIETTI, 2011), transforming this distillate into a more relevant product even for non-experts not used to higher alcohol levels and with a strong flavour. To date, grappa has a new identity and is appreciated by a greater demographic variety, even by young people (DEMOSKOPEA, 2003). To this end, the aim of our research, conducted in northwest Italy, was to investigate on the purchasing preferences and behaviour of Grappa's consumers, also to understand if young people were included in the consumers target. At this purpose, the sampling phase was also addressed towards places typically frequented by young individuals.

The Best-Worst Scaling (BW) methodology (Finn and Louviere, 1992; Marley and Louviere, 2005), already used to analyse consumer preferences in the agri-food sector (LOCKSHIN *et al.*, 2015; MERLINO *et al.*, 2018; GIRGENTI *et al.*, 2016), as well as in other areas (REZAEI *et al.*, 2016), was employed in our study. The paper results are structured as follows: firstly, the Grappa consumers characteristics and habits are described; then, is defined the importance of 12 quality attributes of Grappa expressed by consumers in the decision-making phase; finally, the Cluster analysis results and the differences in terms of socio-demographic variables between the consumer targets are analysed.

2. Materials and methods

A total of 667 individuals were involved in the research to assess Grappa's consumer preferences. Face-to-face interviews were conducted through a paper questionnaire from March to June 2018 at various Grappa purchasing or consumption points (bars, wineries, supermarkets) distributed in Cuneo city and in the metropolitan areas of Turin (northwest Italy) and on the campus of the University of Turin.

The paper questionnaire consisted of three sections: the first contained questions to investigate the socio-demographic characteristics of respondents; the second part focused

on the survey of Grappa consumption habits and styles; the third section focused on the analysis of consumer preferences on the twelve attributes of Grappa selected for the Best-Worst scaling application.

Socio-demographic characteristics of the involved sample are described in Table 1.

	Sample (N= 667)				
Gender	Educational level				
Male	53%	Primary school	1%		
Female	47%	Lower secondary school	11%		
Age		Upper secondary school	71%		
18-24 years	40%	Master's degree	17%		
25-35 years	21%				
36-50 years	21%	Annual average income			
51-65 years	13%	<25,000 €/year	29%		
over 65	5%	25,000 - 35, 000 €/year	45%		
		> 35,000 €/year	26%		
Family composition		Employment			
One member	11%	Student	37%		
Two members	13%	Employed	38%		
Three members	26%	Self-employed	11%		
Four members	40%	Retired	7%		
More than 4 members	10%	Unemployed	4%		
		Housewife	3%		

Table 1. Respondents characteristics in terms of gender, age, number of family components, educational level, annual average income and employment (%).

2.1. Best-Worst scaling methodology and Cluster analysis

The BW method model helps to identify the most and least relevant attributes for consumers within a designed set of features that describe and characterize a product (SECCIA *et al.*, 2012). Data collection takes place through interviews, during which respondents are asked to indicate between a defined number of attributes organized in sets (from three to five elements), the one that is the most important (BEST) and the least important (WORST) during the purchase and/or selection of the product. The BW method has several advantages compared to traditional methods of discrete choice. Firstly, it appears to be easier to understand by consumers and quick to fill out. There is also greater consistency in the options chosen by the consumer, especially when these are the contrary or extreme. Finally, the BW method helps to obtain a good amount of information about consumer preferences through a classification of the same (MARLEY and LOUVIERE, 2005).

Using this methodology, respondents evaluate all the attributes present in each set as if they were pairs, consequently choosing the most representative pair for each set that corresponds to the maximum difference pair. For this reason, the BW method is also known as a maximum difference scale (MaxDiff) that provides a more efficient evaluation of the coupled data, thereby obliging the respondent to make a discriminating choice between attributes compared to traditional systems of comparison (AUGER *et al*, 2007; Cohen, 2003; FINN and LOUVIERE, 1992; MARLEY and LOUVIERE, 2005). According to ORME (2005) it is advisable to have between four or five attributes per set because a greater number would determine a minimum increase in the information obtained. In our research, 12 Grappa attributes have been selected and organized in nine sets of four attributes each, allowing single item to appear three times in the questionnaire. This was feasible by using the appropriate software (Sawtooth Software v.2.0.2, Orem, UT, USA; http://www.sawtoothsoftware.com/). The Sawtooth software has also created four different versions of the questionnaire in order to minimize the differences (both subjective and cultural) in the way of personal classification and create greater diversification in the presentation of items.

The level of importance for each Grappa attribute was evaluated by the average raw Best-Worst score analysis (CASINI *et al.*, 2009; COHEN, 2003; GOODMAN *et al.*, 2005). This score is a numerical value calculates dividing the BW score (number of BEST minus number of WORST) to the number of respondents and the frequency with which each attribute appears in the set of choices. The confidence limit used for BW score calculation was set equal to 95% and the standard deviation was used to evaluate sample variability. The 12 attributes of Grappa selected through a literature research and used in the BW analysis are reported in Table 2.

