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The alcohol consumption of wine drinkers with the onset of Covid-19

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ABSTRACT

The onset of Covid-19 has been the most evident global crisis of the current decade so far. This study explores the difference between professionals in the drinks industry and non-professional wine lovers and the impact on their consumption behaviour of wine and other alcoholic beverages in the early stages of the pandemic, particularly in the context of anxiety. A survey by questionnaire was administered worldwide from the end of March to the end of June 2020 to test four research hypotheses. Results are relevant for the alcoholic beverage industry and public policy. They highlight a higher incidence of unchanged alcohol consumption among non-professionals. They also reveal similarities and differences in changes in consumption behaviour and trends among the two cohorts. Anxiety has an impact on the wine consumption of professionals, and on beer consumption of non-professionals, where the gender and age of respondents are also relevant. The findings of a short qualitative data-collection process enrich our understanding of the results.

1. Introduction

The onset of Covid-19 in early 2020 has been the most evident global crisis of the current decade so far; crucially, unlike trade disputes, environmental disagreements or changing governments, it is a crisis that has immediately and directly affected the lives of the entire population of the world. It has created a context of uncertainty which has stimulated more or less anxiety for many, and changed the lifestyle of nearly all.

One impact of such crises is to motivate some people to search for comfort and security as the world around them loses those benefits, or to cause them to re-evaluate their lives to live 'better' (however determined), or, possibly, to carry on regardless, doggedly maintaining their lifestyle in the face of all the pressures to change. Alcohol in its various consumable forms may feature in any of these responses, so that this study is an exploration of how people responded globally in the early stages of the pandemic, particularly in the context of anxiety. Specifically, the focus is on the difference between professionals in the drinks industry and non-professional wine lovers and how they differently examined and (perhaps) modified their consumption behaviour faced with the crisis. There is a particular concentration on wine and wine professionals, but all forms of alcoholic beverage are covered to a certain extent.

The rest of the paper is structured as follows. After analysing the literature on the effect of crises on alcohol consumption and on the

peculiarities of professional consumers, Section 2 develops four research hypotheses. Section 3 explains the methodology adopted to test the hypotheses and Section 4 shows results. After discussing the results in Section 5 with the addition of some qualitative data, Section 6 closes with conclusions.

2. Background literature and hypothesis development

2.1. Alcohol consumption and crises

Alcoholic beverage consumption during crises is the focus of many studies, producing contradictory results. When looking at economic crises, two opposite effects are revealed: from the one side, people consume higher quantities of alcoholic beverages to cope with psychological distress due to job loss or income reduction; from the other side, as alcoholic beverages are not a primary good, people may decrease consumption as a consequence of tighter budget constraints (De Goeij et al., 2015). People tend also to consume cheaper and lower quality alcoholic beverages and to increase (less expensive) off-trade consumption (Bosque-Prous et al., 2017; Munné, 2005).

The effect of the COVID-19 health crisis on alcohol consumption is currently unclear when analysing the early research on the epidemic (Callinan et al., 2021) – partly because most studies are country-specific. Rodrigues et al. (2022) provide the first evidence of the role of country

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of residence on trends in alcohol consumption during the pandemic, highlighting a decrease in consumption among Spanish consumers and a stable consumption among British consumers, mainly connected to the cultural implications of alcoholic beverages in the countries.

Some studies highlight the negative effect of increased depression, anxiety and stress symptoms on alcohol consumption during the crisis (Stanton et al., 2020; Glowacz and Schmits, 2020). Other studies highlight the rise in the consumption of alcoholic beverages to cope with stress, anxiety and boredom (Avery et al., 2020; Rolland et al., 2020; Rebelo et al., 2021; Grossman et al., 2020). In particular, it was noted by Oksanen et al. (2021), that people experiencing psychological distress before the pandemic have increased their drinking during the crisis, although this study was limited geographically to Finland.

Research results are also controversial when highlighting harmful drinking behaviours during the pandemic. Some studies note a decrease in harmful drinking due to social distancing measures (Callinan et al., 2021). Other studies suggest that social restrictions are associated with an increase in stress and anxiety and the use of alcohol as a coping mechanism, which can translate into harmful consumption behaviours, like binge drinking, when people are more vulnerable (Avery et al., 2020; Callinan et al., 2021; Grossman et al., 2020; Verma and Mishra, 2020; Clay and Parker 2020; Rebelo et al., 2021).

Changes in alcohol consumption during the COVID-19 pandemic have also been associated with individual characteristics. People who are working from home, with children and higher educated, are shown to be more prone to consume alcoholic beverages more frequently and in higher quantities (Schmits and Glowacz, 2021). Conflicting results emerge when considering alcohol consumption and age. Some studies highlight that young individuals, and young women in particular, are decreasing their alcohol consumption with the pandemic because of the poorer social life (Glowacz and Schmits, 2020; Callinan et al., 2021). Other research highlights an increased consumption among younger individuals instead (Oksanen et al., 2021). It may be that geography has an impact on these contradictory conclusions.

Changes in alcohol consumption during the first months of the health crisis of COVID-19, individual characteristics, and anxiety will be also the focus of this study, together with consumption habits before the pandemic. These elements will be analysed for the first time with a focus on wine and in the light of individual profession, whether working or not in the wine industry.

2.2. Professional and non-professional consumers

The target sample for this project is both non-professional and professional consumers. We include in the category 'wine professionals' people working in the wine industry as producers, distributors, retailers, influencers or educators; they may or may not have received a professional education. We consider as 'non-professionals' wine drinkers who are members of the public and do not work with wine. Most consumers studies do not make this distinction, and focus only on purchasers, or people who use what is purchased for them. However, with some products there may be consumers who are professionals also, working in the production or distribution of the product. This often occurs in creative and leisure jobs, such as food, the arts or fashion. The nature of these professional consumers has not been investigated often in consumer research; it can be assumed that they are generally highly-involved and very knowledgeable, although that may not always be the case. Professional consumers can essentially be viewed as a category of consumers showing very high involvement behaviour (Muniz and O'Guinn, 2001). Thus, wine becomes fundamental not merely economically (to earn their living), but to their identity also (Rössel & Pape, 2016). Consequently, they exhibit consumption behaviour which is ultra-high involvement (Charters & Pettigrew, 2006). High involvement levels with wine have been correlated to higher product consumption, greater knowledge and significant passion leading to more overt variety seeking activities (Dodd et al., 1996). Higher-involvement

wine consumers are more prone to be cognitive in their engagement with wine when drinking (Charters & Pettigrew, 2006). Interestingly, there is also a relationship between high involvement and innovativeness as well as the probability of such a consumer shaping the opinions and behaviour of their peer groups (Goldsmith & d'Hauteville, 1998). Additionally, higher involvement has been found, to a certain extent, to transcend national variations in the consumption of wine (Lockshin, Quester & Spawton, 2001). All these characteristics tend to be displayed by professionals in the field of cultural or aesthetic production. It is also important to note that at higher levels of involvement general wine consumers tend to share many common attitudes and behavioural traits with wine professionals: at the very highest level there may be a cross-over in approach between the two groups (Charters & Pettigrew, 2006, 2007; Fattorini, 1994).

