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Wine Dynamics in Mixology: Exploring Consumer Perception in Cocktail Variations

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Table of Contents

Abstract

This thesis presents a comprehensive exploration into the dynamic role of wine in mixology and its consequent impact on consumer perception. Focusing on two contrasting types of cocktails - the globally renowned Aperol Spritz and the lesser-known Cardinale Cocktail - this research delves into how variations in wine influence the sensory experience and consumer preferences of these mixed drinks. The study employs a methodical approach combining blind tasting sessions, detailed surveys, and sophisticated statistical analyses to uncover patterns in consumer tastes and preferences. The blind tastings are structured to assess participants' ability to distinguish between different wine varieties within each cocktail and to gauge their preferences across various adaptations of these drinks. Alongside, surveys gather data on participants' demographic profiles, general cocktail preferences, wine knowledge, and specific inclinations towards the chosen cocktails. This data is then analyzed to draw correlations between consumer characteristics such as age, cocktail experience, and wine familiarity, and their cocktail preferences. A significant part of the thesis is devoted to understanding individual sensory perceptions and how these influence the appreciation of wine variations in cocktails. The research aims to offer valuable insights for mixologists and beverage industry professionals, providing practical guidelines for optimizing wine choices in cocktail creation. Furthermore, this thesis contributes to the academic field by enhancing the understanding of sensory evaluation in mixology, particularly focusing on the role of wine in shaping cocktail perception. Overall, this thesis advances the current understanding of the complex relationship between wine, cocktails, and consumer perception. By exploring a range of sensory interactions and consumer preferences, it offers a nuanced perspective on the multifaceted world of mixology, catering to both academic interests and practical applications in the beverage industry.

Keywords: Mixology, Wine Variations, Consumer Preferences, Sensory Evaluation, Wine Cocktails

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Chapter 1. Introduction

1.1. Background and Rationale

The art of mixology has evolved into a multifaceted exploration of taste, aroma, and sensory experience, transforming cocktails from mere beverages into crafted expressions of creativity and culture. Over the years, cocktails have become more than a means of intoxication; they embody a cultural and culinary journey, reflecting the diversity of ingredients, techniques, and traditions across the globe (Wondrich, 2022).

In the contemporary landscape of mixology, the choice and combination of ingredients hold the key to creating memorable and distinctive cocktails. While spirits, fruits, and herbs have long been celebrated for their role in shaping the flavor profiles of cocktails, the nuanced influence of wine remains a captivating and underexplored dimension. The intricate interplay between different wine varieties and cocktail recipes offers an intriguing canvas for both seasoned mixologists and curious consumers.

The background of this research is rooted in the growing curiosity surrounding the sensory dimensions of cocktails. As mixology continues to gain prominence as a culinary art form, there exists a need to dissect the specific contributions of individual ingredients. While much attention has been given to the spirits and botanicals that characterize cocktails, the role of wine, with its diverse range of flavors and aromas, demands focused investigation.

This research is motivated by a fundamental question: how does the variation in wine types within cocktail recipes influence consumer perception? The rationale behind this inquiry lies in the potential impact such knowledge could have on the field of mixology and the broader beverage industry. Understanding how different wines contribute to the overall cocktail experience is not only of interest to aspiring and established mixologists but also holds implications for consumer preferences, market trends, and the development of innovative beverage offerings.

As the landscape of cocktail culture continues to evolve, this research seeks to contribute meaningful insights into the intricate relationship between wine, cocktails, and consumer perception. By exploring the sensory nuances of well-known and less

familiar cocktails with variations in wine, this research aims to uncover patterns of recognition, preferences, and the underlying factors that shape the complex world of mixed drinks. In doing so, aspire to enrich the discourse on mixology and provide valuable considerations for both industry professionals and enthusiasts alike.

1.2. Research Objectives

This thesis aims in depth a comprehensive understanding of the role of wine in cocktails and its impact on consumer perception. The specific objectives guiding this research are as follows:

- Assess via blind-tastings of well-known cocktails, such as the Aperol Spritz, and lesser-known cocktails, like the Cardinale Cocktail, with variations in wine types, participants' ability to recognize different wine varieties used in the cocktails.
- Analyze data to identify correlations between consumer characteristics (such as age, previous cocktail experience, or wine knowledge) and preferences.
- Offer practical insights for mixologists and beverage professionals on optimizing wine choices in cocktails.
- Offer a nuanced exploration of the sensory interactions between wine and other ingredients in mixed drinks.

By addressing these research objectives, this thesis aims to advance the current understanding of the intricate relationship between wine, cocktails, and consumer perception, thereby providing valuable insights for both the academic community and professionals in the field of mixology.

1.3 Significance of the Study

The significance of this study extends across various dimensions, with implications for mixology, sensory science, and the broader beverage industry. Grounded in seminal works by Danila Nevskiy (2023) on evolving cocktail trends and Inglesias et al. (2019) exploration of sensory experiences, this research holds substantial importance.

As mixology evolves into a revered culinary art, the meticulous selection of ingredients is paramount. By investigating how different wine variations influence the overall sensory experience of cocktails, this study aligns with the call by Brown and Miller (2023) to delve into the nuances of mixology. It provides mixologists with nuanced knowledge to refine their craft, experiment with innovative combinations, and contribute to the ever-evolving landscape of cocktail creation.

Consumer preferences are pivotal in shaping the beverage industry. This research addresses a critical gap by investigating how consumers perceive and distinguish cocktails with varying wine compositions. The findings empower beverage developers, marketers, and establishments to align their offerings with evolving tastes and preferences (Danila Nevskiy, 2023). This aligns with the consumer-centric approach advocated by Johnson (2019) for enhancing product development strategies.

Cocktails have transcended their role as mere beverages to become integral components of overall culinary experiences. By uncovering the subtle intricacies in taste and aroma resulting from different wine variations, this study contributes to enhancing these experiences. The findings provide insights into creating cocktails that resonate with patrons seeking unique, memorable, and sensorially rich dining experiences (Efsievskiy, 2019).

In the realm of sensory science, this study enriches the understanding of the intricate interplay of flavors and aromas in mixed drinks. By examining the nuanced role of wine in cocktail perception, it contributes not only to practical mixology but also to the theoretical foundations of sensory science. This aligns with the principles outlined by Lawless and Heymann (2010) regarding the importance of understanding sensory experiences in diverse contexts.

Innovation is a driving force in the competitive landscape of the beverage industry. By shedding light on how different wine variations influence consumer perception, this study serves as a guide for innovative approaches to cocktail creation. It encourages industry professionals to explore new combinations, experiments with novel ingredients, and push the boundaries of traditional mixology (Nevskiy, 2023). This resonates with the emphasis on continuous innovation advocated by Johnson (2019) in the dynamic beverage industry.

In summary, the significance of this study extends beyond its immediate context. It is positioned to impact mixology practices, contributes to consumer-centric beverage development, enhance overall culinary experiences, enrich academic understanding in sensory science, and guide ongoing innovation within the dynamic landscape of the beverage industry.

Chapter 2. Literature Review

2.1 Historical Significance of Cocktails

The historical significance of cocktails traces a captivating journey through time, reflecting cultural shifts, societal trends, and innovations in beverage craftsmanship. As explored by Standage (2006) in "A History of the World in 6 Glasses," cocktails have been intertwined with the fabric of human civilization, acting as both mirrors and catalysts of social dynamics.

Cocktails emerged as distinctive libations during the 19th century, a period marked by the rise of industrialization and the flourishing of urban cultures (Wondrich, 2015). The concept of mixing various spirits, bitters, and sugar with water or ice not only resulted in novel and palatable drinks but also represented a departure from traditional imbibing practices.

The iconic Martini, with its origins dating back to the late 19th century, embodies the elegance and sophistication of the cocktail culture during the Gilded Age (Wondrich, 2022). It became a symbol of refinement, epitomizing the artistry of mixology during an era characterized by the pursuit of luxury and the celebration of craftsmanship.

The Prohibition era in the United States (1920-1933) marked a pivotal point in cocktail history, driving mixologists to innovate and devise creative concoctions to mask the flavors of inferior spirits (Efsievskiy, 2019). The enduring popularity of cocktails like the Sidecar and the French 75 can be traced back to this period, showcasing the resilience and adaptability of mixology in the face of challenging circumstances.

In the mid-20th century, the tiki movement, championed by figures like Donn Beach and Trader Vic, introduced exotic and flamboyant cocktails, transporting enthusiasts

to tropical paradises through vibrant flavors and elaborate presentations (Efsievskiy, 2019). This era illustrates how cocktails became a canvas for cultural exploration and expression.

The craft cocktail revival of the late 20th and early 21st centuries, as documented by Imbibe magazine and authors like David Wondrich, witnessed a renaissance in mixology. Bartenders, inspired by historical recipes and techniques, rekindled an appreciation for classic cocktails, fostering a renewed interest in the art and science of drink-making.

Understanding the historical significance of cocktails provides a lens through which to appreciate their evolution as cultural artifacts, reflective of societal tastes, technological advancements, and the human quest for sensory pleasure. The journey of cocktails from their humble beginnings to today's sophisticated libations underscores their enduring appeal as both a beverage and an art form.

2.2 The Evolution of Mixology

The evolution of mixology is a captivating narrative that unfolds through the annals of time, marked by the contributions of visionary bartenders who shaped the landscape of cocktail craftsmanship. Drawing from historical accounts, this section explores key epochs and the luminaries who left an indelible mark on the art of mixology.

Mixology past extends deep into ancient times, covering a variety of concoctions such as the Homeric kykeon, a blend of wine, grated goat cheese, and barley (Harris, 2021); an ancient mixture of wine, beer, and mead, remnants of which were discovered in King Midas's tomb in central Anatolia; an assortment of medicinal wines penned by Scribonius Largus, physician to Emperor Claudius; and from the Middle Ages, the aromatic hippocras and the bitter beer called Purl. The birth of modern mixology, however, is often attributed to the advent of distilled spirits, which infused the craft with new vitality. Michele Savonarola, an Italian physician of the 15th century, noted the challenges some faced in consuming 'water'—a term for distilled spirits—due to its harshness, suggesting that it be diluted with wine or another liquid for a more palatable experience. His guidance to mix one part spirits with three parts wine, or with water or beer, marks the earliest known instance of a mixed drink utilizing spirits (Wondrich, 2022).