Grappa attributes	References
Taste/flavour	DIAMANTIDOU <i>et al.</i> , 2018; LOUW and LAMBRECHTS, 2012; VIOLONI, 2008; FINZI, 2007; UBIGLI, 2001; UBIGLI and CASTINO, 1992; DA PORTO, 2012; APOSTOLOPOULOU <i>et al.</i> , 2005.
Packaging/bottle format	DIAMANTIDOU et al., 2018; VIOLONI, 2008; DA PORTO, 2012.
Brand	DEMOSKOPEA, 2003; PRENTICE and HANDSJUK, 2016; CARSANA and JOLIBERT, 2017; LOUW and LAMBRECHTS, 2012.
Price	FINZI, 2007; GALLETTO and ROSSETTO, 2005; MU <i>et al.</i> , 2017; DA PORTO, 2012.
Grapevine	DIAMANTIDOU et al., 2018; BORSA et al., 2008; GALLETTO and ROSSETTO, 2005; DA PORTO, 2012.
Aging	DIAMANTIDOU et al., 2018; VIOLONI, 2009; SOUFLEROS et al., 2004.
Information on the label	VIOLONI, 2009; DA PORTO, 2012.
Origin/place of production	CHANDRA et al., 2017; SCHÄUFELE and HAMM, 2017; DA PORTO, 2012; LOUW and LAMBRECHTS, 2012.
Adding aromas/flavour	DIAMANTIDOU et al., 2018; VIOLONI, 2009; ASIOLI et al., 2017; DUBININA and ALIEVA, 2015; DA PORTO, 2012; LOUW and LAMBRECHTS, 2012.
I know/already tried	MULLER et al., 2010; HARRINGTON, 2007.
It was recommended to me	AGNOLI et al., 2011; HARRINGTON, 2007.
Alcohol content	DIAMANTIDOU <i>et al.</i> , 2018; DUBININA and ALIEVA, 2015; PIGOZZO, 2018; LOUW and LAMBRECHTS, 2012; APOSTOLOPOULOU <i>et al.</i> , 2005.

Table 2. The twelve attributes of Grappa selected and used for the Best-Worst analysis.

The Latent Class (lClass) Analysis was used to divide the whole sample of individuals into homogeneous groups (clusters) according to their purchasing behaviour and expressed preferences. The Sawtooth software automatically created five clusters, each of which is characterized by different values of the following indicators: the Akaike Constant Information Criterion (CAIC), the Log-Likelihood (LL) and the Bayesian Information

Criterion (BIC). In our research, the most appropriate segmentation was chosen as the one with the lowest BIC value, which, in our case, was corresponding to four clusters, also in accordance with MERLINO *et al.* (2018) and DEKHILI *et al.* (2011) (Table 3).

Table 3. Values of BIC of the lClass analysis results: the lowest value was used for clusters number choice.

Groups	Replications	BIC
2	5	5845.89
3	4	5726.20
4	2	5639.28
5	4	5640.28

3. RESULTS

3.1. The consumers of Grappa: socio-demographic characteristics

The 31% of the total sample (n=207 individuals) declared to consume Grappa. Among those who have declared that they do not consume Grappa "non-consumers", the main reason was linked to the organoleptic aspect ("I do not like it"), leaving out other reasons such as health or religious aspects.

The sub-sample of Grappa consumers was represented mainly by men (77%) with respect to women (23%), and by individuals belonging to the age groups of the youngest (under 35 years), while a minority of over 65 consumed Grappa (Table 4).

The distribution of the genders proportion in the different age groups is described in Fig. 1.

 Age ranges
 Consumer sample (n=207)

 18-24
 38%

 25-35
 22%

 36-50
 21%

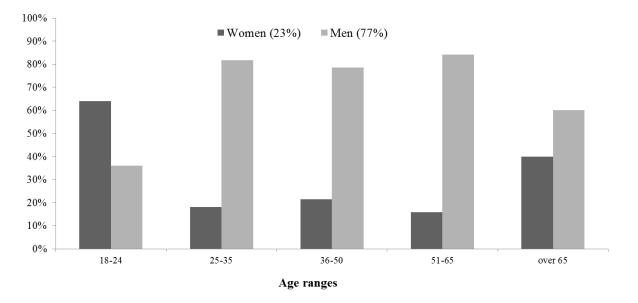
 51-65
 14%

 over 65
 5%

Table 4. Age ranges of Grappa consumers.

From data reported in Fig. 1 emerged a majority of men among Grappa consumers (77%) compared to women (23%). However, when analysing the distribution between women and men in the different age groups, a majority of women among the youngest consumers emerge, while an evident numerical superiority of men is highlighted in the other considered age ranges. In the over 65 consumers women represented the 40%.

Grappa consumers differed in level of education and occupational characteristics compared to the whole sample (Table 5). Regarding the family composition, 43% of consumers represented four-member families, 22% with three members, 16% with more



than two children, 13% belonged to families with two members and only 6% to single-parent families.