The exploration of consumption behaviour during times of crisis can be useful for scholars and practitioners in the wine industry. This is the case for consumers generally, who form part of the focus for this study, but it is also relevant with professional consumers. The object of their passion can take on a special significance. Beyond that, it may operate as a bellwether, connoting other, crucial, responses in a difficult time. Additionally, professionals' roles as opinion formers and the shapers of a product's image to non-professional consumers suggest that changes in their behaviour may be influential and consequently worth researching.

In the light of this context, the first hypothesis we are going to test in our study is:

Hp1: *Different trends in wine and alcoholic beverage consumption emerge between wine professionals and non-professionals during the COVID-19 pandemic.*

2.3. Individuals and crises

Socio-demographic characteristics of individuals have been shown to be strong drivers of change in behaviour during crises, with gender having the most impact. During crisis periods, women appear to be more emotionally fragile than men, with higher levels of confusion, depression, fear, sorrow and sadness (Lachlan et al., 2010), but they also use a greater variety of coping strategies, which are more active and problem-focused than those used by men (Ben-Zur and Zeidner, 1996).

The literature shows that the confinement due to the COVID-19 crisis has increased gender diversities, reinforcing traditional gender roles (Hennekam and Shymko, 2020). Indeed, the so-called 'disaster for feminism' (Lewis, 2020) has led men to strengthen their role as householders, involved in performances of determination, strength and control, with women playing the role of the 'modern angel of the hearth', juggling housework, teleworking and home teaching (Hennekam and Shymko, 2020; Alon et al., 2020). These diversities are also mirrored in their social media communication: while men are mainly focused on sports cancellations due to the virus, its spread and political reactions, women talk about the family, social distancing and healthcare (Thelwall and Thelwall, 2020). Although the percentage of mortality from COVID-19 is lower in women than in men (Sharma et al., 2020), the former encounter anxiety and stress more than the latter (Hennekam and Shymko, 2020; Wang et al., 2020). Their concerns are about their loved ones and severe health dangers, whereas men are worried about the economic effect of the crisis (van der Vegt et al., 2020).

Age is another important driver of changes in behaviour during a crisis. This is revealed in the marketing literature, which highlights that when the crisis involves a product and its harmful consequences, older consumers tend to consider the product as less threatening and to place less blame on the producing company, maintaining a stronger intention to purchase and recommend the product than young consumers (Silvera et al., 2012). Considering the COVID-19 crisis, although the percentage of mortality from the virus is higher in the older segments of the population, apparently the psychological well-being of old people has not been impacted any more than that of young people (Lopez et al., 2020), who display higher levels of anxiety and depression (Lei et al., 2020).

Older people also have suffered less from loneliness, especially during the first phase of the confinement, compared to younger age groups (Luchetti et al., 2020). Age further influences spending during the pandemic, with younger people tending to cut back on spending by less than older people (Baker et al., 2020).

The literature highlights that individual characteristics influence behaviour during and after a crisis. We believe that socio-demographic characteristics also have a role in shaping the behaviour of people, and produce different effects between professionals and non-professionals.

Hp2: *Different socio-demographic characteristics predict changes in wine and alcoholic beverage consumption of wine professionals and non-professionals during the COVID-19 pandemic.*

2.4. Habits and crises

Crises represent the boundary of inevitable changes and they mark a line between how people used to behave previously and how they are going to behave afterwards. Consequently, economic crises dramatically change the consumption behaviours of people and households, with a higher focus on what is essential for survival (Duquenne and Vlontzos, 2014; Ștefura, 2010). According to Flatters and Willmott (2009), the economic crisis of 2008 led to an increased demand for simplicity, a move to saving (even by affluent consumers), flexibility in switching between brands and increased consumption of green and ethical products. The literature considers risk perception and attitudes as important drivers in modelling consumer behaviour during that crisis. A segment of consumers was identified, experiencing high levels of risk, tending to react by drastically cutting expenses and eliminating major purchases (Amalia and Ionut, 2009). Sharma and Sonwalkar (2013) highlight the emergence of 'new consumers' from the 2008 economic crisis; these distinguish themselves from traditional consumers by seeking authentic consumption experiences.

The COVID-19 crisis provoked deep changes in consumption behaviour, pushing the consumption of national and local products while stimulating more online purchasing, developing a 'stock-up mentality', inspiring home cooking at the expense of restaurants and increasing the pursuit of goods and services able to meet hedonistic needs, as 'we can die tomorrow' (Zwanka and Buff, 2020; Butu et al., 2020). The health crisis also increased attention towards the environment and the needs of the wider community (Zwanka and Buff, 2020).

Crises reveal changes in how people behave both during and after. We believe that habits and previous behaviours also have an impact on consumption during a crisis, and this impact differs among professionals and non-professionals.

Hp3: *Consumption behaviour and habits before the pandemic play a different role in influencing the wine and alcoholic beverage consumption of professionals and non-professionals.*

2.5. Anxiety and crises

The American Psychological Association (APA) defines anxiety as "an emotion characterized by feelings of tension, worried thoughts and physical changes like increased blood pressure" (APA, 2020). Shortness of breath, heart palpitations, fear of talking to people and panic shopping are some of the effects that anxiety derived from the COVID-19 pandemic has on people (Castaneda, 2020). What the effects of anxiety are on wine consumption during the pandemic is an aspect that still needs to be addressed. Anxiety can play an important role in shaping consumers' decision-making processes and affect consumption itself. The literature focuses on different sources of anxiety for consumers, which can be of a social, economic, and health nature.

Social anxiety provokes feelings of discomfort in social situations and inhibits interactions with others (Schlenker and Leary, 1982). At the point of sale, this feeling impacts on both seller and buyer: it accentuates the fear of sales staff being negatively evaluated by the customer, and provokes psychological, economic and time costs for consumers. These are shown, for example, by an underestimation of their social skills, by the fact that they buy items they do not want because they are afraid to say no to an insistent seller, or by procrastination over the purchase of products (Verbeke and Bagozzi, 2000; Delacroix and Guillard, 2016). The pandemic caused by COVID-19 has heightened social anxiety, overlaying it with health connotations (Olivera-La Rosa et al., 2020).

Economic anxiety is defined as:

an emotional response by individuals in cases of reduced life standards, difficulties in earning a livelihood, and being pessimistic about the future due to some macro-economic reasons, such as economic stagnation, threat, and crisis; and micro-economic reasons, such as personal (costs of living, concerns about the future), and occupational reasons (earning rates, job security) (Yetgin and Benligiray, 2019, p. 335-336).