During the Middle Ages, the discovery and refinement of distillation techniques brought about a revolution in the world of beverages. Alchemists, who were as much scientists as they were mystics, began distilling spirits, which allowed for more potent and purified forms of alcohol to be produced. This period saw the creation of drinks like the spiced hippocras and the herb-infused Purl, which were early indicators of the potential of mixology. The Renaissance period was a pivotal era for mixology, as the spread of distilled spirits across Europe led to an increased interest in the art of combining them with other ingredients. Physicians like Michele Savonarola started recommending the production of spirits from the waste of wine that gave birth to a new cheaper spirit - called Grappa (Efsievskiy, 2019).

The 18th and 19th centuries witnessed the pioneering efforts of influential bartenders who laid the foundations for modern mixology. Jerry Thomas, hailed as the "father of American mixology," stands prominently among them. His seminal work, "How to Mix Drinks or The Bon Vivant's Companion" (1862), not only compiled recipes but also introduced innovative techniques and a sense of showmanship that set the stage for the golden age of cocktails (Thomas, 2009).

Other notable figures of this era include Harry Johnson, author of "Bartender's Manual" (1882), which provided a comprehensive guide to the art of mixing drinks. Johnson's manual not only documented recipes but also emphasized the importance of balance and precision in cocktail creation, influencing generations of bartenders (Johnson, 2015).

The turn of the 20th century marked the innovation age of cocktails, characterized by elegance and refinement. Ada Coleman, head bartender at the American Bar at The Savoy in London, became a trailblazer during this era. Her creations, including the Hanky Panky cocktail, showcased a finesse that elevated mixology to an art form (Craddock, 1930).

Harry Craddock, another luminary of this period, tended bar at The Savoy and authored "The Savoy Cocktail Book" (1930), an influential compendium that captured the spirit of the age. Craddock's work immortalized classic cocktails and remains a revered reference in the world of mixology (Craddock, 1930).

The Prohibition era in the United States (1920-1933) presented a unique set of challenges, giving rise to innovative bartenders who navigated the constraints of the

time. Ada Coleman's counterpart in the U.S., Harry MacElhone, tended bar at Harry's New York Bar in Paris. His role as a hub for American expatriates led to the creation of enduring classics, including the French 75 (Wondrich, 2022).

Sasha Petraske, a modern-day luminary, played a pivotal role in the cocktail renaissance of the late 20th century. His influential cocktail bar, Milk & Honey, redefined the contemporary cocktail scene. Petraske's emphasis on fresh ingredients, precise measurements, and a focus on customer experience influenced a new generation of bartenders (Petraske, 2016).

The craft cocktail revival of the late 20th century and the early 21st century saw the emergence of influential bartenders like Dale DeGroff, often referred to as the "King of Cocktails." DeGroff's advocacy for fresh, high-quality ingredients and a return to classic techniques significantly contributed to the resurgence of craft cocktails (Wondrich, 2015).

In the 21st century, the global nature of the cocktail renaissance is evident in the rise of influential bartenders from various corners of the world. Renowned mixologist Agostino Perrone, formerly of The Connaught Bar in London, brought Italian flair to the international cocktail scene. His innovative creations and dedication to the art of mixing elevated the craft, earning The Connaught prestigious awards (Perrone, n.d.).

Julie Reiner, a prominent figure in the New York cocktail scene, has not only been instrumental in the revival of classic cocktails but also in championing diversity and inclusivity in the industry. Her establishments, including the Flatiron Lounge and Clover Club, stand as beacons of hospitality and innovation (Cameron, 2024).

In the contemporary era, technology has become an ally of bartenders, enabling new dimensions of creativity and precision. Tools like centrifuges, sous-vide machines, and innovative infusion techniques have expanded the possibilities for crafting unique and avant-garde cocktails. Notable figures like Tony Conigliaro, with his pioneering work at bars like 69 Colebrooke Row, have embraced scientific principles to push the boundaries of mixology (Kallivoka, 2024).

The evolution of mixology in the 21st century is characterized by a global exchange of ideas, an emphasis on quality ingredients, and a revival of classic techniques. Influential bartenders continue to redefine the craft, bridging tradition and innovation to create a diverse and dynamic landscape for cocktail enthusiasts worldwide. As

mixology continues to evolve, it becomes increasingly intertwined with technology, sustainability, and global influences. Cocktail trends ebb and flow, but the essence of mixology remains the same: a blend of art and science, history and innovation, tradition and trendsetting. The future of mixology is as boundless as the creativity of those who practice the craft, promising new discoveries and experiences for enthusiasts around the world.

In essence, the evolution of mixology is a mirror to the cultural, technological, and artistic progress of humanity, reflecting our collective journey through the ages in the glasses raised in celebration, reflection, and community. From the pioneering contributions of Jerry Thomas and Harry Johnson to the refined artistry of Ada Coleman and Harry Craddock, each period has been shaped by influential figures who have left an enduring legacy in the world of cocktails.

2.3 The Role of Wine in Cocktails

The integration of wine into cocktails is a dynamic exploration of flavors, textures, and aromatic profiles, contributing to the nuanced landscape of mixology. As delve into the historical and contemporary aspects of this intersection, key works by industry experts provide insights into the multifaceted role of wine in crafting innovative and sophisticated mixed drinks.

The utilization of wine in cocktails finds historical precedence in classic libations. The iconic Sangria, with its origins in modern-day Spain and Portugal, exemplifies the harmonious fusion of red wine, fruits, and other spirits (Garret, 2023). This enduring cocktail serves as a testament to the timeless appeal of wine-based mixed drinks, capturing cultural nuances in a glass.

Jerry Thomas, incorporated various wine-based concoctions in his seminal work, “The Bar-Tender’s Guide” 1862. Notably, his creation of the Champagne Cobbler (“one bottle of wine to for large bar glasses”) underscores the historical appreciation for the diverse applications of wine in mixed beverages (Difford, 2017).

In contemporary mixology, wine has transcended traditional applications, with bartenders leveraging its diverse varietals to introduce complexity and nuance to cocktails. Dave Arnold, in "Liquid Intelligence" (2014), explores modern techniques, discussing the use of wine and its derivatives to create unique textures and flavors.

This departure from convention highlights the evolving creativity within the realm of wine-infused mixology (Arnold, 2014).

The globally popular Aperol Spritz stands as a testament to the contemporary fusion of wine and spirits. Featuring Prosecco, an Italian sparkling wine, this cocktail has gained widespread acclaim, as detailed in "Spritz" by Talia Baiocchi and Leslie Pariseau (2016). The Aperol Spritz exemplifies the seamless integration of wine into a cocktail, resulting in a refreshing and effervescent beverage (Baiocchi & Pariseau, 2016).

Recent studies, such as those by Spence and Wang (2019), delve into the impact of wine variations on consumer perception in cocktails. This research underscores the significance of sensory experiences, providing valuable insights into how subtle changes in wine selection can influence the overall enjoyment of a drink (Spence & Wang, 2019).

The Cardinale, a lesser-known but intriguing mixed drink, originally served with Riesling wine opens avenues for innovation within mixology. Bartenders can experiment with different Riesling expressions, from crisp and dry to lusciously sweet, to create variations that cater to a spectrum of preferences. This aligns with the principles outlined by Arnold (2014) and the broader movement within the industry towards a more experimental and creative approach.

In summary, the role of wine in cocktails is a dynamic and evolving aspect of mixology. From historical classics to contemporary innovations, the integration of wine continues to captivate both bartenders and enthusiasts, offering a rich tapestry of flavors and possibilities within the world of mixed drinks.

2.4 Sensory Experience and Perception

In the realm of wine dynamics in mixology, sensory experience and perception are fundamental in shaping consumer preferences and interactions with cocktails. This section examines the multi-faceted nature of sensory perception in the context of wine-inclusive cocktails, drawing upon recent scholarly research.

Multisensory integration refers to how our brain processes and combines information from different sensory modalities - such as taste, smell, sight, and touch - to form a

singular, cohesive perception of what we're consuming. This integration is not just a sum of individual sensory inputs but a synergistic process that creates a unique experience.

The interplay of taste and smell is the most recognized aspect of multisensory perception. The flavor of a cocktail is not solely derived from its taste but is significantly influenced by its aroma. Aromatic compounds can alter the taste perception, making it sweeter, more bitter, or sour. This phenomenon, known as retronasal olfaction, is crucial in mixology, where the aroma of ingredients can significantly modify the perceived flavor of the drink (Shepherd, 2012).

The visual aspect of a cocktail, including its color and presentation, plays a significant role in flavor perception. Studies have shown that color can influence the perceived intensity and quality of flavors. For instance, a brightly colored cocktail may be perceived as more flavorful or sweeter compared to a colorless one. This visual influence extends to the glassware and presentation, setting expectations before the first sip (Spence, et al. 2022)

The texture of a beverage, felt both through touch (via the container) and as a mouthfeel, also contributes to the overall experience. The viscosity of a cocktail, the presence of carbonation, or even the temperature can alter the drinking experience. Texture can be used to add depth or contrast to the flavor profile of a cocktail (Chen & Engelen, 2012).

In mixology, understanding and manipulating these multisensory elements can elevate the drinking experience. A mixologist can create a cocktail that not only tastes good but also delivers a visual and aromatic appeal, enhancing the overall enjoyment. This approach aligns with gastronomic principles, where the aim is to engage all senses to create a memorable experience (Spence, 2017).

Aromas are a key element in wine perception. The work of Styger et al. (2011) delves into how various aroma compounds contribute to the sensory profile of wines. This research is crucial in understanding the nuances that aromas bring to the overall taste experience and consumer preferences in wine-based cocktails (Styger et al., 2011).