Figure 1. Genders distribution among the considered age groups and in the sub-sample of Grappa consumer.

Grappa consumers (n = 207)				
Educational level		Family composition		
Primary school	0%	One member	15%	
Lower secondary school	8%	Two members	14%	
Upper secondary school	68%	Three members	23%	
Master's degree	23%	Four members	34%	
		More than 4 members	13%	
Annual average income		Employment		
<25,000 €/year	24%	Student	51%	
25,000 - 35, 000 €/year	44%	Employed	24%	
> 35,000 €/year	42%	Self-employed	14%	
		Retired	7%	
		Unemployed	7%	
		Housewife	0%	

Table 5. Educational level, family composition, annual average income and employment of Grappa consumers.

Households with several members (four and five members) had a prevalence of affirmative answers to the question, "someone in the family drinks Grappa". On the contrary, by analysing the family composition of respondents who said they did not consume Grappa, the data revealed that 33% belonged to single member families and 20% to two member families.

3.2. Habits and styles of Grappa consumption

The majority of Grappa consumers involved in this study (69%) stated that they drink Grappa occasionally, while the 16% consume Grappa once or twice a month and 12% once or more a week. Only 2% of consumers drink this liquor every day (Table 6). The study found that majority of consumers drink Grappa habitually inside their home (35%), followed by 20% of individuals who consumed it in restaurants/pizzerias, special events (17%), in pubs and bars (17%) and at social tastings (10%). Only the 2% answered to drank Grappa in unspecified occasions. Different results emerged from the analysis of answers about the frequency of Grappa purchase (the bottle); among consumers, only 21% of those declared to never buy Grappa throughout the year, while 42% said they bought it occasionally. The 16% of consumers who bought Grappa two to four times a year, while 14% of respondents bought annually. Those who bought several times a year represented 8% of the whole sample. About the reasons to purchase Grappa, the main expressed by respondents was the convivial consumption with friends (44%), followed by purchase as a gift (31%), and for personal consumption (25%). In the latter case, there was a clear difference in behaviour between products in the case of personal consumption, highlighting a clear prevalence of men in this category.

Table 6. Frequency of Grappa consumption and purchase declared by interviewees.

Frequency of Grappa consumption		Frequency of Grappa (bottle) purchase		
Everyday	Everyday 2%		8%	
More than 2 times a week	2%	2-4 times a year	16%	
1-2 times a week	10%	Annually	14%	
1-2 times monthly	16%	Occasionally	42%	
Occasionally	69%	never	21%	

3.3. The importance of Grappa attributes

The numbers of selected BEST and WORST and the BW average raw score for single Grappa attributes for Piedmont consumers are reported in Table 7.

The most important attributes considered during the decision-making process of Grappa choice and purchase were "I know it/already tried" with an average raw score of 2.13, followed by "It was recommended to me" (average raw score equal to 1.68), "brand" (raw score equal to 1.71), and "origin/place of production" with a raw score of 1.08. On the contrary, among the attributes that not influence grappa purchase there was the "alcohol content", with the lowest average raw score (-2.30), followed by the "packaging/bottle format" (raw score of -1.71), by "addition of aromas/flavours" and by "information on the label" with average raw score values, respectively, of -1.21 and -0.79. The attributes considered least important by consumer at the time of purchase all present negative raw scores.

3.4. Latent Class Analysis of Grappa consumers

Clusters of consumers defined in function of their expressed preferences for Grappa attributes are described in Table 8. The same table shows the dimensions of the different clusters, as well as the BW raw score values for each attribute that define their importance within the single consumer group. Each of the four clusters has been named according to their expressed preference and perception defined in function of the importance given to the individual factors by consumers.

Attribute	Number of selected BEST	Number of selected WORST	B-W average raw score
Taste/flavour	83	102	-0.40
Packaging/bottle format	55	181	-1.71
Brand	162	30	1.71
Price	75	105	-0.40
Grapevine	101	86	0.31
Aging	109	87	-0.10
Information on the label	66	130	-0.79
Origin/place of production	146	48	1.08
Adding aromas/flavour	51	150	-1.21
I know/already tried	188	51	2.13
It was recommended to me	163	43	1.69
Alcohol content	25	211	-2.30

Table 7. Number of BEST, number of WORST and B-W average raw score for each attributes of Grappa.

Table 8. Average BW raw score for the four clusters representative of considered consumers sample: Nonexpert, Price Sensitive, Experts and Quality Sensitive.