Even before the pandemic, this form of anxiety was shown to have a negative effect on demand (Bechtel, 2012; Bechtel, 2014), with, however, some positive effects on the demand for green products (Kostadinova, 2016). The COVID-19 pandemic has substantially increased economic anxiety (Fetzer et al., 2020). This study wants to test if anxiety due to the pandemic has an impact on wine consumption of high-involvement wine consumers, and if this impact differs among professionals and non-professionals. This leads to the fourth hypothesis, on anxiety, in two parts:

Hp 4.1. *Anxiety about the COVID-19 pandemic has a substantial impact on wine and alcoholic consumption behaviour.*

Hp 4.2. *Anxiety about the COVID-19 pandemic has a different impact on the wine and alcohol consumption behaviour of wine professionals and non-professionals.*

3. Methodology

A survey by questionnaire was administered to test the research hypotheses and analyse the consumption dynamics of wine professionals and non-professionals around the English-speaking world. The time frame focused on the first three months of measures taken to respond to COVID-19 – broadly the period from the end of March to the end of June 2020, when uncertainty about the impact and progression of the pandemic was perhaps at its highest; a situation giving rise to potentially high anxiety.

Participants were recruited via social media and email convenience and snowball sampling, asking participants to share the Limesurvey link to the questionnaire in turn to their acquaintances. Despite the limitations linked to lack of representativeness, online surveys are commonly used in social science research (North et al., 2021; Giampietri et al., 2018). Given the need for speed in a rapidly changing environment this was the most expeditious and efficacious way to proceed.

The survey questionnaire included both quantitative and qualitative questions. Quantitative information was collected on: i) socio-demographic characteristics (gender, age, residence); ii) wine habits before the crisis, including: consumption frequency (scale from 1 = never to 10 = every day, with people answering 1 excluded from the sample); willingness to pay for a bottle of wine for everyday use; wine knowledge and involvement (Likert scale from 1 = not at all to 7 = very much), and; owning a wine cellar for ageing wines; iii) wine consumption habits during the COVID-19 first lockdown, including: variation of the number of consumption occasions; of consumption volume on each

occasion; in purchasing; in willingness to pay (nominal scale, detecting decreasing, stable or increasing), and; willingness to consume high quality bottles from the cellar (dichotomous question); iv) consumption habits for other alcoholic beverages during the COVID-19 first lockdown: variation in consumption of beer and spirits (nominal scale detecting decreasing, status quo or increasing); v) information on the number of days confined when answering the questionnaire; vi) level of anxiety about the crisis (Likert scale from 1 = not at all, to 7 = very much).

In addition to the quantitative components of the survey instrument, we included a short qualitative element, with a question at the end inviting respondents to write anything which they wished to add. This has been used in the current study to enlarge a little on the quantitative data and is included in the discussion of the results below. The data thus gleaned are interesting because, while limited, they were voluntary and top-of-mind, thus representing respondents' key concerns at a crucial moment.

Given the urgent nature of the epidemic and the rapidity with which the situation was evolving, the questionnaire was designed to be completed in five minutes. The choice to submit a short questionnaire was driven by: i) the desire to maximise the sample size; ii) the fact that people were not rewarded for answering it; iii) the need for rapidity imposed by the fluid nature of events. This drove us to forego the possibility of including scales to measure constructs like anxiety and its different sources, wine involvement, or knowledge as these would almost certainly have deterred many from replying. The final open-ended question allowed respondents to deepen their answers if they wanted to, and this allowed us to better characterise them, based, for example, on the different sources of anxiety.

Bivariate analysis techniques are applied to test **Hp1** (*Different trends in wine and alcoholic beverage consumption emerge between wine professionals and non-professionals during the COVID-19 pandemic*). After applying one-way ANOVA analysis and Chi-square test to check for different trends in the consumption of wine and other alcoholic beverages among wine professionals and non-professionals, Spearman's correlation tests are performed to analyse the relationships among changes in consumption of the different alcoholic beverages and change in wine consumption habits among the two cohorts.

Multivariate analysis techniques are applied to test **Hp2** (*Different socio-demographic characteristics predict changes in wine and alcoholic beverage consumption of wine professionals and non-professionals during the COVID-19 pandemic*), **Hp3** (*Consumption behaviour and habits before the pandemic play a different role in influencing the wine and alcoholic beverage consumption of professionals and non-professionals*) and **Hp 4** (*Anxiety about the COVID-19 pandemic has a substantial impact on wine and alcoholic consumption behaviour, and Anxiety about the COVID-19 pandemic has a different impact on the wine and alcohol consumption behaviour of wine professionals and non-professionals*). Three Multinomial Logistic Regressions were performed to predict changes in wine, beer and spirits consumption during the onset of COVID-19 pandemic in turn as dependent variables and socio-demographic characteristics, consumption habits and anxiety perception as independent variables. Chi-square test and one-way ANOVA were also applied to test **Hp4** and highlight socio-demographic differences in anxiety perception among the two cohorts.

Table 1 details the socio-demographic characteristics of the sample, together with wine knowledge and involvement and anxiety level during the pandemic, splitting them into professionals and non-professionals. Considering gender, the segment of wine professionals is male dominated, as the wine industry has been until now (Alonso et al., 2020). Around 30 percent of respondents in both segments come from the UK and the average age is around 50 years old.

When considering wine knowledge and involvement, as one would expect, the professional segment is overwhelmingly ultra-high involvement and – at over 90% – has a high level of wine knowledge. This is less the case for the non-professionals; nevertheless, this survey was targeted

Table 1
Socio-demographic characteristics of the sample (n = 575).