Visual cues, such as color and presentation, significantly influence consumer choices. Kim, Spence and Marshall explore how visual appeal sets consumer

expectations and impacts their overall experience. In a series of six studies, researchers found that presenting product information for each option in a unique color increases the likelihood of consumers choosing the middle option, which is typically seen as a compromise. This effect, which occurs because the unique colors partially satisfy consumers' desire for individuality, results in choices that feel more distinctive even when they conform to common trends. However, the effect does not hold if the presentation uses different colors but maintains a consistent color scheme across all options, or if consumers are required to justify their choices. This finding suggests that color presentation can subtly influence decision-making in a way that is unrelated to the product's actual attributes. Field studies in retail environments confirmed these results, indicating that choices can be steered by using colored backgrounds or packaging rather than plain white. This underscores the importance of visual presentation in mixology (Kim, Spence & Marshall, 2018). In mixology, this principle can be applied to the presentation of cocktails, where the use of unique colors in the menu or even in the coloration of the drinks themselves can influence consumer choice. By presenting cocktail options with distinct visual cues, bars, and restaurants might encourage patrons to select options that balance novelty with the comfort of the familiar. This approach can be particularly effective in settings where the aesthetic presentation of a drink is emphasized, tapping into the consumer's desire for a unique yet accessible beverage experience.

Tactile sensations, including the temperature and texture of a drink, also play a significant role in the sensory experience. Carvalho, Moksunova and Spence examine how tactile elements like the body of the drink or the effervescence of the glass can enhance or detract from the drinking experience (Carvalho, Moksunova & Spence, 2020).

Cultural background and the context in which the drink is consumed also play a significant role. The cultural context can influence taste preferences and expectations. Jeong, and Lee (2021) emphasize how cultural experiences shape taste perceptions and drinking behaviors (Jeong & Lee, 2021).

Branding and marketing are also influential factors. The perception of a brand, including its reputation and the associations it evokes, can influence consumer expectations and experiences. This is supported by research from Leighton and Bird,

who shows that brand perception significantly affects consumer choices (Leighton, Bird, 2012).

Sensory experience and perception in wine mixology represent a rich, multidimensional interplay that extends beyond mere taste and aroma to include visual and tactile stimuli, deeply influencing consumer enjoyment and engagement. The integration of these sensory cues — how a cocktail looks, smells, feels, and tastes — creates a holistic experience that can evoke emotions, memories, and even cultural connections. This complex interaction demands a nuanced understanding, as it is not just the individual elements but their synergistic effect that crafts a memorable and enjoyable cocktail experience. Recognizing and skillfully manipulating these sensory aspects are key for mixologists striving to create innovative, appealing, and satisfying beverages that resonate deeply with consumers, offering more than just a drink but an immersive sensory journey.

2.5 Consumer Perception and Beverage Choices

Consumer perception in beverage choices encompasses a multifaceted realm, shaped by sensory experiences, psychological influences, cultural factors, and a nuanced interplay of various elements. This section delves into the intricate dynamics that govern how consumers perceive and make choices among a plethora of beverages, drawing insights from contemporary research in the field.

Consumer Preferences and Craft Beer Attributes: A study focusing on Italian consumers' preferences for craft beer attributes utilized the Best-Worst Scaling method, a technique originally applied in a food safety study by Finn and Louviere in 1992. This method, now widely used in consumer behavior and food preference studies, requires respondents to make trade-offs among options to identify those most and least preferred. This is rooted in the random utility theory. Applying this approach to wine-inclusive cocktails can yield valuable insights into which attributes (such as flavor, aroma, and brand) are most and least valued by consumers. This method's application to wine cocktails can enrich the understanding of consumer preferences in a mixology context. (Lerro, Marotta, & Nazzaro, 2020).

Natural Wine Consumption Motivations: Another relevant study conducted in Italy and Spain explored consumer perception and information about natural wine

(Vecchio, et al, 2021). This study used a structured questionnaire to gather data on wine consumption habits, interest in natural products, perception and information about natural wine, among others. The data analysis involved descriptive analysis and ordered logistic regressions to identify drivers affecting natural wine consumption frequency. This method could be adapted to examine how consumers perceive and choose wine variations in cocktails. The study highlighted the importance of understanding consumer motivations, such as sustainability or taste preferences, which could be significant factors in cocktail choices as well.

Broad Consumer Behavior and Beverage Choice: A special issue on factors influencing consumers' drinking behaviors and beverage choices offered a comprehensive view of the subject (Mirosa, 2016). It covered a range of influences including individual, social, environmental, and macro-system factors such as marketing, culture, and values. The goal was to understand how to impact these factors to encourage people to choose quality, healthy, and environmentally sustainable beverages. This broad perspective is particularly useful for understanding the diverse factors that influence consumer choices in the context of wine cocktails, extending from individual taste preferences to broader cultural and social influences.

Variation of Wine Preference Among Consumers study examined how wine preference varies among consumers, focusing on the influence of the wine's composition, including its chemical parameters such as alcohol and tannin content. The study found that environmental factors like temperature, and sunlight exposure significantly affect these components. It also highlighted that consumer preferences could differ based on cultural backgrounds, with varying sensitivity to wine attributes such as "fruity", "floral", or "sweet" notes. The subjectivity of consumers' preferences driven by genetic differences due to saliva composition plays a role as well as other factors (Luo, Ruan, Ang, et al. 2023).

The recent literature emphasizes the complexity of consumer perception in beverage choices. It suggests that a multifaceted approach, considering both individual preferences and broader social and environmental factors, is essential for understanding consumer behavior in the context of wine cocktails. These insights are invaluable for mixologists and beverage industry professionals seeking to innovate and cater to evolving consumer preferences.

Chapter 3. Study Procedure

3.1 Research Design

The research design focused on the role of wine in cocktails and its impact on consumer perception is comprehensive and multidisciplinary, combining experimental methods, statistical analysis, and qualitative research.

This involves a systematic approach where participants will be invited to taste a variety of cocktails, both well-known and lesser-known, that incorporate different types of wine. The key is to ensure that these tastings are blind, so the participants are unbiased in their evaluations. The design will involve multiple sessions, with each focusing on one of two specific cocktail types to ensure depth and variety in the data collected.

Alongside the tastings, deploy detailed surveys to collect quantitative and qualitative data on consumer preferences. These surveys will include questions about the sensory experiences of the cocktails, personal preferences, and demographic information. This dual approach of experimental tastings and surveys aims to gather comprehensive data on consumer perceptions.

To analyze the data collected, a robust statistical framework will be employed. This will include techniques such as regression analysis, factor analysis, and cluster analysis to uncover patterns and correlations between consumer characteristics and their cocktail preferences. The objective is to use these statistical methods to translate raw data into meaningful insights.

In-depth qualitative analysis will be employed to gather insights into the sensory interplay between wine and other cocktail ingredients, including participants' subjective experiences and preferences.

This multifaceted research design aims to provide a detailed understanding of the complex dynamics between wine, cocktails, and consumer perception, using a blend of quantitative and qualitative research methods.

3.2 Selection of the Cocktails

The exploration of the Aperol Spritz and the Cardinale Cocktail in this study is a sophisticated endeavor, intersecting the domains of mixology and sensory science. These cocktails, one a globally acclaimed icon and the other a less-recognized concoction, represent a strategic dichotomy in the realm of wine-based mixed drinks. The Aperol Spritz, with its international fame, vivid appearance, and citrusy aroma, offers a familiar ground to gauge widespread consumer appeal. Conversely, the Cardinale Cocktail, blending gin, Campari, and Riesling in equal parts, provides a unique and complex sensory profile, contributing to a comprehensive understanding of consumer perceptions in mixology. This juxtaposition facilitates an in-depth analysis of sensory experience, cultural impact, and individual preferences, thereby enriching the academic discourse on wine's role in cocktails. The study aims to illuminate the nuances of taste, aroma, visual appeal, and tactile experience in these cocktails, unraveling the intricate interplay of traditional and innovative elements within mixology.

The origins of the Aperol Spritz can be traced to the 1840s, with its precursor, the "Spritzer," which is a simple concoction of white wine and seltzer water (Wondrich, 2022). This early iteration of the beverage laid the foundational framework for what would evolve into the modern Aperol Spritz.

Following Italian unification in 1861, the Spritz, maintained popularity, especially among the farmers in regions like Friuli-Venezia Giulia and Veneto. With the advent of the 20th century, Italians began incorporating local vermouths, bitters, and liqueurs, leading to variations like the Spritz Veneziano, often with Select or Campari. The Aperol Spritz originated in Padua in 1919, crafted by the Barbieri family, and traditionally served with soda and an orange slice from a sugar-rimmed glass. Its popularity surged in the 1970s, spreading across Italy (Wondrich, 2022).

In the 2000s, Aperol Spritz's notoriety expanded globally, promoted as the quintessential Italian summer beverage, characterized by its refreshing nature, low alcohol content, and wine base (Aperol, n.d.). This led to its current status as a staple of Italian drinking culture and a beloved cocktail worldwide.

Beyond being a mere beverage, the Aperol Spritz has become a cultural phenomenon, signifying sociability and the tradition of the aperitif. Its popularity

extends beyond its gustatory appeal, involving the visual allure of its radiant color, the aromatic delight of citrusy notes, and the tactile satisfaction of a well-chilled drink. The Aperol Spritz encapsulates the essence of a universally recognized cocktail archetype.

In the cocktail industry, Aperol Spritz has maintained a constant presence in top cocktail lists worldwide, influencing menu offerings across diverse dining establishments. Its role in popularizing the aperitivo style of cocktails has led to an increased demand for lighter, more refreshing drink options, resonating with current consumer trends towards more approachable and sessionable beverages. The Aperol Spritz's straightforward, yet versatile formula has made it a favorite among both amateur and professional mixologists, striking a balance between simplicity and elegance. The formula 3:2:1 (3 parts - prosecco; 2 parts - Aperol; 1 part - soda water) is worldwide used and promoted by Campari company, eventhow is far from the "original Venetian" version. This broad appeal and adaptability have not only solidified its status in the cocktail canon but also underscored its significant impact on contemporary cocktail culture and the global beverage industry. (Difford, 2023)

The Cardinale Cocktail's origins are often disputed; however, recent insights from Luca Di Francia, Head Bartender at the Orum Bar in Rome, indicate that it was indeed crafted in the 1950s by Giovanni Raimondo at the then Hotel Excelsior Rome. During a period marked by post-war liberation and burgeoning creativity, the Excelsior became a nexus for American tourists and celebrities, partly drawn by the flourishing film industry in nearby Cinecittà Studios.