	Clusters			
	Nonexpert	Price Sensitive	Experts	Quality Sensitive
Cluster dimension	27.4%	15.9%	30.7%	26.0%
Attributes		Average Ra	w Score	
Taste/flavour	1.37	3.60	-0.01	0.96
Packaging/bottle format	0.73	2.84	-0.36	-0.20
Make/brand	2.01	2.16	2.70	3.02
Price	1.59	3.51	0.15	0.64
Grapevine	-0.41	3.31	1.87	2.29
Aging	-0.51	1.72	2.23	2.48
Information on the label	1.18	1.19	0.09	1.79
Origin/place of production	0.99	3.62	2.21	2.43
Adding aromas/flavour	0.83	0.36	0.64	0.97
I know/already tried	2.74	1.68	4.13	1.36
It was recommended to me	2.75	2.85	3.45	0.78
Alcohol content	0.00	0.00	0.00	0.00

Important differences in attributes preferences evaluation between the four groups of consumers emerged from cluster analysis. The main group (30.7% of the entire sample), called *Experts*, was represented by respondents who considered their consolidated knowledge of Grappa, the recommendations on the product, as well as the brand, as the most important factors in the purchasing process. In some aspects, the *Experts* had similarities with the *Nonexpert* group (27.4%). In fact, even for these two types of consumers, the attributes "I know/already tried", "It was recommended to me" and "brand" were the most important factors for the product choice. However, these latter individuals differed from the *Experts* on the least important attributes. For *Experts* consumers, packaging and taste/flavour were irrelevant for Grappa selection, whereas the *Nonexpert* considered qualitative aspects such as the grape variety and the aging of the product unimportant factors in the Grappa selection.

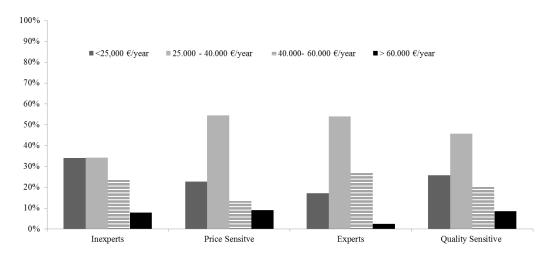
The third group was named of *Quality Sensitive* and represented the 26% of the entire sample. Respondents that considered discriminant during Grappa purchase the grape variety, the product aging and the origin/ place of production, characterized this cluster. Among the four groups, *Quality Sensitive* was the only one that emphasized the intrinsic qualities of the product, with high raw score values for the information on the label. This group also considered aspects such as price and packaging irrelevant in the decision-making process.

Price sensitive individuals (15.9% of the entire sample) represented the fourth cluster. Respondents who considered the price the most important attribute during Grappa purchase, followed by the origin/place of production and the taste/flavour, characterized this group.

The respondents' profiles were also analysed considering the consumers sociodemographic characteristics. In particular, if the *Nonexpert* group was characterized by a slight majority of women (58%) compared to men (42%), the *Price Sensitive* and *Expert* clusters presented the same distribution with a minority of men (32%) compared to women (68%), while the *Quality Sensitive* clusters were represented by 83% of men and only 17% of women. The percentages of individuals divided by age group in the different clusters are shown in Table 9. In general, the majority of young people emerge among the expert drinkers of Grappa, while the *Nonexperts* were mainly more mature individuals.

Cluster		Age	ranges (years ol	rs old)	
Cluster	18-24 25-35 36-50 51-65				
Price sensitive	41%	0%	27%	23%	9%
Nonexpert	46%	23%	15%	12%	3%
Expert	21%	0%	25%	23%	12%
Quality sensitive	38%	9%	26%	27%	0%

Table 9. Age differentiation of respondents belonging to the selected clusters.



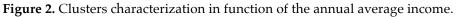


Fig. 2 highlights clusters characterization in function of the annual average income range of respondents. The *Price sensitive, Expert* and *Quality sensitive* groups were mostly represented by consumers with a mean yearly income between 25,000 to $40,000 \notin$ /year. In general, from our results the intermediate income level emerged as widespread among all the considered clusters, constituting at least one third of each cluster in all cases, excluding the *Nonexpert* group.

The clusters composition was then analysed based on the expressed level of Grappa knowledge (low, medium, high) declared during the interviews (Table 10).

The behaviour of the four groups was analysed according to their willingness to spend (in euros) for a bottle of Grappa purchase (Table 11).

Cluster		Level of knowledge			
Cluster	Low	Medium	High		
Nonexpert	89%	11%	/		
Quality sensitive	54%	46%	/		
Expert	65%	27%	8%		
Price sensitive	70%	21%	9%		

Table 10. Level of Grappa knowledge expressed by the four defined clusters of consumers.

Table 11. Willingness to pay (Euros ranges) for a bottle of Grappa purchase declared by the different clusters of consumers (Nonexpert, Price sensitive, Expert and Quality sensitive).

Cluster			Price ranges		
Cluster	less than 10€	10-20 €	21-40 €	41-60€	more than € 61
Nonexpert	16%	59%	22%	3%	0%
Price sensitive	0%	33%	48%	10%	5%
Expert	0%	48%	42%	0%	6%
Quality sensitive	3%	35%	55%	3%	3%

On average, the sample was willing to pay between 21 and 40 euros for Grappa purchase. Only *Nonexpert* consumers were willing to spend less than 10 euros on Grappa, while *Price sensitive* consumers showed a clear price sensitivity by focusing on product value for money.