| | Full sample (n = 575) | | Wine professionals (n = 264) | | Non-professionals (n = 311) | |
|---------------------------------|-----------------------|------|------------------------------|------|-----------------------------|------|
| | n | % | n | % | n | % |
| Gender | | | | | | |
| Male | 275 | 48.6 | 157 | 60.2 | 118 | 38.7 |
| Female | 291 | 51.4 | 104 | 39.9 | 187 | 61.3 |
| Age classes | | | | | | |
| <30 years old | 41 | 7.1 | 5 | 1.6 | 36 | 11.6 |
| 30–39 | 79 | 13.7 | 33 | 10.6 | 46 | 14.8 |
| 40–49 | 138 | 24.0 | 80 | 25.7 | 58 | 18.6 |
| 50–59 | 158 | 27.5 | 74 | 23.8 | 84 | 27.0 |
| 60 years plus | 139 | 24.2 | 64 | 20.6 | 75 | 24.1 |
| Residence | | | | | | |
| British | 203 | 35.3 | 82 | 31.6 | 92 | 29.6 |
| European | 113 | 19.7 | 43 | 16.3 | 93 | 29.9 |
| North American | 77 | 13.4 | 41 | 15.5 | 36 | 11.6 |
| Australian | 88 | 15.3 | 34 | 12.9 | 52 | 16.2 |
| Other ^a | 106 | 18.4 | 64 | 24.2 | 39 | 12.5 |
| Wine knowledgeable ^b | | | | | | |
| 1 (not at all) | 14 | 2.4 | 0 | 0.0 | 14 | 4.5 |
| 2 | 22 | 3.8 | 0 | 0.0 | 22 | 7.1 |
| 3 | 42 | 7.3 | 1 | 0.4 | 41 | 13.2 |
| 4 | 70 | 12.2 | 8 | 3.0 | 62 | 19.9 |
| 5 | 89 | 15.5 | 16 | 6.1 | 73 | 23.5 |
| 6 | 96 | 16.7 | 41 | 15.5 | 55 | 17.7 |
| 7 (very much) | 242 | 42.1 | 198 | 75.0 | 44 | 14.1 |
| Wine involved ^c | | | | | | |
| 1 (not at all) | 4 | 0.7 | 0 | 0.0 | 4 | 1.3 |
| 2 | 9 | 1.6 | 0 | 0.0 | 9 | 2.9 |
| 3 | 14 | 2.4 | 0 | 0.0 | 14 | 4.5 |
| 4 | 45 | 7.8 | 1 | 0.4 | 44 | 14.1 |
| 5 | 54 | 9.4 | 5 | 1.9 | 49 | 15.8 |
| 6 | 73 | 12.7 | 8 | 3.0 | 65 | 20.9 |
| 7 (very much) | 367 | 65.4 | 250 | 94.7 | 126 | 40.5 |
| Anxiety ^d | | | | | | |
| 1 (not at all) | 19 | 3.3 | 11 | 4.2 | 8 | 2.6 |
| 2 | 59 | 10.3 | 21 | 8.0 | 38 | 12.2 |
| 3 | 94 | 16.3 | 41 | 15.5 | 53 | 17.0 |
| 4 | 130 | 22.6 | 58 | 22.0 | 72 | 23.2 |
| 5 | 147 | 25.6 | 68 | 25.8 | 79 | 25.4 |
| 6 | 77 | 13.4 | 37 | 14.0 | 40 | 12.9 |
| 7 (very much) | 49 | 8.5 | 28 | 10.6 | 21 | 6.8 |

^a The 'other' category is composed of respondents from South Africa (68.9%), Asia (30.1%) and South America (1.0%)

^b Significant difference among wine knowledge of professionals (mean = 6.9; SD = 0.4) and non-professionals (mean = 5.6; SD = 1.5) (F = 336.663, p-value ≤ 0.001)

^c Significant difference among wine involvement of professionals (mean = 6.6; SD = 0.8) and non-professionals (mean = 4.6; SD = 1.6) (F = 184.034, p-value ≤ 0.001)

^d Non-significant difference among anxiety of professionals (mean = 4.4; SD = 1.6) and non-professionals (mean = 4.2; SD = 1.5) (F = 184.034, p-value = 0.128)

at consumers who habitually consume wine and the sample still shows noticeably higher levels of involvement than the general population (60% have high involvement and over one-third have medium involvement levels) and - though less extreme - higher knowledge levels than the general public. This study has, therefore, a focus on wine professionals and wine lovers which is important when interpreting the results.

When analysing the anxiety level of respondents, the average for the total sample is just above the mid-point of four, showing a very slight level of concern overall. There is no significant difference in anxiety level between professionals and non-professionals.

4. Results

Tables 2–4 show results of testing for **Hp1** (*Different trends in wine and alcoholic beverage consumption emerge between wine professionals and non-*

Table 2
Wine consumption before and during the confinement, professionals and non-professionals.

| | Wine professionals | Non-professionals | Chi2 | F | Sig. |
|---------------------------------------------------------------------|--------------------|-------------------|--------|--------|--------|
| <i>Wine consumption before COVID-19</i> | | | | | |
| Consumption frequency | 8.7 | 7.9 | | 47.675 | <0.001 |
| Willingness to Pay (WTP) (euros) | | | | | |
| Have a wine cellar when ageing wines | 16.23 | 12.35 | | 34.923 | <0.001 |
| <i>Consumption during confinement</i> | | | | | |
| Alcohol consumption (%) | | | | | |
| Decreased | 12.1 | 15.4 | 1.308 | | 0.253 |
| Not changed | 37.9 | 44.7 | 2.731 | | 0.098 |
| Increased | 50.0 | 39.9 | 5.931 | | 0.015 |
| Spirits consumption (%) | | | | | |
| Decreased | 7.2 | 15.4 | 9.411 | | 0.002 |
| Not changed | 75.4 | 64.3 | 8.239 | | 0.004 |
| Increased | 17.4 | 20.3 | 0.746 | | 0.388 |
| Beer consumption (%) | | | | | |
| Decreased | 14.8 | 16.4 | 0.286 | | 0.593 |
| Not changed | 77.3 | 71.1 | 2.857 | | 0.091 |
| Increased | 8.0 | 12.5 | 3.213 | | 0.073 |
| Wine consumption (%) | | | | | |
| Decreased | 14.4 | 15.1 | 0.059 | | 0.809 |
| Not changed | 44.3 | 45.3 | 0.060 | | 0.807 |
| Increased | 41.3 | 39.2 | 0.252 | | 0.616 |
| Wine consumed in each occasion (%) | | | | | |
| Decreased | 14.8 | 16.7 | 1.562 | | 0.458 |
| Not changed | 61.4 | 62.1 | 0.029 | | 0.864 |
| Increased | 23.5 | 21.2 | 0.423 | | 0.516 |
| Wine purchase (%) | | | | | |
| Decreased | 23.6 | 18.3 | 2.349 | | 0.125 |
| Not changed | 41.3 | 43.4 | 0.254 | | 0.614 |
| Increased | 19.7 | 26.4 | 3.520 | | 0.061 |
| WTP for wine (%) [*] | | | | | |
| Decreased | 10.8 | 7.4 | 2.023 | | 0.155 |
| Not changed | 43.2 | 18.0 | 43.298 | | <0.001 |
| Increased | 12.7 | 9.3 | 1.702 | | 0.192 |
| Willing to consume high quality bottles of wine from the cellar (%) | 50.4 | 23.5 | 42.948 | | <0.001 |

*In some jurisdictions, respondents were unable to purchase wine at the time of completing the survey, hence the figures total <100%.

professionals during the COVID-19 pandemic).

Table 2 expands our understanding of how wine consumption behaviour evolved with the onset of the pandemic. In general terms, wine professionals are more frequent consumers of wine by habit than non-professionals, and they also emerge as willing to pay more for a bottle of wine (16.23 euros versus 12.35 euros a bottle on average). When the pandemic began, the same group showed a higher percentage of increased alcohol consumption; more of them, however, made no changes to the level of their consumption (either up or down) of beer and spirits than non-professionals. Their willingness to pay for wine was more stable than the non-professionals - but at the same time they were more likely to use a cellar¹ as a supply for their ongoing wine consumption than non-professionals.

Non-professionals showed a higher percentage of unchanged alcohol

¹ The use of a wine cellar is an interesting aspect of wine consumption behaviour. Its role is to allow one to keep high-quality wines for future events, and to allow wine to mature, and thus to improve with age. Taking wine out of the cellar implies therefore a desire to drink better wine.

consumption overall; they were also more likely to decrease consumption of spirits but more likely to increase consumption of beer. Their purchases of wine increased (perhaps because, unlike professionals, they were less likely to have a wine cellar).