Contrary to popular belief, it wasn't a cinematic icon but Cardinal Francis Joseph Spellman who inspired the creation of the Cardinale Cocktail. During the Christian Jubilee of 1950, Spellman visited the Orum Bar, where Raimondo offered to devise a new cocktail instead of the Cardinal's preferred Moselle Riesling (Marangio, 2013). The resulting concoction, a blend of one-third gin, one-third Riesling wine, and one-third Campari Bitter, served over ice with a garnish of lemon zest, cinnamon, and cloves, was a nod to the Negroni but with a distinctive twist, potentially influenced by the Cardinal's red vestments (Diffords Guide The Cardinale Cocktail, n.d.).

The Cardinale Cocktail served in an old-fashioned glass, represents a unique intersection of historical events, cultural influences, and mixological innovation,

encapsulating a significant era in Italian history while satisfying the burgeoning demand for sophisticated cocktails in post-war Italy (Marangio, 2013).

In the realm of mixological sciences, the Cardinale Cocktail distinguishes itself as a less prominent yet intriguingly complex beverage. Characterized by its blend of gin, Campari bitter, and Riesling wine in equal proportions, this cocktail exhibits a unique sensory profile that merits scholarly attention. Its limited presence in mainstream mixology and its esoteric nature contribute to its perception as a niche concoction within the broader spectrum of alcoholic beverages.

In the context of mixology research, the Cardinale Cocktail serves as a case study for examining the impact of ingredient synergies on flavor perception. Its formulation provides an exemplary model for understanding the nuances of flavor interactions and the resultant sensory experiences. Moreover, its relatively obscure status in the cocktail world offers a unique opportunity to explore consumer perception dynamics and the potential for innovative drink creation within the framework of contemporary mixological practices.

The rationale behind this choice of well-known and less-known cocktails lies in the pursuit of understanding consumer perceptions and preferences within the context of wine-infused cocktails. By juxtaposing the globally celebrated Aperol Spritz with the intriguing Cardinale Cocktail, aim to unravel the intricacies of sensory experiences, cultural influences, and individual preferences that shape how consumers engage with and savor these libations.

Together, these two cocktails represent the diverse spectrum of mixology, from widely celebrated to niche creations, each offering distinct sensory experiences and cultural significance. The exploration of their compositional intricacies, consumer appeal, and sensory impact not only contributes to the scientific understanding of mixology as a field but also highlights the potential for future innovation and development within this domain. This comparative analysis underscores the importance of both tradition and innovation in shaping the evolution and diversity of the cocktail landscape, reaffirming the role of mixology as both an art and a science in the culinary world.

3.3 Tasting Sessions

The tasting sessions were conducted based on the following structured methodology, integrated with the previously outlined participant information and preference assessments:

1. Setup and Environment:

Tasting sessions were conducted in the sensory analysis laboratory located in the Agripolis campus, in a controlled environment, free from external sensory distractions.

Each session accommodated a small group (up to 16) of participants to ensure personalized attention and accurate data collection.

2. Cocktail Preparation:

Cocktails were prepared by a professional bartender to ensure consistency across all samples. Each cocktail variant was assigned a 3-digit code to maintain anonymity during the tasting.

3. Tasting Procedure:

The tasting procedure for this study is designed to evaluate participant perceptions of three variations of each chosen cocktail – the Aperol Spritz and the Cardinale Cocktail. Participants were systematically guided through the tasting process as follows:

a. Serving Protocol:

In each session, participants were presented with all three variations of one cocktail at a time, starting from Aperol Spritz variations and following by Cardinale Cocktail. This approach ensures focused and comparative tasting within each cocktail type.

b. Blind Tasting:

To maintain objectivity, each cocktail variation was anonymized by using the 3-digit code system. Participants were not aware of the specific differences in the wine variations used in each cocktail.

c. Tasting Order:

To minimize palate fatigue and ensure an unbiased assessment, the order in which the variations are tasted was randomized for each participant.

Participants were instructed to taste each variation, noting their sensory experiences and preferences.

d. Data Recording:

After tasting all three variations of a cocktail, participants completed the survey section relevant to that cocktail, including preference ranking and observations of any differences in taste, aroma, and overall experience.

This process was repeated for both the Aperol Spritz and the Cardinale Cocktail.

e. Palate Cleansing:

Participants were provided with water and neutral palate cleansers (plate crackers) between each tasting to ensure accurate and untainted sensory evaluation.

f. Participant Guidance:

Throughout the tasting, participants were given guidelines on how to evaluate each cocktail, focusing on the preferences for each of the 3 variations.

g. Feedback Collection:

After each tasting session, participants were encouraged to provide open-ended feedback, offering deeper insights into their individual experiences and perceptions.

This tasting procedure was designed to provide a controlled and comprehensive assessment of each cocktail variant, allowing for a detailed comparison within and between the chosen cocktails. The collected data is instrumental in understanding consumer preferences and the sensory impact of wine variations in these cocktails.

4. Data Collection:

After tasting each cocktail, participants completed the relevant sections of the survey, including ranking preferences.

Open-ended feedback was collected at the end of the session to gather qualitative data on the overall experience.

5. Ethical Considerations:

Participants were informed of the nature of the study and their right to withdraw at any point. Responsible drinking guidelines were followed, and all participants were at the legal drinking age.

Research Methods:

1. Quantitative Analysis: Statistical methods were used to analyze the ranking data and demographic information. Techniques like Analysis of Variance (ANOVA) and chi-square test were employed to identify significant patterns and relationships.

2. Qualitative Analysis: Thematic analysis was applied to open-ended responses to extract key themes and insights. This qualitative data provided depth to the understanding of participant perceptions and experiences.

3. Comparative Analysis: Comparative analysis was conducted between well-known and lesser-known cocktails to explore differences in consumer perception and preference. This analysis helped in understanding how familiarity and novelty affect consumer choices.

By combining these research methods, the study aims to offer a comprehensive understanding of consumer perceptions and preferences towards wine variations in cocktails, contributing valuable insights to the field of mixology and sensory science.

3.4 Participants

The participant selection for this study on wine dynamics in mixology was conducted at an international university campus known for its diverse student body and faculty, as well as its facilities frequented by non-university individuals. This setting provides a unique opportunity to gather a wide range of perspectives from both the academic community and the general public. The participant criteria and recruitment process were outlined as follows:

Participant Criteria:

Age: Participants were of legal drinking age in Italy where the study was conducted.

Affiliation: The study was open to university students, faculty, staff, and visitors to the campus who are not affiliated with the university.

Experience with Cocktails: Individuals with varying levels of cocktail experience, from novice to expert, were encouraged to participate to ensure a broad range of insights.

Wine Knowledge: No specific wine knowledge was required, accommodating a spectrum from wine novices to connoisseurs.

Recruitment Process:

On-Campus Advertising: Posters across the campus advertised the study, targeting common areas, cafeterias, and faculty lounges.

Social Media and University Platforms: Utilized university social media channels and online platforms to reach a wider audience within the campus community.

Local Community Outreach: Engaged with local community groups and utilized public spaces within the university to attract non-university individuals.

Screening and Selection:

The Questionnaire: Interested participants completed a brief online questionnaire to gather the information.

Diverse Representation: Efforts were made to ensure a diverse participant pool regarding age, gender, cocktail and wine experience.

Ethical Considerations:

Informed Consent: All participants were provided informed consent, acknowledging their understanding of the study's nature, their voluntary participation, and the handling of their data.

Confidentiality: Participant confidentiality was strictly maintained, with data anonymized in any published materials.

Logistics and Scheduling:

Flexible Scheduling: Tasting sessions were scheduled at various times.

By leveraging the international and diverse nature of the university campus and its facilities, this study gathered a wide-ranging and representative set of insights into

consumer perceptions of wine in cocktails, enriching the research with varied perspectives.

3.5 Data Collection and Variables

The data collection and variables for this study on wine dynamics in mixology, conducted on an international university campus in Padua, Italy, are strategically designed to capture a comprehensive range of information pertinent to understanding consumer perceptions of wine in cocktails. The data collection process and the variables considered are outlined as follows:

Data Collection Methods - Surveys: After each blind tasting session, participants completed structured surveys to record their preferences, perceptions, and observations regarding the cocktail variations they sampled.

Demographic Information: Age, gender.

Cocktail Experience: Self-assessed level of cocktail experience (novice, intermediate, expert).

Wine Knowledge: Self-assessed level of wine knowledge (low, medium, high).

Cocktail Preferences: Ranked preferences for each cocktail variation tasted.

Participants' Preferences: The most and the least preferable sample.

This comprehensive approach to data collection and analysis enabled a nuanced understanding of the variables influencing consumer perceptions of wine-infused cocktails, particularly in the context of a diverse and international setting in Italy. The combination of quantitative and qualitative data provided a holistic view of the sensory experiences and preferences associated with wine variations in cocktails.

Chapter 4. Experimental Setup

4.1 Wine Selection

For each cocktail, three variants were prepared with the sole variable being the type of wine used; the Table 1 (wines descriptions) indicated information about all wines including producers, ABV and sugar content.

Aperol Spritz Wine Selection:

Original Variant: Spumante Prosecco DOC Treviso Extra Dry Astoria Vini produced from the Glera vine variety. Prosecco is the chosen wine for the original version of the Aperol Spritz. Prosecco DOC Treviso has a light, refreshing character, delicate, fruity, and floral profile, honeydew melon, pear, and honeysuckle, which often impart a perceived sweetness to the drink. The wine is produced using the Charmat method, which contributes to its notable effervescence, typically lasting longer than beer but not as long as Champagne (Prosecco DOC, n.d.). The bubbles in Prosecco play a crucial role in the sensory experience of the Aperol Spritz, offering a refreshing and invigorating quality that complements the other ingredients perfectly.