4. DISCUSSION

This study analysed Grappa consumer characteristics, buying and consumption habits in Piedmont. In particular, the preference degree of 12 Grappa attributes was measured by dividing the considered sample into four clusters of individuals. Subjects with similar behaviours, attitudes and preferences towards Grappa product characterized each cluster. The socio-demographic analysis helped with describing the sample of Grappa consumers who represented the 31% of the total of interviewed. These individuals were especially men and young subjects under 35 years. This latter result underlines how young people, in particular women, are joining the target group of Grappa consumers, and further confirming the evolution of Grappa from a product associated with a specific category of consumers to a product for all individuals (ANTONIETTI, 2011)².

The probable correlation between the personal consumption of Grappa and a more or less habitual drinking within the family emerged from our analysis. Although focused only on Grappa, this latter result is also confirmed by literary research conducted on the overall consumption of alcohol, confirming the influence of alcohol consumption by family components on the individual behaviour. Both SCAFATO *et al.* (2004) and ISTAT (2016) clearly show how the influence of consumption patterns of parents and, in particular, the head of the family, is a key element in determining behaviour, especially in the younger age group.

Concerning the consumption habits, the profiled consumer in our study tends to be an occasional consumer who buys Grappa infrequently in association with special events, perhaps for convivial consumption with friends or as a gift. These attitudes show differences, however, depending on the gender, revealing a greater propensity of women to buy Grappa on specific occasions to taste it in company, in opposition to men respondents that had a greater tendency to buy it for personal consumption.

In general, however, while other alcoholic beverages (wine or beer) are consumed more easily due to their alcoholic range, as shown in literature, emerged the tendency of Grappa consumers to choose this spirit carefully to taste it on special occasions, without almost never abusing it⁹. The exploration of Grappa consumption habits highlighted how consumers prefer their home as a place to taste this traditional distillate. Grappa is often and traditionally drunk after meals, such as lunch or dinner, served as a "*digestive*" or "to correct a cup of espresso" (ANTONIETTI, 2011). These latter results underline that the social factor is extremely related both to the reasons for buying and to the occasions of consumption of Grappa. In the case of buying Grappa as a gift, the two genders seem to be very similar during purchasing behaviour. The identification of Grappa as a gift to give to friends or relatives symbolizes a recognition in this product by the consumer of an added and symbolic value, appreciable as a gift.

The results belonging to the Best-Worst scaling methodology application highlighted as the choice of Grappa is driven by the memories arising from a previous tasting experience, a known product and a specific brand, putting the product quality aspects in second place. Although Grappa producers are focusing their marketing strategies on product enhancing and differentiating through the improvement of aspects such packaging originality, elegance and communicative power⁴, in our study both packaging and bottle size were among the less important attributes considered during Grappa purchase. The lesser importance of the attribute "adding aromas/flavour", on the contrary, is not a surprising result because also literature have confirmed the tendency of Grappa consumers to prefer the pure product version, appreciating the taste, aroma, transparency, in particular the "white" colour of grappa (KOCH, 2008; BELLONE, 2011; ONOFRI and BOATTO, 2015, ONOFRI and KOCH, 2006).

Clusters analysis allowed the entire sample division into four groups of consumers characterized by homogeneous features and behavioural preferences. The most represented group was that of *Experts*, composed mainly by young men, with a medium-high income bracket and a willingness to pay an intermediate price for the purchase of Grappa.

These consumers reflect the trend of the entire sample by relying on their previous experiences and product image during purchasing. In this case, the experience is accompanied by a greater product knowledge, paying less attention to attributes such as the packaging and the taste/flavour of Grappa.

The second most represented group was of *Nonexpert*. It is interesting to note that the groups of *Experts* and *Nonexpert* have given importance to the same attributes in the grappa choice in relation to product knowledge and recommendations provided by others. However, the same preferences expressed probably need to be interpreted differently. In fact, for *Experts*, product knowledge and experience give the subject confidence in their own knowledge, which gives them certainty in the choice and reassurance during the purchase phase.

The *Nonexpert* group was represented by consumers who rely on their previous experience during the choice, perhaps to make a safe choice of product, and also, not having sufficient knowledge of the product, rely on recommendations for fear of making a mistake in buying. In this group, mainly represented by young people, age has played a key role as it leads to greater inexperience. Their willingness to pay for a bottle of Grappa was associated with a low-medium price, perhaps in correlation with their lower income bracket. Finally, this group was characterized by a higher percentage of women.

The group of *Quality sensitive* were mainly mature men who showed greater attention to the intrinsic factors of Grappa at the time of purchase, such as aging, the grape variety and geographical origin. Probably these consumers are connoisseurs who do not give importance either to price or packaging. *Quality Sensitive* probably belong to those expert consumers, enhancers of the gustatory quality of the product that conceive the tasting of Grappa as a ritual or a moment to appreciate all the unique connotations conferred by the aging process of a specific producer.

These consumers were probably connoisseurs for whom the brand image becomes important again because it is associated with an intrinsic quality of the product, without paying attention to aspects not directly related to the product itself, such as price and packaging. In this category there was a strong prevalence of men, who were willing to pay an average price for the purchase of Grappa, as well as characterized by a good knowledge of the product.