The change in consumption of alcoholic drinks as the COVID-19 crisis began is outlined in Table 3. This underlines some distinctions between the two cohorts being studied. As the table shows, wine professionals showed a correlation in evolving consumption behaviours across beer, wines and spirits (so if they changed their consumption of one of those drinks, they tended to change for all of them in the same direction). For non-professionals they change only with regards to spirits consumption. Thus, if spirits consumption increased then wine (or beer) consumption increased and if spirits consumption decreased then consumption of the other drinks decreased. There was no equivalent correlation between changes in beer and wine consumption.

Table 4 examines how wine consumption specifically was modified for each cohort under COVID-19. In some cases, professionals and non-professionals altered their behaviour in the same manner. In particular, changes in wine consumption were positively correlated with changes in wine consumption on each drinking occasion during the lockdown for both cohorts. Changes in overall wine consumption volume positively correlated with wine buying during the lockdown; thus, higher consumption linked to more purchasing, a relationship which was stronger for the non-professionals than the professionals. Furthermore, changes in consumption on each occasion positively correlated with wine buying behaviour, with a stronger relation emerging for wine professionals.

On the other hand, in one instance professionals showed changes not replicated by the non-professional consumers. Notably, their wine buying behaviour positively correlated with willingness to pay during the lockdown (although the correlation is not very strong); this means that if they bought more, then they were also willing to pay more.

Tables 5–7 show results of the testing of **Hp2** (*Different socio-demographic characteristics predict changes in wine and alcoholic beverage consumption of wine professionals and non-professionals during the COVID-19 pandemic*), **Hp3** (*Consumption behaviour and habits before the pandemic play a different role in influencing the wine and alcoholic beverage consumption of professionals and non-professionals*) and **Hp4** (*Anxiety about the COVID-19 pandemic has a substantial impact on wine and alcoholic consumption behaviour and anxiety about the COVID-19 pandemic has a different impact on the wine and alcohol consumption behaviour of wine professionals and non-professionals*).

They reveal that professionals who habitually drank frequently before the onset of COVID-19 were less likely to increase consumption of wine further during the pandemic. A group of professionals - those who were generally older, plus those with high anxiety and those who did not have a wine cellar (and therefore, perhaps, less access to good wine) all decreased their consumption. Additionally, and running counter to this, more anxious, older professional respondents tended to decrease their wine consumption less. There were no significant changes for them in beer and spirits consumption.

Conversely, younger non-professionals generally consumed more wine - but not beer or spirits, of which they drank less than other non-professionals; indeed, they were more likely to reduce beer consumption than other non-professionals - except for those older non-professionals with noticeable levels of anxiety about the pandemic who also cut down. Country of residence seems to have little impact on alcoholic beverage consumption patterns, both among wine professionals and non-professionals. This is confirmed by the non-significance of the variable 'British residents' in Tables 5 and 7, and the significance of this variable in Table 6, only when associated with non-professionals and a decrease in the consumption of beer. Appendix 1 depicts alcoholic beverage consumption patterns in the light of the different countries of residence of respondents, confirming the limited importance played by country of residence in shaping alcohol consumption trends.

Individuals who were generally less anxious about the pandemic

Table 3
Spearman's correlation, consumption of alcoholic beverages.

| | Wine professionals | | Non-professionals | |
|---------------------------------------------------|------------------------------------------------|---------------------------------------------------|------------------------------------------------|---------------------------------------------------|
| | Change in beer consumption during the lockdown | Change in spirits consumption during the lockdown | Change in beer consumption during the lockdown | Change in spirits consumption during the lockdown |
| Change in wine consumption during the lockdown | 0.236*** | 0.244*** | 0.064 | 0.318*** |
| Change in beer consumption during the lockdown | | 0.169*** | | 0.285*** |
| Change in spirits consumption during the lockdown | | | | |

Note: *** = p-value \leq 0.01.

Table 4
Spearman's correlation matrix, wine consumption.

| | Wine professionals | | | Non-professionals | | |
|-----------------------------------------------------------------|------------------------------------------------|------------------------------------------------------------|-------------------------------------------|------------------------------------------------|------------------------------------------------------------|-------------------------------------------|
| | Change in wine consumption during the lockdown | Change in consumption in each occasion during the lockdown | Wine buying behaviour during the lockdown | Change in wine consumption during the lockdown | Change in consumption in each occasion during the lockdown | Wine buying behaviour during the lockdown |
| Change in wine consumption in each occasion during the lockdown | 0.541*** | | | 0.514*** | | |
| Wine buying behaviour during the lockdown | 0.386*** | 0.291*** | | 0.558*** | 0.393*** | |
| Willingness to pay for wine during the lockdown | -0.069 | 0.073 | 0.234*** | -0.004 | 0.173 | 0.077 |

Note: *** = p-value \leq 0.01.

Table 5
Multinomial logistic regression, base outcome: wine consumption not changed during confinement.

| | Wine professionals | | | | Not wine professionals | | | |
|----------------------------|--------------------------------------------------|-----------|--------------------------------------------------|----------|--------------------------------------------------|----------|--------------------------------------------------|-------|
| | Increase consumption of wine during the lockdown | | Decrease consumption of wine during the lockdown | | Increase consumption of wine during the lockdown | | Decrease consumption of wine during the lockdown | |
| | Coef. | SE | Coef. | SE | Coef. | SE | Coef. | SE |
| Male | 0.313 | 0.992 | -1.597 | 1.359 | 0.252 | 0.850 | 0.605 | 1.117 |
| Age | -0.005 | 0.044 | 0.117 | ** 0.058 | -0.060 | * 0.031 | -0.022 | 0.041 |
| British resident | 0.336 | 0.349 | 0.489 | 0.479 | 0.493 | 0.323 | 0.050 | 0.428 |
| Have a wine cellar | 0.085 | 0.402 | -1.221 | ** 0.467 | 0.680 | ** 0.303 | -0.277 | 0.401 |
| Wine consumption frequency | -0.643 | *** 0.160 | -0.175 | 0.213 | -0.156 | 0.097 | -0.016 | 0.132 |
| Anxiety | 0.387 | 0.445 | 1.101 | * 0.659 | -0.001 | 0.352 | 0.313 | 0.447 |
| Anxiety*Male | -0.110 | 0.213 | 0.560 | * 0.323 | -0.158 | 0.193 | -0.161 | 0.256 |
| Anxiety*Age | -0.004 | 0.009 | -0.032 | ** 0.013 | 0.004 | 0.007 | -0.003 | 0.009 |
| Days of confinement | 0.028 | 0.016 | 0.028 | 0.023 | -0.004 | 0.010 | 0.156 | 0.013 |
| Constant | 4.427 | * 2.480 | -3.577 | 3.476 | 2.928 | * 1.739 | -0.932 | 2.235 |
| Goodness of fit | | | | | | | | |
| Obs. | 254 | | | | 296 | | | |
| Log-likelihood | -224.21 | | | | -279.32 | | | |
| Pseudo R2 | 0.115 | | | | 0.065 | | | |
| LR chi square | 58.3 | | | | 38.55 | | | |

Note: * = p-value \leq 0.1; ** = p-value \leq 0.05; *** = p-value \leq 0.01.

tended to reduce beer consumption more than individuals who experience greater anxiety. Meanwhile, those having a wine cellar also commonly increased their wine consumption. The time spent in confinement was also relevant, as an increase in the number of days confined was positively related to a decrease of beer consumption. Other

than the fact, noted above, that younger non-professionals tended to consume less spirits no other significant behavioural changes with spirits were noted.