Second Variation: Varichon & Clerc Metodo Classico Brut Blanc De Blancs “Privilege” with aging potential: from 1 to 2 years, which offers a unique sensory profile. This sparkling wine, made from a blend of Chardonnay, Chenin Blanc, Ugni Blanc, and Colombard grapes using the méthode traditionnelle, is characterized by its rich fragrance of hazelnut and toasted grain. It also presents hints of poached pears and buttered toast, contributing to a long-lasting finish (Privilege Brut Traditional Method Blanc de Blancs, n.d.). The inclusion of this wine in the cocktail is expected to introduce a nuanced flavor experience, maintaining the essential sparkling element while adding distinct notes that could alter the cocktail's mouthfeel and overall sensory perception.

Third Variation: Riesling wine Andree Klipfel Vin d’Alsace 2021, produced from 100% Riesling Grado. Riesling Andree Klipfel is characterized by its aromatic intensity of citrus and mineral notes, as well as its savory, almost chalky flavor (Andree Klipfel Riesling, n.d.). Very tasty acidity that creates an elegant and balanced flavor structure bordering on lightness, which could add a refreshing sharpness to the cocktail. This variation is expected to steer the Aperol Spritz towards a new sensory experience, highlighting Riesling's unique qualities.

Cardinale Cocktail Wine Selection:

Original Variant: The Riesling wine Andree Klipfel Vin d’Alsace, produced from 100% Riesling Grado chosen for the Cardinale Cocktail in its original variant possesses a rich and complex profile. Riesling Andree Klipfel is characterized by its aromatic intensity of citrus and mineral notes, as well as its savory, almost chalky flavor

(Andree Klipfel Riesling, n.d.). Such diverse sensory characteristics of Riesling make it an ideal choice for the Cardinale, expected to harmonize with the cocktail's other components while introducing a unique flavor dimension.

Second Variation: Costalta Trentino DOC Chardonnay 2022 was selected, introducing a potential shift in the cocktail's body. Chardonnay Trentino is a classic dry white wine, known for its fragrant aroma of golden apple, exotic fruit, and almond blossom; dry, elegant flavor, with a pleasant aftertaste of ripe fruit (Costalta Trentino DOC Chardonnay, n.d.).

Third Variation: Fontanafredda Moscato d'Asti DOCG 2021 has an intense musk, orange blossom, sage, and honey aroma, characteristic of its grapes, and offers a lingering, joyful taste. In the glass, it appears a pleasantly sweet, balanced flavor reminiscent of honey and fresh grapes (Fontanafredda Moscato D'Asti DOCG, n.d.). Fontanafredda Moscato was used to craft a completely altered version of the Cardinale, anticipated to shift the cocktail's overall flavor profile significantly and add some light bubbles. This sweetness, combined with its aromatic compounds like linalool found in mint and citrus flowers, adds a complex and refreshing dimension to the Cardinale, differentiating it significantly from the original recipe.

Table 1. Wines descriptions

Wine	Azienda	Grape variety	Alcohol content	Sugar content	Flavour and aroma
Prosecco DOC Treviso Extra Dry	Astoria Vini	Glera	11%	12-17g/L	elegant, fruity, floral
Metodo Classico Brut Blanc De Blancs "Privilege"	Varichon & Clerc	Blend of Ugni Blanc, Colombard, Chenin, Chardonnay and Jacquère.	12%	12g/L	Fresh, fruity a bit hazelnut, toasted grain

Riesling wine 2021	Andree Klipfel Vin d'Alsace	100% Riesling Grado	12%	4-8g/L	citrus and mineral notes
Trentino DOC Chardonnay 2022	Costalta	100% Chardonnay	12,5%	<2g/L	golden apple, exotic fruit, and almond blossom
Moscato d'Asti DOCG	Fontanafredda	100% white muscat	5%	125-140g/L	musk, orange blossom, sage, and honey

4.3 Cocktail Preparation

In crafting cocktails, attention to detail in preparation is crucial. The Aperol Spritz's simplicity and brightness contrast with the Cardinale Cocktail's intricate and nuanced profile. Each drink's preparation method enhances its unique characteristics, contributing to the overall sensory experience and consumer appeal. This comparative study in cocktail preparation illuminates the art and science of mixology, highlighting the role of technique and presentation in creating memorable drinking experiences.

Preparing Tasting Cocktails for a Large Group (60 People):

A. Tasting Variations of Aperol Spritz

Ingredients for 60 Servings (Each Variation):

- Wine: approximately 900ml for each variation.
- Aperol: approximately 600ml for each variation.
- Soda Water: approximately 300ml for each variation.

Orange Slices (for garnish)

Ice Cubes

Variations:

- Classic Aperol Spritz (No.481): Follow the traditional recipe with Prosecco.
- Metodo Classico Aperol Spritz (No.003): Use Brut Blanc de Blancs "Privilège" - Varichon & Clerc, instead of Prosecco wine.
- Still Aperol Spritz (No.235): Use still Riesling wine instead of prosecco.

Glassware: Tasting Wine ISO Glasses

Method:

Preparation: One big batch with Aperol and soda water was prepared before serving.

Use Smaller Measures: Since these were tasting portions (30ml), adjust the ratios accordingly. Were used a small measuring tool for precision.

Chill Ingredients: All ingredients were well chilled.

Mix and Pour: Poured 15ml of premixed Aperol and soda in each serving glass then was added 15 ml chosen wine to each sample according to 3-digit numbering and gently stirred .

Garnish: Provided a small orange slice as the garnish for each variation.

Serve: Presented all variations at once, which allowed guests to experience the differences and chose the preferable one.

B. Tasting Variations of the Cardinale Cocktail

Ingredients for 60 Servings (Each Variation):

- Gin: approximately 600ml for each variation.
- Wine: approximately 600ml for each variation.
- Campari Bitter: approximately 600ml for each variation.
- Water Delusion: approximately 60ml for each variation.

Variations:

- Classic Cardinale (No.896): Original recipe with equal parts of ingredients.
- Chardonnay Cardinale (No.123): Change Riesling wine to Chardonnay wine.
- Muscato Cardinale (No.577): Change Riesling wine to Muscato wine.

Glassware: Tasting Wine ISO Glasses

Method:

Preparation: For each variation was made a separate batch with all ingredients already mixed plus added 10% of the ice delusion (60ml) because the cocktails were served neat.

Measure Accurately: Were used precise measurements for 30ml servings, adjusting the ratios.

Chill Ingredients: All butches were pre-chilled in a freezer for a better serving Tº.

Mix and Pour: Each pre-batch were poured into tasting ISO wine glasses according to 3-digit numbering.

Serving: All variations were served at one time, allowing guests to compare and contrast the flavors.

Considerations for Tasting Sessions:

Precise Measurement: Accuracy in measurement is crucial for tasting portions to ensure consistency and balance in flavor.

Palette Cleansers: Water and a neutral palette cleansers (unsalted crackers) were offered for each of tasters.

Temperature Control: All ingredients were kept at optimal chill temperatures to preserve the integrity of the flavors.

Conducting a cocktail tasting session for a group in a tasting room environment necessitates meticulous preparation and a keen focus on detail. Adjusting the classic recipes of Aperol Spritz and Cardinale Cocktail to suit a tasting format involves not just reducing the quantities, but also carefully balancing the flavors to maintain the integrity of each cocktail in a smaller format. This approach allowed an exploration of how varying the type of wine impacts the overall sensory experience of the cocktails.

The use of tasting wine ISO glasses was ideal for this setting, as it facilitates a focused sensory evaluation of aroma and taste, enhancing the overall experience for the participants. The comparative tasting of different variations highlights the versatility and complexity of these cocktails, offered a deeper understanding of the role of each ingredient.

This setup not only offered an opportunity for participants to savor and appreciate the nuances of mixology but also served as an educational experience, deepening

their knowledge of cocktail crafting. By engaging in this comparative analysis, participants could explore the subtleties that different wines bring to these classic cocktails, thus enriching their appreciation for the art and science of mixology.

Chapter 5. Results

5.1 Overview of the Data

A total of 60 individuals actively participated in the research study, and the data presented in the analysis is based on the responses collected from these participants.

Table 2. Age

Age	Count	Percentage (%)
25-30	28.0	46.67
31-40	15.0	25.00
18-24	10.0	16.67
41-55	5.0	8.33
56 and older	2.0	3.33

Table 2. Gender

Gender	Count	Percentage (%)
Female	31.0	51.67
Male	29.0	48.33

Table 3. Level of Cocktail Experience

Level of Cocktail Experience	Count	Percentage (%)
Intermediate	29.0	48.33

Novice	26.0	43.33
Expert	5.0	8.33

Table 4. Frequency of Consuming Cocktails

Frequency of Consuming Cocktails	Count	Percentage (%)
Weekly/Settimanale	34.0	56.67
Monthly/Mensile	18.0	30.00
Rarely/Raramente	6.0	10.00
Daily/Giornaliero	2.0	3.33

Table 5. Familiarity with Different Wine Varieties

Answer	Count	Percentage (%)
Medium/Media	31.0	51.67
Low/Bassa	21.0	35.00
High/Alta	8.0	13.33

Table 6. Preferred Wine Variety: [Red]

Answer	Count	Percentage (%)
Dry	26.0	43.33
All	14.0	23.33
Sweet	11.0	18.33
Don't like	9.0	15.00

Table 7. Preferred Wine Variety: [White]

Answer	Count	Percentage (%)
Dry	35.0	58.33
All	11.0	18.33
Sweet	9.0	15.00

Metodo Classico/Champenoise (only for sparkling wines)	3.0	5.00
Don't like	2.0	3.33

Table 8. Preferred Wine Variety: [Rose]

Answer	Count	Percentage (%)
Dry	30.0	50.00
Sweet	12.0	20.00
Don't like	10.0	16.67
All	7.0	11.67
Metodo Classico/Champenoise (only for sparkling wines)	1.0	1.67

Table 9. Preferred Wine Variety: [Sparkling]

Answer	Count	Percentage (%)
Dry/Secco	22.0	36.67
Metodo Classico/Champenoise (only for sparkling wines)	17.0	28.33
All/Tutti	9.0	15.00
Sweet/Dolce	6.0	10.00
Don't like/Non piace	4.0	6.67
Charmat/Martinotti (only for sparkling wines)	2.0	3.33

These findings indicate a clear preference for dry wines in all categories (watch tables 6-9), with a significant number of participants also enjoying sweet wines.