Price sensitive, the last cluster by size, considered price and taste/flavour important attributes during their decision-making process of Grappa purchase. Their willingness to pay for a bottle of Grappa has never fallen below 10 € indicating a lack of confidence in products too cheap and looking for a good value for money. In this case, knowledge plays a fundamental role because no consumer of this group relied on past experience or even on the image of the product because otherwise it doesn't guarantee quality. In addition,

there has been an increase in the average age for this category along with an increase in the middle-income bracket, which is in line with the positive perception of the attribute "price". However, these consumers were looking for the best value for money, also paying attention to the production areas. The combination of price, origin and taste can probably be associated with a consumer who assesses the price as an indicator of superior quality of the Grappa product. On the other hand, the information on the label and the addition of flavours/aromas are irrelevant for this category.

5. CONCLUSIONS

This study identified four different profiles of Grappa consumers: despite the differentiation in term of preferences and socio-demographical variables, in general, a good part of involved consumers stated to have a medium-low level of knowledge towards Grappa, except for a few passionate connoisseurs.

The heterogeneity between clusters preferences defines the importance of studying consumer attitudes, especially for products linked to tradition, but whose consumption is limited to special occasions or convivial moments such as Grappa. Consumer preferences must be interpreted and seen by the producers as a tool and an indicator to deal with marketing and production decisions. Grappa has enormous potential; the last twenty years has witnessed the production sector undergoing an evolution that has affected the product, the structure and the organisation of the production chain. The goal of reaching new and younger targets is being realized; however, the intrinsic potential of this product could allow it to expand even further products, opportunities and ways of consumption. The operators of the sector, in collaboration with the points of sale and consumption of Grappa, could envisage this objective.

A limitation of this research lies in the characteristic of the sample in terms of circumscription in a single geographical area (single region in the northwest of Italy), and in the sampling method that could represent a limitation in this type of research. In the future, it could be considered to expand to more areas at the national level and to involve individuals interviewed only in point of Grappa consumption. In addition, it would be interesting in future work to assess the level of knowledge of Grappa in other areas at the international level and to provide a tool of enhancement to companies with the intention of expanding their market.

NOTES

¹www.istitutograppa.org/ita/cosa-e-la-grappa.html/ available at 1/01/2019

²www.istitutograppa.org/ita/stampa/la-grappa-tra-passato-presente-e-futuro-da-vinitaly-buone-prospettive-per-il-distillato-di-bandiera.html Available at 10/12/2018

³www.grappa.com/ita/grappa_dettaglio.php/titolo=chi_beve_la_grappa/idpagina=10/idnews=1/idsezione=6 Available at 10/12/2018

⁺www.anag.it/premio-design-il-vestito-della-grappa-alla-grappa-clessidra-ma-vince-tutto-il-mondo-della-distillazione/ Available at 12/12/2018

REFERENCES

Agnoli L., Begalli D. and Capitello R. 2011. How do values influence the consumer utility for wine and the other alcoholic beverages? a focus on generation y preferences and consumption situations. Vineyard Data Quantification Society European Association of Wine Economist, Angers France, 18-21 May 2011.

Apostolopoulou A.A., Flouros A. I., Demertzis P.G. and Akrida-Demertzi K., 2005. Differences in concentration of principal volatile constituents in traditional Greek distillates. Food Control 16(2):157-164.

Asioli D., Aschemann-Witzel J., Caputo V., Vecchio R., Annunziata A., Næs T. and Varela P. 2017. Making sense of the "clean label" trends: A review of consumer food choice behavior and discussion of industry implications. Food Research International 99:58-71.

Assodistil. 2017. Il settore in cifre. Available online at www.assodistil.it/il-mondo-della-distillazione/il-settore-in-cifre.html. Available at 9/10/2018.

Auger P., Devinney T.M. and Louviere J.J. 2007. Using best–worst scaling methodology to investigate consumer ethical beliefs across countries. Journal of Business Ethics 70(3):299-326.

Behrendt A. and Behrendt B. 2000. Grappa. A guide to the best, NY: Abbeville Press.

Bellone C. 2011. La grappa nel canale della grande distribuzione in Italia.

Borra D. and Tarantola M. (Eds.). 2015. Il consumatore europeo e il benessere animale. Indagine di Slow Food sui consumi e le abitudini di acquisto della carne in funzione della percezione dell'animal welfare. FrancoAngeli.

Borsa D., Monticelli L., Bonello F., Pazo Alvarez M.C., Dell'oro V. and Cravero M.C. 2008. Caractérisation chimique et sensorielle des distillats de marc Italiens «Grappa» produits en Piémont. Les eaux-de-vie traditonnelles d'origine viticole. Ed. Lavoisier, Cap. 27:209-216. ISBN 978-2-7430-1040-9.

Bruwer J., Chrysochou P. and Lesschaeve I. 2017. Consumer involvement and knowledge influence on wine choice cue utilisation. British Food Journal 119(4):830-844.