Table 8 expands the exploration of *Hp4*. It reveals that anxiety has no relationship to the number of days someone has been in confinement.

Table 6
Multinomial logistic regression, base outcome: beer consumption not changed during confinement.

| | Wine professionals | | | | Not wine professionals | | | |
|---------------------|--------------------------------------------------|-------|--------------------------------------------------|-------|--------------------------------------------------|-------|--------------------------------------------------|-------|
| | Increase consumption of beer during the lockdown | | Decrease consumption of beer during the lockdown | | Increase consumption of beer during the lockdown | | Decrease consumption of beer during the lockdown | |
| | Coef. | SE | Coef. | SE | Coef. | SE | Coef. | SE |
| Male | -1.097 | 1.368 | 0.792 | 1.501 | 1.013 | 1.120 | -0.293 | 1.060 |
| Age | -0.061 | 0.067 | -0.084 | 0.054 | -0.030 | 0.040 | -0.114 *** | 0.038 |
| British resident | 0.661 | 0.537 | 0.798 | 0.422 | 0.441 | 0.396 | 0.779 ** | 0.360 |
| Anxiety | -0.533 | 0.685 | -0.409 | 0.542 | -0.058 | 0.430 | -1.002 ** | 0.403 |
| Anxiety*Male | 0.406 | 0.329 | 0.163 | 0.313 | -0.057 | 0.256 | 0.126 | 0.240 |
| Anxiety*Age | 0.002 | 0.014 | 0.009 | 0.010 | 0.001 | 0.009 | 0.019 ** | 0.008 |
| Days of confinement | -0.014 | 0.025 | 0.027 | 0.020 | 0.022 | 0.014 | 0.028 ** | 0.013 |
| Constant | 2.221 | 3.180 | 0.534 | 2.866 | -1.194 | 2.004 | 3.164 * | 1.799 |
| Goodness of fit | | | | | | | | |
| Obs. | 254 | | | | 296 | | | |
| Log-likelihood | -162.754 | | | | -217.255 | | | |
| Pseudo R2 | 0.084 | | | | 0.072 | | | |
| LR chi square | 29.90 *** | | | | 33.87 *** | | | |

Note: * = p-value ≤ 0.1; ** = p-value ≤ 0.05; *** = p-value ≤ 0.01.

Table 7
Multinomial logistic regression, base outcome: spirits consumption not changed during confinement.

| | Wine professionals | | | | Not wine professionals | | | |
|---------------------|-----------------------------------------------------|-------|-----------------------------------------------------|-------|------------------------------------------------------|-------|-----------------------------------------------------|-------|
| | Increase consumption of spirits during the lockdown | | Decrease consumption of spirits during the lockdown | | Increase consumption of spirits during the lockdown. | | Decrease consumption of spirits during the lockdown | |
| | Coef. | SE | Coef. | SE | Coef. | SE | Coef. | SE |
| Male | -0.326 | 1.151 | -0.827 | 1.650 | 0.374 | 0.935 | 0.352 | 1.088 |
| Age | 0.001 | 0.056 | -0.020 | 0.069 | -0.013 | 0.035 | -0.084 ** | 0.040 |
| British resident | 0.090 | 0.412 | 0.318 | 0.563 | -0.181 | 0.331 | -0.353 | 0.415 |
| Anxiety | 0.571 | 0.551 | -0.145 | 0.719 | -0.358 | 0.395 | -0.357 | 0.395 |
| Anxiety*Male | 0.146 | 0.240 | 0.461 | 0.389 | 0.011 | 0.249 | 0.011 | 0.249 |
| Anxiety*Age | -0.011 | 0.012 | -0.004 | 0.014 | 0.001 | 0.008 | 0.007 | 0.009 |
| Days of confinement | 0.008 | 0.018 | 0.007 | 0.026 | 0.018 | 0.013 | 0.018 | 0.013 |
| Constant | -2.033 | 2.742 | -0.864 | 3.463 | 2.066 | 1.831 | 2.006 | 1.831 |
| Goodness of fit | | | | | | | | |
| Obs. | 254 | | | | 296 | | | |
| Log-likelihood | -171.794 | | | | -248.908 | | | |
| Pseudo R2 | 0.050 | | | | 0.058 | | | |
| LR chi square | 18.11 | | | | 30.59 *** | | | |

Note: * = p-value ≤ 0.1; ** = p-value ≤ 0.05; *** = p-value ≤ 0.01.

Table 8
Anxiety and socio-demographic characteristics/attitudes of respondents.

| | Total sample | | | | Wine professionals | | | | Non-professionals | | | |
|----------------------|--------------|-------|-------|---------|--------------------|-------|------|---------|-------------------|-------|-------|---------|
| | Correlation | F | Sig. | Average | Correlation | F | Sig. | Average | Correlation | F | Sig. | Average |
| Days of confinements | -0.067 | | 0.109 | | -0.087 | 0.159 | | | -0.018 | | 0.756 | |
| Wine involvement | 0.107 | | 0.010 | | -0.036 | 0.560 | | | 0.188 | | 0.001 | |
| Wine knowledge | 0.105 | | 0.012 | | -0.008 | 0.690 | | | 0.164 | | 0.004 | |
| Age | 0.074 | | 0.080 | | 0.102 | 0.104 | | | 0.043 | | 0.454 | |
| Gender | | 3.847 | 0.050 | | | 0.864 | 0.35 | | | 5.583 | 0.02 | |
| Male | | | | 4.2 | | | | 4.4 | | | | 4.0 |
| Female | | | | 4.5 | | | | 4.5 | | | | 4.4 |

However, there are (weak) correlations between anxiety and wine knowledge and involvement: the higher the knowledge or involvement level the more the drinker is likely to be anxious (although this is not a significant correlation for the professionals as a cohort). Additionally, anxiety is higher for female respondents (though not significantly for the professional females), and it is also (weakly) correlated with age, so that older respondents show higher levels of anxiety.

5. Discussion

The aim of this project was to understand how the onset of a crisis affected the consumption of alcoholic drinks, particularly wine, and specifically what differences there were between those who were professionals and also consumers, and non-professionals (**Hp1, Hp2, Hp3**). It was also designed to investigate the relationship between anxiety levels and changing drinking patterns (**Hp4**). The results will be

examined with some illustration of what is revealed by way of comments made by respondents.