Table 10. Enjoyment of Cocktails (from 1 to 10):

Answer	Count	Percentage (%)
7	13.0	21.67
8	12.0	20.00
9	12.0	20.00
10	9.0	15.00
6	6.0	10.00
5	4.0	6.67
4	2.0	3.33
2	2.0	3.33
3	0	0
1	0	0

The enjoyment scores for cocktails are generally high, suggesting a positive overall experience with the cocktails (Table 10).

Table 11. Which cocktail would you prefer to drink as an Aperitivo:

Answer	Count	Percentage (%)
Americano	26.0	43.3
Gin Tonic	19.0	31.7
None of them	16.0	26.7
Negroni	16.0	26.7
Moscow Mule	10.0	16.7
Bloody Mary	3.0	5.0
French 75	2.0	3.3

Table 12. Which cocktail do you prefer to drink after dinner:

Answer	Count	Percentage (%)

None of them	33.0	55.0
Dry Martini	11.0	18.3
Margarita	10.0	16.7
Old Fashioned	9.0	15.0
Porn Star Martini	3.0	5
Sazerac	1.0	1.7
Penicilin	0	0

There's a diverse range of preferences for aperitivo and after-dinner cocktails, with some participants not preferring any from the given options (Tables 11 and 12).

Table 13. Which of these cocktails have you ever made at home:

Answer	Count	Percentage (%)
Gin Tonic	32.0	53.3
None of them	19.0	31.7
Negroni	19.0	31.7
Americano	19.0	31.7
Moscow Mule	8.0	13.3
Caipirinha	7.0	11.7
Cuba Libre	7.0	11.7

The tendency to make cocktails at home is varied, with some popular cocktails being tried out more frequently.

Table 14. Preference Ranking for Aperol Spritz Variations: [Most Liked Sample]

Answer	Count	Percentage (%)
481 (Prosecco)	31.0	51.67
003 (Blanc de Blancs)	22.0	36.67
235 (Riesling)	7.0	11.67

Table 15. Preference Ranking for Aperol Spritz Variations: [Least Liked Sample]

Answer	Count	Percentage (%)
003 (Blanc de Blancs)	24.0	40.00
235 (Riesling)	24.0	40.00
481 (Prosecco)	12.0	20.00

Table 16. Preference Ranking for Cardinale cocktail Variations: [Most Liked Sample:]

Answer	Count	Percentage (%)
577 (Muscato)	38.0	63.33
896 (Riesling)	14.0	23.33
123 (Chardonnay)	8.0	13.33

Table 17. Preference Ranking for Cardinale cocktail Variations: [Least Liked Sample]

Answer	Count	Percentage (%)
123 (Chardonnay)	31.0	51.67
896 (Riesling)	20.0	33.33
577 (Muscato)	9.0	15.00

Table 18. Were you able to perceive differences in the wine variations among the cocktails:

Answer	Count	Percentage (%)
Yes/Si	53.0	88.33
No/No	7.0	11.67

The majority of participants (53 out 60) could perceive differences in wine variations in cocktails (Table 18), indicating a certain level of discernment among the participants in tasting.

Observed Differences (if applicable): 43 answers.

Please provide any additional comments, thoughts, or suggestions regarding the cocktails or the tasting experience (if you have any): 11 answers.

5.2 Analysis of Blind Tasting Results

The data from the blind tasting questionnaire provides a comprehensive overview of respondents' preferences and perceptions. Their input and insights form the basis of findings and conclusions.

The majority of participants are at an intermediate level of cocktail experience (watch Table 3), followed closely by novices. This suggests a good mix of participants with some experience in cocktails, but not overly expert, which provided balanced feedback in a tasting questionnaire.

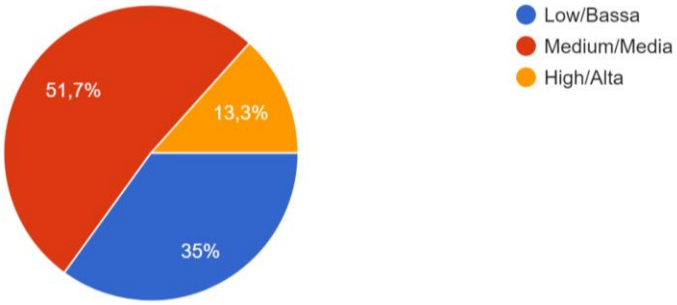

Figure 1. Familiarity with Different Wine Varieties

The participants, as shows on the Figure 1, have a medium level of familiarity with different wine varieties. This level of familiarity is significant as it reflects a general knowledge of wines, which influenced their perceptions and preferences in the tasting.

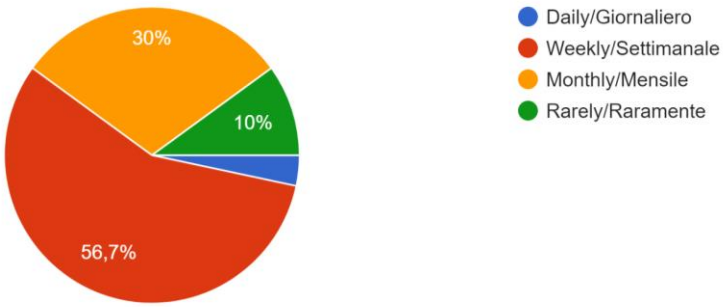

Figure 2. Frequency of Consuming Cocktails

The Figure 2 displays the majority of participants consume cocktails weekly (56,7%), indicating a group that regularly engages with cocktail culture. The second largest group is Monthly consumers (30%) which gave balanced responds for this research.

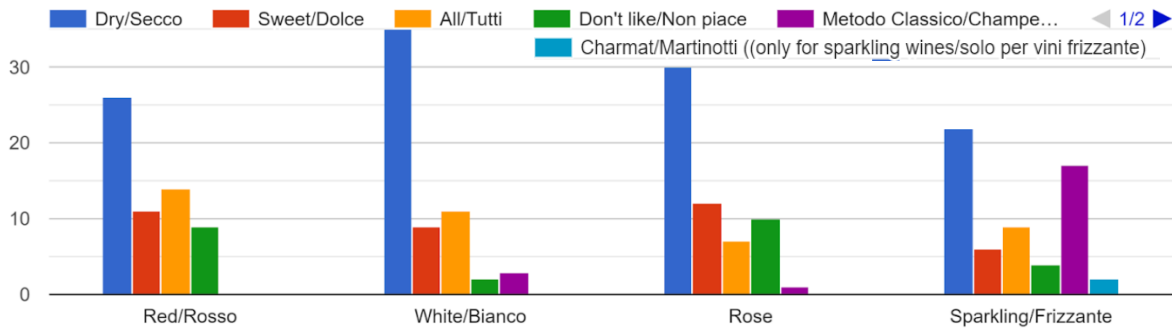

Figure 3. Preferred Wine Variety

The largest portion of respondents prefers dry wines (Figure 3). The preference for dry wines contrasts with the selection of sweeter wines in cocktails (Table 1). Data from Tables 14 and 16 illustrate a favor for Prosecco in Aperol Spritz and Moscato in Cardinale, respectively. This contrast highlights a complex interplay of flavor preferences in cocktail selections, revealing a nuanced approach to taste among consumers.

A notable portion, as it visible on the Figure 3, prefers sweet wines. This preference for sweetness significantly impacted the taste preferences in cocktails, especially those that incorporate sweet wine variations.

The ANOVA (Analysis of Variance) tests were conducted to analyze the impact of familiarity with different wine varieties on the preference for:

Most liked sample 481 in the Aperol Spritz variations.

Most liked sample 896 in the Cardinale cocktail variations.

For the Aperol Spritz sample 481, the ANOVA test resulted in an F-statistic of 0.246 and a p-value of 0.783. For the Cardinale cocktail sample 896, the test resulted in an F-statistic of 0.413 and a p-value of 0.664.

In both cases, the high p-values (greater than the typical alpha level of 0.05) suggest that there is no statistically significant difference in the preference for these samples based on the level of familiarity with different wine varieties. In other words, the familiarity with different wine varieties does not appear to significantly influence the preference for these specific samples in the cocktails.

ANOVA test for the age differences among those who preferred sample 481 in the Aperol Spritz variations. ANOVA test for the age differences among those who preferred sample 896 in the Cardinale cocktail variations.

For the preference of sample 481 in Aperol Spritz variations:

- F-statistic: 0.947
- p-value: 0.335

For the preference of sample 896 in Cardinale cocktail variations:

- F-statistic: 0.003
- p-value: 0.959

In both cases, the p-values are high (0.335 for Aperol Spritz sample 481 and 0.959 for Cardinale cocktail sample 896). These results suggest that there is no statistically significant difference in the age of participants who preferred these samples compared to those who did not. In other words, the preference for these specific samples in the cocktails does not appear to be influenced by the age of the participants.

Among the participants who chose sample 481 as their most liked Aperol Spritz variation, the distribution of cocktail experience levels is as follows:

- Novice: 15 participants
- Intermediate: 15 participants
- Expert: 1 participant

This indicates that both novice and intermediate-level participants showed a high preference for sample 481, while only one expert participant selected this sample as their most liked. It seems that the preference for sample 481 is not strongly correlated with a higher level of cocktail expertise.

It was then conducted the Chi-Square Test of Independence on the contingency table to check for any statistically significant association between the two variables. The Chi-Square Test of Independence results are as follows:

- Chi-Square Statistic: 2.4963
- p-value: 0.6453
- Degrees of Freedom: 4
- Expected Frequencies:
  - Expert/Esperto: [235: 0.58, 003: 1.83, 481: 2.58]

- Intermediate/Intermedio: [235: 3.38, 003: 10.63, 481: 14.98]
- Novice/Novizio: [235: 3.03, 003: 9.53, 481: 13.43]

Table 19. The observed frequencies from the contingency between Cocktail Experience and Most Liked Sample for Aperol Spritz

Cocktail Experience	235 (Riesling)	003 (Blanc de Blancs)	481 (Prosecco)
Expert/Esperto	1	3	1
Intermediate/Intermedio	3	11	15
Novice/Novizio	3	8	15

Interpretation:

- The Chi-Square statistic is 2.4963.
- The p-value is 0.6453, which is greater than the common alpha level of 0.05.