Carsana L. and Jolibert A. 2017. The effects of expertise and brand schematicity on the perceived importance of choice criteria: a Bordeaux wine investigation. Journal of Product and Brand Management 26(1):80-90.

Casini L., Corsi A.M. and Goodman S. 2009. Consumer preferences of wine in Italy applying best-worst scaling. International Journal of Wine Business Research, 21(1), 64-78.

Chandra S., Chapman J., Power A., Roberts J. and Cozzolino D. 2017. Origin and regionality of wines. The role of molecular spectroscopy. Food Analytical Methods 10(12):3947-3955.

Clarke N. and Koptev S. 1992. The Russian Consumer: A Demographic Profile of a New Consumer Market. The Journal of European Business 4(1):23.

Cohen S. 2003. Maximum difference scaling: Improved measures of importance and preference for segmentation. Sawtooth software conference proceedings, Sawtooth Software, Inc., 530 W. Fir St., Sequim, WA (www.sawtoothsoftware.com), 61-74.

Da Porto C., 2012. Grappa: production, sensory properties and market development. In Alcoholic Beverages 299-314.

Dal Vecchio A., Massaglia S., Merlino V.M., Borra D., Hao and M., 2018. Italian wines in China's e-commerce market: focus on Piedmont region products. Italian Journal of Food Science, 30(2).

Decreto n. 5389 del 01/08/2011 - Attuazione dell'articolo 17 del regolamento (CE) n. 110/2008 del Parlamento Europeo e del Consiglio, del 15 gennaio 2008, concernente la definizione, la designazione, la presentazione, l'etichettatura e la protezione delle indicazioni geografiche delle bevande spiritose - Scheda tecnica della "Grappa"

Dekhili S., Sirieix L. and Cohen E. 2011. How consumers choose olive oil: The importance of origin cues. Food quality and preference 22(8):757-762.

Demoskopea 2003. Barometro Grappa: Consumi e distribuzione in Italia. Ricerca presentata al Simposio di Mondo Grappa, Conegliano Veneto (TV), Ottobre 18-19.

Diamantidou D., Zotou A. and Theodoridis G. 2018. Wine and grape marc spirits metabolomics. Metabolomics 14(12):159.

Dubinina E.V. and Alieva G.A. 2015. Correlation study between organoleptic evaluation and the content of volatile components of fruit vodkas. Wine-making and Viticulture.

Federvini 2017. Relazioni annuali 2017. Available online at www.federvini.it/download/relazioni-annuali1/category/30-relazioni-annuali available at 9/10/2018.

Federvini 2018. Relazioni annuali 2017. Available online at www.federvini.it/download/relazioni-annuali1 available online at 20/11/2018

Finn A., and Louviere J.J. 1992. Determing the appropriate response to evidence of public concern: the case of food safety. Journal of Public Policy and Marketing 11:12-25.

Finzi E. 2007. Gli italiani e le grappe: 25 anni di rapida evoluzione. Intervento al Grappa Day, Greve in Chianti, Firenze, Italia 15 Settembre 2007.

Galletto L. and Rossetto L. 2005. The market of grappa in LSR: an analysis of scanner data. Food, agriculture and the environment. Economic Issues. Editore Franco Angeli, 2005:147-164.

Galletto L. and Rossetto L. 2005. The market of Grappa in LSR: an analysis of scanner data. Food Agriculture and the Environment. Economic Issues 1:147-164.

Gauthier M.F. and Mazières B. 2013. Whisky consumption behaviour: the case of France. In HASSACC-Human And Social Sciences at the Common Conference (No. 1).

Girgenti V., Massaglia S., Mosso A., Peano C. and Brun F. 2016. Exploring perceptions of raspberries and blueberries by Italian consumers. Sustainability 8(10):1027.

Goodman S., Lockshin L. and Cohen E., 2005. Best-Worst Scaling: a simple method to determine drinks and wine style preferences. Paper presented at the 2nd International Wine Marketing Symposium, Sonoma State University. Sonoma, California.

Guy C., Piggott J.R. and Marie S. 1989. Consumer profiling of Scotch whisky. Food Quality and Preference 1(2):69-73.

ISTAT, 2016. Il consumo di alcol in Italia. Available at www.istat.it/it/files//2017/04/Consumo_alcol_in_Italia_2016.pdf

Koch K. 2008. Il mercato della Grappa in Italia e Germania. paduaresearch.cab.unipd.it/

Harrington R.J. 2007. Food and wine pairing: A sensory experience. John Wiley & Sons.

Lock L., Jarvis W., D'Hauteville F. and Perrouty J.P. 2006. Using simulations from discrete choice experiments to measure consumer sensitivity to brand, region, price, and awards in wine choice. Food Quality and Preference 17:166-178.

Lockshin L., Cohen E., Louviere J., Flynn T., and Marley A.A. 2015. How Consumers Choose Wine-Using Best Worst Scaling Across Countries. Best-Worst Scaling: Theory, Methods and Applications 159-176.