When a crisis occurs, there may be many reactions. These could be categorised as (1) ‘things are bad - I must be careful and retrench’ (De Goeij et al., 2015; Ștefura, 2010); (2) ‘things are bad - I must show that this does not concern me and soldier on as normal’ (Ben-Zur & Zeidner, 1996; Bryce, Ring, Ashby & Wardman, 2020), and: (3) ‘things are bad - I must enjoy myself more while I can, as tomorrow I may not be able to’ (Zwanka and Buff, 2020; Butu et al., 2020). The evidence from this study is that people responded in each of these ways. The following comments taken from the non-professional respondents to the open-ended question posed are illustrative:

Trying to use this time to be healthy & lose weight therefore reduced alcohol intake considerably... despite having a very well stocked cellar & spirits cupboard!

We're sticking to the same routines as previously as we are both still working (though from home). We also want to stick to previous consumption patterns.

'[I] take more pleasure with good wines because every moment is important'.

Nevertheless, as the statistical data has shown and in line with part of the literature (Avery et al., 2020; Rolland et al., 2020; Rebelo et al., 2021; Grossman et al., 2020), the majority of respondents did not reduce their consumption of alcohol overall and tended (especially for the professionals) to increase it. This was mirrored in the type of comments given overall. Again, the following are typical.

Initially, we drank more wine, a second bottle between two at dinner. Now we're back to one bottle, high quality but every night. Before Covid, it was much less often (non-professional).

I'm glad you asked if I'm raiding the cellar for the good stuff. I am doing that, as are many people. Why save it for the apocalypse - we are in the apocalypse!! (professional).

The sense is that for people who feel strongly about wine (perhaps as professionals but at least as comparatively highly-involved consumers) their passion becomes yet more important for them during the crisis. The comments were dense with the idea that the respondents ‘needed a treat’ and one non-professional respondent was keen to underline that this was not a coping mechanism.

The increase in consumption has been more about the change in lifestyle rather than resorting to alcohol because of stress.

The increased consumption of alcohol was, as Table 3 has shown and in line with the literature (Dubois et al., 2021), mainly linked to an increase in wine consumption. There was, for beer and spirits, less movement either to increase or decrease across both professionals and non-professionals. Again, it may be that in a crisis it is not so much alcohol per se which becomes a crutch as security being found in one's passion. It could, as easily, have been music, or cooking or a stamp collection.

Having noted that there was a general stability or increase in wine consumption across both cohorts, the results nevertheless show there were some differences between them. Professionals tended to increase their consumption of what was their life's focus more than non-professionals, confirming **Hp1** (Different trends in wine and alcoholic beverage consumption emerge between wine professionals and non-professionals during the COVID-19 pandemic) and **Hp3** (Consumption behaviour and habits before the pandemic play a different role in influencing the wine and alcoholic beverage consumption of professionals and non-professionals). They had been, as one would expect, willing to pay more for

wine than non-professionals before the onset of the pandemic. After it began they were willing to pay at least what they had paid before and, in many cases, significantly more when they purchased a greater volume. They tended to take high-quality wines out of a cellar. Having said that, if they did not have a cellar they were more likely to decrease their wine consumption - as were older professionals (probably related to the fact that older people were more anxious about COVID-19). The key here, however, is that in a time of crisis there is a tendency to turn more towards wine and, as this quotation shows, for many reasons:

I'm using the lockdown time to work my way through some of the bottles that have accumulated in my cellar. I'm drinking slightly more frequently (3-4 times a week, rather than once or twice) and opening bottles I might once have saved for 'best', partly as a treat in a difficult situation, partly because (as we're all increasingly aware) you only live once.

Non-professionals, on the other hand showed a higher percentage of unchanged alcohol consumption. They were more likely to increase the volume of their wine purchases than professionals (perhaps because they were less likely to have wine cellars; it was notable that those who did have a wine cellar were especially prone to increase their wine consumption). They also tended to increase their beer consumption - although that was not the case for younger non-professionals, who in turn were significantly more likely to drink more wine. The non-professionals have an attachment to alcohol, and often it is a serious interest (notably wine, given their involvement levels) - but overall their relationship with it is less intense and for many it does not become something to which they turn for pleasure, reward or as a prop in a time of crisis.

When we examine the relationship of anxiety to alcohol and wine consumption levels there are again some differences between the cohorts, which are linked to different individual characteristics as well, confirming **Hp4** (Anxiety about the COVID-19 pandemic has a substantial impact on wine and alcoholic consumption behaviour and anxiety about the COVID-19 pandemic has a different impact on the wine and alcohol consumption behaviour of wine professionals and non-professionals) and **Hp2** (Different socio-demographic characteristics predict changes in wine and alcoholic beverage consumption of wine professionals and non-professionals during the COVID-19 pandemic). In line with previous research, age and gender are important elements to take into account when analysing the influence of anxiety in alcohol consumption behaviour (Schmits and Glowacz, 2021). With the professionals, a high level of anxiety was correlated with a decrease in wine consumption - and this was especially true for male drinkers (possibly linked to news stories that males were more at risk, as highlighted by Sharma et al. (2020)). However, less-anxious younger professionals also decreased their wine consumption. On the other hand, anxiety in non-professionals was more linked to beer consumption, with older anxious consumers and (overall) low anxiety people more likely to drink less. The difference between the two cohorts may be due to the fact that professionals drink a lot of wine and have no alternative if they felt the need to decrease consumption, whereas the non-professionals were wine lovers who were, nevertheless, more promiscuous drinkers; if they wanted to cut down on alcohol intake then they focused on beer, so that they could continue to drink their ‘first love’.

The qualitative data, whilst not statistically significant, also suggest some interesting findings on this theme. For the non-professionals with a high anxiety level 17.4% of those who volunteered comments noted that they were drinking more, 32.6% that they were drinking better and 15.2% that they were picking wines out of their cellar more often. The comparative figures for the lower anxiety non-professionals were -2.0% (so that on balance the comments noted that they were drinking less

rather than more), only 9.8% were drinking better wine and 5.9% were taking wine out of the cellar to drink. These were voluntarily declared behaviours which suggest that for many consumers with higher anxiety consolation was sought both in the quality and quantity being drunk. Quality and quantity were not necessarily coterminous, however, with some noting they were drinking less but better. For professionals there are similar discrepancies. Again, more high-anxiety respondents explicitly commented that they were drinking more (9.3%) whereas –13% with low-anxiety gave the same response. However, as regards to quality many more of the low-anxiety professionals noted that they were drinking better (21.7%) against 9.3% of the high-anxiety respondents. Both had similar percentages stating that they were taking wines out of their cellar (18.6% higher-anxiety and 15.2% lower anxiety).

Nevertheless, anxiety may take many forms. In the case of COVID-19 it was most obviously directed towards the immediate health danger of the disease. However, for professionals the anxiety about wine may also be linked to lose of employment and/or income. Anxiety can also reveal itself in a changed approach to alcohol in the context of the threat to health posed by the disease. All of these revealed themselves in the comments made by the respondents.