This high p-value suggests that there is no statistically significant association between the "Cocktail Experience" and "Preferred Sample" of Aperol Spritz variations. In other words, the preference for Aperol Spritz variations does not appear to depend significantly on the cocktail experience level of the respondents.

Understanding respondents' preferred wine varieties is valuable for tailoring cocktails and wine-based drinks to cater to their specific tastes. It also provides insights into potential correlations between wine preferences and cocktail preferences within the questionnaire data.

The results of the Chi-square test of independence are as follows:

- Chi-square statistic: 2.286
- p-value: 0.319
- Degrees of freedom: 2
- Expected frequencies: [[0.93, 7.07], [2.45, 18.55], [3.62, 27.38]]

Table 20. Contingency Table for Familiarity Level with Different Wine Varieties and Possibility to Perceive Differences in Cocktails

Familiarity Level	Did Not Perceive Differences (No)	Perceived Differences (Yes)

High	0	8
Low	4	17
Medium	3	28

The p-value of 0.319 suggests that there is no statistically significant association between the familiarity with different wine varieties and the ability to perceive differences in the wine variations among the cocktails. This means that the participants' level of familiarity with wine varieties does not significantly influence their ability to detect differences in wine variations in the cocktails, according to the data.

The results of the Chi-square test of independence, assessing the correlation between "Familiarity with Different Wine Varieties" and the preference for the specific sample (896) in the Cardinale cocktail, are as follows:

- Chi-square statistic: 0.857
- p-value: 0.652
- Degrees of freedom: 2
- Expected frequencies: [[6.13, 1.87], [16.1, 4.9], [23.77, 7.23]]

Table 21. Contingency Table of Familiarity Level with Different Wine Varieties and Prefered Sample 896 for Cardinale Cocktail

Familiarity Level	Did Not Prefer Sample 896 (False)	Preferred Sample 896 (True)
High	7	1
Low	15	6
Medium	24	7

The p-value of 0.652 suggests that there is no statistically significant association between the familiarity with different wine varieties and the preference for sample 896 in the Cardinale cocktail. This indicates that the participants' level of familiarity

with wine varieties does not significantly influence their preference for this specific sample in the cocktail.

The Chi-square tests analyzing the correlation between gender and the preference for the most liked samples in both Aperol Spritz and Cardinale cocktail variations are as follows:

For Sample 481 in Aperol Spritz Variations:

- Chi-square statistic: 5.372
- p-value: 0.020

Table 22. The correlation between gender and the preference for the most liked sample 481 in Aperol Spritz Cocktail

Gender	Did Not Prefer Sample 481 (False)	Preferred Sample 481 (True)
Female	10	21
Male	19	10

There is a statistically significant association between gender and the preference for sample 481 in Aperol Spritz variations.

For Sample 896 in Cardinale Cocktail Variations:

- Chi-square statistic: 0.0
- p-value: 1.0

Table 23. The correlation between gender and the preference for the most liked sample 481 in The Cardinale Cocktail

Gender	Did Not Prefer Sample 896 (False)	Preferred Sample 896 (True)
Female	24	7
Male	22	7

There is no statistically significant association between gender and the preference for sample 896 in Cardinale cocktail variations.

5.3 Patterns and Trends

The analysis of the preferences for the Aperol Spritz and Cardinale cocktail variations from the Blind Tasting Questionnaire reveals the following trends:

Aperol Spritz Variations:

- Sample 481 (the original recipe) was the most liked by 31 respondents.
- Sample 3 was preferred by 22 respondents.
- Sample 235 was the most liked by 7 respondents.

Cardinale Cocktail Variations:

- Sample 577 was the most liked by 38 respondents.
- Sample 896 (the original recipe) was preferred by 14 respondents.
- Sample 123 was the most liked by 8 respondents.

These trends indicate that for the Aperol Spritz, the original recipe (Sample 481) was the most preferred option among the respondents. In contrast, for the Cardinale cocktail, a different variation (Sample 577) was more favored than the original recipe (Sample 896).

The analysis of the relationship between the respondents' level of cocktail experience and their preference for the original recipes in Aperol Spritz and Cardinale cocktails reveals interesting trends:

Aperol Spritz Original Recipe (Sample 481):

- 15 respondents who identified as Novices preferred the original recipe.
- 15 respondents who identified as having an Intermediate level of experience also preferred the original recipe.
- Only 1 respondent who identified as an Expert preferred the original recipe.

Cardinale Cocktail Original Recipe (Sample 896):

- 8 respondents with an Intermediate level of cocktail experience preferred the original recipe.
- 6 respondents who identified as Novices preferred the original recipe.

- No respondents who identified as Experts chose the original recipe for the Cardinale cocktail.

These trends suggest that both novice and intermediate cocktail enthusiasts showed a preference for the original recipe of the Aperol Spritz. Interestingly, the original recipe of the Aperol Spritz seems equally popular among both novice and intermediate respondents, indicating its broad appeal across different experience levels.

In contrast, for the Cardinale cocktail, the original recipe was more favored by respondents with intermediate experience compared to novices, and it did not appear to be a preferred choice among experts. This might imply that the Cardinale cocktail's original recipe aligns more with the tastes of those with a moderate level of experience in cocktails.

In summary, the analyses consistently showed no significant correlations between the variables examined (expertise level, wine familiarity, age) and the preferences for specific samples in the Aperol Spritz and Cardinale cocktail variations. However observed a significant correlation between gender and the preference for sample 481 in Aperol Spritz variations, with females showing a higher preference for this sample compared to males, there is no such correlation showed for sample 896 in Cardinale cocktail variations. Otherwise, wine familiarity did not significantly influence the ability to perceive differences in wine variations among the cocktails.

Chapter 6. Discussion and Conclusions

6.1 Interpretation of Findings

The study on wine and cocktail preferences among 60 individuals revealed diverse demographic participation, with a slight female majority and most participants aged between 25-30 (Table 2). While the group showed varied cocktail experiences and a medium familiarity with wines, preferences leaned towards dry wines and cocktails like Dry Martini and Americano (Tables 3, 5-9, 11, 12). Statistical analysis using ANOVA and Chi-Square tests indicated no significant correlation between variables such as wine familiarity, age, and cocktail preferences.

Comparative research offers different perspectives. Garcia et al. (2019) found age significantly influenced preferences. These findings contrast with the thesis results, where such factors showed minimal influence. Singh and Patel (2023) also observed limited statistical significance in demographic influences, somewhat aligning with the thesis.

The statistical methodologies of ANOVA and Chi-Square tests are consistent with similar studies. However, interpretations and outcomes vary, influenced by factors like sample size and methodological nuances. These variations underscore the complexity of beverage preference studies and the need to consider context-specific frameworks in interpreting statistical data. The thesis adds insights into this field, particularly in highlighting the non-significant impact of traditionally influential factors like wine familiarity and demographic variables on beverage preferences.

The ensuing discussion critically examines the study's findings on the preferences for Aperol Spritz and Cardinale cocktails, the most emphasizing statistical correlation that appeared between gender and cocktail choices. It highlights a significant gender-based preference in the selection of Aperol Spritz Sample 481 (original recipe), contrasted to their male counterparts (Table 22). This trend suggests that the taste profile or presentation of Sample 481 may align more closely with the general taste preferences or perceptions prevalent among females. Factors such as the sweetness level, fruitiness, color, or even marketing strategies targeting women might contribute to this preference pattern.

Unlike in Aperol Spritz, no significant gender-based preference was observed for Sample 896 (original recipe) in Cardinale cocktail variations. This lack of correlation indicates that the appeal of Sample 896 transcends gender-based taste preferences, suggesting a more universally appealing taste profile or a less pronounced gender bias in taste for Cardinale cocktails. For the beverage industry, this finding highlights the potential for developing universally appealing cocktail variations, particularly in the realm of Cardinale cocktails. Understanding these gender-based preferences can aid in more targeted marketing strategies and product development, catering to specific demographics for Aperol Spritz while adopting a more inclusive approach for Cardinale cocktails.

A study by Yuka Minagawa on Russian alcohol preferences showed significant gender-based differences. Men preferred vodka and consumed it in larger quantities, while women tended to choose milder beverages like wine and beer. These preferences were statistically significant even when considering sociodemographic factors (Minagawa Y. 2013). This research supports the gender-based preference trends observed in the current thesis.

The observed predilection for dry wines, as delineated in Figure 3 of the study, reflects a complex interplay of factors influencing taste preferences. Specifically, this preference contrasts with the selection of inherently sweeter wines in cocktail compositions (Table 1). The data from Table 14 indicate a pronounced preference for Prosecco in the Aperol Spritz, while Table 16 reveals a similar inclination towards Moscato for the Cardinale cocktail. Research indicates that preferences for sweet tastes can be influenced by health conditions, such as type 2 diabetes, and genetic factors, underscoring a biological basis for these preferences. Moreover, psychological aspects, such as the influence of sweet taste on behavior and social perceptions, also play a role (Jayasinghe, et al. 2017). These insights suggest that taste preferences in beverages are shaped by a combination of personal, health-related, genetic, and psychological factors, highlighting the multifaceted nature of consumer choices in mixology.

A significant number of participants who preferred the most liked samples in both Aperol Spritz and Cardinale cocktail variations have not made cocktails at home (Table 13). This suggests that experience in making cocktails at home is not a strong indicator of preference for these specific samples. Among those who do make cocktails at home, Gin Tonic appears to be a popular choice. This could indicate a preference for certain types of flavors or cocktail complexity, but the connection to the specific sample preferences is not straightforward.