Louw L., Lambrechts M. G., 2012. Grape-based brandies: Production, sensory properties and sensory evaluation. In: Alcoholic Beverages 281-298.

Marley A.A.J. and Louviere J.J. 2005. Some probabilistic models of best, worst, and best–worst choices. Journal of Mathematical Psychology. Special Issue Honoring Jean-Claude Falmagne: Part 1. 49 (6):464-480. DOI: doi.org/10.1016/j.jmp.2005503.

Merlino V.M., Borra D., Girgenti V., Dal Vecchio A. and Massaglia S. 2018. Beef meat preferences of consumers from Northwest Italy: Analysis of choice attributes. Meat science 143:119-128.

Merlino V. M., Borra D., Verduna T. and Massaglia S. 2017. Household Behavior with Respect to Meat Consumption: Differences between Households with and without Children. Veterinary sciences 4(4):53.

Mu W., Zhu H., Tian, D., and Feng J., 2017. Profiling wine consumers by price segment: a case study in Beijing, China. Italian Journal of Food Science 29(3).

Mueller S., Osidacz P., Francis L. and Lockshin L. 2010. The relative importance of extrinsic and intrinsic wine attributes: Combining discrete choice and informed sensory consumer testing.

Onofri L. and Koch K. 2006. The Italian Grappa Market: An Analysis of Consumer Preferences Through Hedonic Price Analysis. Working Paper No 06/6654. Center for International Food and Agricultural Policy, University of Minnesota.

Onofri L. and Boatto V. 2015. Cournot Oligopoly, Homogeneous Products and Grappa Market: An Econometric Study (No. 01/2015). EERI Research Paper Series.

Orme B. 2005. Accuracy of HB estimation in MaxDiff experiments. Sawtooth Software, research paper series, 1-7.

Pigozzo M. 2018. Undici grandi distillerie di Grappa a confronto per condividere il futuro del distillato italiano. Available at storiedieccellenza.it/undici-grandi-distillerie-Grappa-confronto-condividere-futuro-del-distillato-italiano/ [Accessed 21/11/2018].

Prentice C. and Handsjuk N. 2016. Insights into Vodka consumer attitude and purchasing behaviors, Journal of Retailing and Consumer Services 32:7-14.

Regulation (EC) N. 110/2008 of the European Parliament and of the Council of 15 January 2008 on the definition, description, presentation, labelling and the protection of geographical indications of spirit drinks and repealing Council Regulation (EEC) N. 1576/89.

Rezaei J., Nispeling T., Sarkis J. and Tavasszy L. 2016. A supplier selection life cycle approach integrating traditional and environmental criteria using the best worst method. Journal of Cleaner Production 135:577-588.

Scafato E., Ghirini S. and Russo R. 2004. L'influenza dei comportamenti familiari sul consumo di alcol. Istituto Superiore di Sanità. Roma Centro Collaboratore WHO per la Ricerca e la Promozione della Salute su Alcol e Problematiche Alcolcorrelate.

Schäufele I. and Hamm U. 2017. Consumers' perceptions, preferences and willingness-to-pay for wine with sustainability characteristics: A review. Journal of Cleaner production 147:379-394.

Seccia A., Carlucci D., Maggi G. and Stasi A. 2012. An application of the best-worst method to analyse Italian consumers? Attitudes towards products from wine dealcoholisation. Congress Abstracts Book, XXXV World Congress of Vine and Wine. Izmir, Turkey. University of Foggia. University of Bari.

Soufleros E.H., Mygdalia A.S. and Natskoulis P. 2004. Characterization and safety evaluation of the traditional Greek fruit distillate "Mouro" by flavor compounds and mineral analysis. Food Chemistry 86(4):625-636.

Ubigli M. and Castino M. 1992. L'èvaluation sensorielle pour la discrimination des eaux-de-vie de marc issues de régions différentes. l er Sym.Sc.Int.de Cognac, Ed.Lavoisier- Tec&Doc, Paris.

Ubigli M., Cravero M.C. and Ponte C. 2001. Comunicare la grappa mediante schede e descrittori, L'Assaggio 83:30-36.

Vaccarini G. and Pillon C. 2017. Il grande libro della Grappa. Hoepli Editore.

Violoni Antoninetti M. 2011. The Long Journey of Italian Grappa: from Quintessential Element to Local Moonshine to National Sunshine. Journal of Cultural Geography 28:375-397

Violoni M. 2008. Grappa: cosa cerca il consumatore nel packaging, L'Assaggio 22:31-34.

Violoni M. 2009. L'etichette della grappa: cosa capisce il consumatore, L'Assaggio 25:35-37.

Wilson J. 2009. There's pleasure in the grip of grappa. The Washington Post [online]. 27 May. Available at www.washingtonpost.com/wp-dyn/content/article/2009/05/25/AR2009052502153.html??noredirect=on. [Accessed 21/11/2018].

Paper Received October 10, 2018 Accepted March 18, 2019