Since I can no longer buy wine at a local store, I have to order online and the cost of freight means I need to buy more bottles of wine at once. As I feel insecure about my job, I can't get over the psychological barrier of spending so much on wine at once, so I have stopped buying wine altogether (professional).

The period gives a lot of occasions to drink a glass of wine or alcohol: no possibilities to go out, stress related to the situation, skype meetings with the family or friends... I have decided to avoid this day after day temptation and to take better care of my health. While this period asks us to think different about the way we live, I have stopped to drink almost entirely for one month (non-professional).

These findings are in line with studies about changes in alcohol consumption during economic crises, highlighting the contrasting impact of psychological distress and budget constraints on alcohol consumption (De Goeij et al., 2015; Bosque-Prous et al., 2017; Munné, 2005). Further, the increasing propensity towards healthy habits is in line with other studies on eating behaviours and increased physical activity during the pandemic (Jaeger et al., 2021; Grossman et al., 2020).

Nevertheless, unlike some other research on COVID-19 (Rodrigues et al., 2022), few differences emerge in alcoholic beverage consumption patterns when considering the country of residence of respondents. This may be due to sample selection biases, or to the fact that most of the sample come from countries where alcohol sales were not banned during the pandemic.

6. Conclusion

There has been substantial previous work on the influence of anxiety on consumption behaviour (Amalia & Ionut, 2009; Bechtel, 2012; Delacroix & Guillard, 2016; Sharma & Sonwalkar, 2013; Ştefura, 2010) and occasionally studies specifically on drinking behaviour (Bosque-Prous et al., 2017). There is also a burgeoning literature around the impact of COVID-19 on consumers. This paper adds to that literature with a specific focus on the relationship of anxiety to wine and general alcohol consumption. However, what is innovative about this study is that it is one of the first to examine consumption differences between professionals and non-professionals. Its significance lies in the fact that the former are often key influencers, and how they respond now may have a wider impact in changing more general consumer behaviour in the future. Additionally the study is global in scope within the Anglophone world, unlike some other research reported here.

Nevertheless, the results have further implications relevant for public policy. The debate around alcohol consumption in the early

stages of COVID-19 often revolved around arguments that retreating to alcohol in the face of a health crisis, or using it as a 'crutch' was dangerous and would in fact cause further health problems (Avery et al., 2020; Callinan et al., 2021; Clay and Parker 2020; Rebelo et al., 2021). There is undoubtedly some truth in this, and recent press reports suggest that alcohol abuse has taken its toll.² Nevertheless, this study suggests that for some wine-related consumption, the engagement with the drink is more complex. There are certainly suggestions that for higher-involvement drinkers, especially but not only professionals, their passion results in consumption despite the fact that the drink has alcohol in it, rather than because of the alcohol. It does also suggest that beyond that, the need for a treat of what one loves and is passionately interested in is a useful psychological boost. Again, for many that 'treat' may not be wine, but a well-prepared meal, reliving classic football matches or engaging with a favourite boxed set.

A further conclusion is important for consumer researchers looking at wine and alcohol consumption, and the consumption of aesthetic, quasi-aesthetic and serious leisure products more widely, and that is the necessity of examining differences between professional and non-professional consumers. In the case of this research the similarities between high-involvement consumers and the professionals seem much more substantial than the differences. Nevertheless, many variations remain evident. Some of these (the price paid for the product, the level of intense interest in it) are to be expected. Others, however, (the role of collecting, gender difference in consumption response to COVID-19) are less self-evident and repay more consideration. A further very interesting conundrum is why there was noticeable correlation between higher levels of product involvement and higher anxiety. Is this connected to alcohol generally, to wine, or to high involvement with any product?

Beyond these questions there are limitations to this study which would repay more extended exploration. There needs to be deeper engagement with the reasons for the varying responses of the two cohorts overall, and on the varying attitudes to consumption in a time of crisis. This limit could have been partially solved if validated scales measuring, for example, anxiety and its different sources could have been included when measuring respondents' attitudes; this is a subject that future research should take into consideration. These would substantially fill out our understanding both of how high-involvement consumers (both professional and non-professional) view their passion, and also how anxiety has an influence on their consumption. Longitudinal research on wine consumption behaviour over the whole pandemic, from the outset, through the various waves to the - we hope - final fading away, will provide much greater understanding on all the issues touched on here.

CRedit authorship contribution statement

Lara Agnoli: Conceptualization, Data curation, Formal analysis, Methodology, Writing – original draft. **Steve Charters:** Conceptualization, Data curation, Formal analysis, Methodology, Writing – original draft, Writing – review & editing.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

² See, e.g. <https://www.thesun.co.uk/news/15599250/deaths-due-to-booze-rose-pandemic/> This particular coverage is based on a report by a reputable source: Public Health England. However, the press is not renowned for an objective, informed or restrained reporting of health issues.

Appendix. 1 – Alcoholic beverages consumption patterns during the confinement by residence, wine professionals and non-professionals

| | Wine professionals | | | | | Non-professionals | | | | | Sig. | |
|-------------------------|--------------------|----------|----------------|------------|-------|-------------------|----------|----------------|------------|-------|--------|-------|
| | British | European | North American | Australian | Other | British | European | North American | Australian | Other | | |
| Wine consumption (%) | | | | | | | | | | | | |
| Decreased | 14.6 | 18.6 | 12.2 | 5.9 | 17.2 | 15.2 | 19.4 | 13.9 | 7.7 | 15.8 | 9.186 | 0.327 |
| Not changed | 42.7 | 37.2 | 48.8 | 47.1 | 46.9 | 43.5 | 48.4 | 36.1 | 44.2 | 55.3 | | |
| Increased | 42.7 | 44.2 | 39.0 | 47.1 | 35.9 | 41.3 | 32.3 | 50.0 | 48.1 | 28.9 | | |
| Beer consumption (%) | | | | | | | | | | | | |
| Decreased | 18.3 | 18.6 | 4.9 | 11.8 | 15.6 | 22.8 | 17.2 | 2.8 | 13.5 | 15.8 | 15.318 | 0.053 |
| Not changed | 73.2 | 74.4 | 85.4 | 85.3 | 75.0 | 62.0 | 68.8 | 80.6 | 75.0 | 84.2 | | |
| Increased | 8.5 | 7.0 | 9.8 | 2.9 | 9.4 | 15.2 | 14.0 | 16.7 | 11.5 | 0.0 | | |
| Spirits consumption (%) | | | | | | | | | | | | |
| Decreased | 7.3 | 9.3 | 0.0 | 2.9 | 12.5 | 12.0 | 19.4 | 11.1 | 15.4 | 18.4 | 3.314 | 0.913 |
| Not changed | 79.3 | 79.1 | 75.6 | 73.5 | 68.8 | 68.5 | 60.2 | 69.4 | 61.5 | 63.2 | | |
| Increased | 13.4 | 11.6 | 24.4 | 23.5 | 18.8 | 19.6 | 20.4 | 19.4 | 23.1 | 18.4 | | |

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