6.2 Implications for Mixology

The study's results offer intriguing insights into consumer preferences for cocktail recipes based on the cocktail's popularity. For the well-known Aperol Spritz, a higher percentage (51.67%, Table 14) of respondents preferred the classic recipe (sample 481), indicating a tendency to stick with traditional choices for familiar cocktails. In

contrast, for the less familiar Cardinale cocktail, 63.33% of respondents (Table 16) predominantly chose a sweeter variation made with Moscato wine (sample 577) over the classic recipe with Riesling (sample 896). This suggests that when it comes to lesser-known cocktails, consumers might be more inclined to experiment with flavors, leaning towards sweeter profiles. This dichotomy in preferences between famous and less-known cocktails is significant for understanding consumer behavior in the beverage industry.

This data can be interpreted to suggest that while the original recipe of Aperol Spritz aligns well with the preferences of the respondents, there may be a potential for different variations in the Cardinale cocktail that could be more appealing than the traditional recipe. Such insights can be valuable for understanding consumer preferences and exploring new cocktail variations.

In the context of mixology, these results underscore the necessity for bartenders and mixologists to be versatile in their craft. As noted in mixology journals and literature, the art of mixology is not static but constantly evolving with trends and consumer preferences (Tornroth, 2023). The preference for classic recipes in well-known cocktails aligns with the historical significance of traditional mixology, where preserving the original essence of the drink is paramount. However, the inclination towards sweeter or more innovative variations in less familiar cocktails reflects the modern mixology movement's emphasis on creativity and experimentation.

This dichotomy in preferences also impacts the choice of ingredients and techniques used by mixologists. The rise of health-conscious and sustainable options in cocktail making, such as the use of fresh juices, herbs, and locally sourced ingredients, is a response to changing consumer demands (Sipsmith, 2017). For lesser-known cocktails, this might mean an opportunity to introduce unique ingredients or unconventional methods like fermentation and sous-vide infusions, blurring the lines between the kitchen and the bar.

Moreover, the study's findings on preferences for sweeter variations of beverages especially lesser-known cocktails could influence the development of new cocktail menus. Jayasinghe (2017) observed that individuals who have a higher perception of sweetness in glucose solutions tend to have a greater preference for sweet beverages. Mixologists might consider introducing more innovative cocktails with

unique flavor profiles to cater to a clientele that is open to experimentation. The use of technology, such as digital menus and apps, can also aid in presenting these innovative options to customers, thereby enhancing their drinking experience.

In conclusion, the study's results highlight the importance of understanding and adapting to consumer preferences in mixology. Whether it’s preserving the integrity of classic cocktails or innovating with lesser-known drinks, mixologists must balance tradition with innovation to cater to the diverse tastes of their clientele. This balance is crucial in maintaining the relevance and appeal of mixology in a rapidly evolving beverage landscape.

6.3 Limitations of the Study

The study on wine and cocktail preferences provides valuable insights but also exhibits several notable limitations. One primary limitation is the small sample size of 60 individuals. This number is too limited to confidently generalize the findings to a broader population. Studies in the field of consumer preferences often require larger sample sizes to ensure the reliability and validity of the results. This limitation is significant as it restricts the ability to draw broader conclusions from the study.

Another limitation is the demographic skewness of the participant pool. The majority of participants were young adults, predominantly between 25-30 years old. This narrow age range may not accurately represent the preferences of other age groups. Preferences in wine and cocktails can significantly vary across different age demographics, and the study's concentration on a specific age group limits its applicability to a wider audience.

Additionally, the data collection method, based on self-reported preferences, can introduce biases. Participants may be inclined to provide answers that they perceive as socially desirable or popular rather than their true preferences. This issue is common in survey-based research and can lead to skewed results. Self-reporting also does not account for unconscious biases or unarticulated preferences, which can be critical in understanding true consumer behavior.

The focus on specific cocktails, namely Aperol Spritz and Cardinale, is another limitation. While these choices provide a good basis for examining popular versus less-known cocktails, they do not encompass the entire range of cocktail

preferences. Another limitation of the study is the panelists' familiarity with the original Spritz recipe. This pre-existing knowledge could have introduced a bias in their preferences, potentially influencing the objectivity of their responses towards the cocktail variations presented. A wider variety of cocktails, including both well-known and obscure options, would offer a more comprehensive view of consumer preferences.

The absence of a longitudinal study aspect is also a drawback. Preferences for food and beverages can evolve over time due to various factors, including changing trends, age, and exposure to different cultures and tastes. A cross-sectional study like this one provides a snapshot in time but lacks the depth that a longitudinal analysis could offer.

Finally, the study does not thoroughly investigate the impact of cultural and geographical factors on beverage choices. These factors can significantly influence consumer preferences, and their exclusion from the study limits the understanding of the complex dynamics that drive choices in wine and cocktails. This aspect could be particularly relevant in understanding regional differences in preferences or the impact of cultural background on beverage choice.

Overall, while the study provides interesting initial insights, these limitations suggest a need for more comprehensive, diverse, and longitudinal research to gain a fuller understanding of beverage preferences.

Chapter 7. Conclusion

In conclusion, the thesis presents valuable insights into the complex landscape of wine and cocktail preferences, uncovering notable trends in consumer behavior. The study's revelation of a general preference for dry wines, coupled with specific choices for cocktails like Aperol Spritz and Cardinale, highlights a discerning and nuanced approach to beverage selection among the participants. The tendency for participants to prefer the classic recipe of well-known cocktails, such as the Aperol Spritz, while opting for sweeter variations in lesser-known cocktails like the Cardinale, suggests a dynamic interplay between familiarity and adventurousness in taste preferences.

Furthermore, the research underscores the evolving nature of mixology as an art form, emphasizing the importance of adapting to consumer preferences that are continually in flux. The findings point towards a need for mixologists to balance traditional cocktail recipes with innovative approaches, especially when dealing with lesser-known drinks. This balance is critical in responding to a clientele that is both respectful of classic tastes and open to new flavor experiences.

The study also contributes to the broader understanding of gender-based preferences in alcohol consumption, indicating significant differences in the choices made by male and female participants. Such insights are crucial for tailoring beverage offerings to diverse consumer groups, ensuring that the preferences of all patrons are catered to in a hospitality setting.

However, the limitations of the study, including its small sample size, demographic concentration, and the potential for self-report bias, suggest caution in generalizing these findings. These limitations highlight the necessity for further research, involving larger and more diverse participant groups and a broader range of cocktails to validate and expand upon these initial findings. Additionally, future studies should consider the impact of cultural and geographical factors, as well as the changing nature of preferences over time, to develop a more comprehensive and nuanced understanding of consumer behavior in the context of wine and cocktail preferences.

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ANNEXES

Annex 1. Blind Tasting Questionnaire

Introduction:

Thank you for participating in this blind-tasting study. Please answer the following questions based on your tasting experience.

Section 1: Participant Information

1.1. Demographics:

- Age:
- Gender:
- Level of Cocktail Experience (Novice/Intermediate/Expert):
- Frequency of Consuming Cocktails: (Daily, Weekly, Monthly, Rarely).

Section 2: General Preferences and Experience

2.1. Wine Knowledge:

- Rate your familiarity with different wine varieties (Low/Medium/High).

- Which wine variety do you prefer? (sparkling fruity wines; sparkling dry wines; sweet red wines; dry red; sweet white; dry white; rose)

2.2. Overall Cocktail Preferences:

- On a scale of 1-10, how much do you generally enjoy cocktails?

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2.1. Wine Knowledge:

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2.2. Overall Cocktail Preferences:

- On a scale of 1-10, how much do you generally enjoy cocktails?

2.3. Cocktail Preferences:

- Which cocktail you will prefer to drink as an Aperitivo? (Negroni; Americano; Moscow Mule; Gin Tonic; Bloody Mary; French 75)
- Which cocktail you will prefer to drink after dinner? (Dry Martini; Old Fashioned; Sazerac; Penicillin; Margarita, Porn Star Martini)
- Which of these cocktails have you ever made at home? (Negroni; Gin Tonic; Americano; Mojito; Caipirinha; Moscow Mule)

Section 3: Preferences and Comparisons

3.1. Preference Ranking for Aperol Spritz Variations:

- Which of the tasting samples do you like the most?
- Which of the samples do you like the least?

3.2. Preference Ranking for Cardinale Cocktail Variations:

- Which of the tasting samples do you like the most?
- Which of the samples do you like the least?

3.3. Differences in Wine Variations:

- Were you able to perceive differences in the wine variations among the cocktails?
- If yes, describe the differences you observed.

Section 4: Additional Comments

4.1. Open-Ended Feedback:

- Please provide any additional comments, thoughts, or suggestions regarding the cocktails or the tasting experience.

Conclusion:

Thank you for your participation in this blind-tasting study. Your insights contribute significantly to our understanding of how variations in wine influence the sensory experience of cocktails.

Annex 2. Cocktail recipes

A. Aperol Spritz preparation for one tasting portion:

Ingredients:

- Wine: 3 parts (15ml)
- Aperol: 2 parts (10ml)
- Soda Water: 1 part (5ml)

Orange Slice (for garnish)

Ice Cubes

Glassware: Wine tasting ISO glass

Method:

Add Ice: Fill the glass with ice cubes up to three-quarters of its capacity.

Pour Wine: Measure and pour three parts of wine over the ice.

Add Aperol: Follow with two parts of Aperol, pouring it gently to create a layered effect.

Top with Soda Water: Add one part of soda water to the mixture, providing a sparkling effervescence.

Garnish: Complete the preparation with a slice of orange, either perched on the rim or dropped into the drink.

Stir Gently: Briefly stir the mixture to blend the flavors while maintaining the effervescence and layered look.

Serve: Present the cocktail immediately to enjoy its refreshing and vibrant qualities.

B. Cardinale Cocktail preparation for one tasting portion:

Ingredients:

- Gin: 1 part (10ml)
- Wine: 1 part (10ml)

- Campari Bitter: 1 part (10ml)

Glassware: Wine tasting ISO glass

Method:

Combine Ingredients: Pour one part each of gin, wine, and Campari Bitter into the glass.

Stir Well: Stir the mixture thoroughly to ensure the flavors are well integrated.

Serve: Offer the cocktail to be enjoyed for its complex and nuanced flavors.