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DATING APP INDUSTRY: ANALYZING PORTUGUESE CONSUMERS' PREFERENCES

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Abstract

The rise of online dating has disrupted traditional ways of how people seek romantic connections. This study investigates Portuguese consumers' perceptions of dating apps, specifically Tinder, Bumble, Hinge, and Grindr. By employing conjoint and perceptual maps analysis, key attributes such as privacy, safety, matching algorithms, and premium features were examined. The research reveals that trust, usability, and the perceived value of premium plans significantly influence user satisfaction and purchase intention. The findings provide strategic insights for dating app companies to enhance user experience and engagement, offering tailored recommendations to better align services with consumer preferences in the Portuguese market.

Keywords

Dating Apps, Consumer's Preferences, Consumer's Perceptions, Business Models, User Behavior, Portugal, Marketing Research, Premium Plans.

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1 Introduction

The pursuit of romantic connection and interactions has long been an integral part of any individual across multiple stages of their life. However, in the digital age, the methods of finding love have undergone a dramatic and deep transformation. Dating apps, once viewed with suspicion, have become an inevitable force in forging modern relationships in today's era.

Online dating platforms offer a highly efficient and accessible means for individuals to establish, or start their search of romantic connections, boasting user bases in the hundreds of millions. Insights gleaned from surveys and subsequent studies, which will be further explored, highlight that people of all age groups have actively participated in this widespread consumerism of dating apps for connections. Furthermore, reports suggest a global increase in the use of dating apps, especially among younger generations (Buyukeren et al., 2022).

Our team's motivation stems from a shared curiosity about the intersection of technology and human relationships. We are intrigued by the challenges and opportunities presented by the increase and diversity of dating apps, particularly in terms of monetization strategies and user engagement. Our research seeks to unravel the complexities of subscription models within the dating app ecosystem, and its perceived value among users, shedding light on their impact on user behavior and experiences.

Dating apps have evolved significantly since their first appearance in the market, with various business models adapting to monetize these platforms and features to stand out among the competition. Early dating apps primarily relied on advertising revenue and a hard paywall where users had to pay to even start using the app, while more recent models have shifted towards subscription-based or freemium approaches. Understanding the evolution of dating

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app business models provides valuable insights into the industry's trajectory and future prospects (Gandini & Bandinelli, 2015).

Our decision to focus on the Portuguese market is driven by several factors. Firstly, Portugal represents an emerging market for dating apps with increasing user adoption and interest, presenting unique opportunities for studying evolving consumer behaviors. Secondly, Portugal's cultural and social dynamics may influence dating app usage patterns differently compared to other regions (Business of Apps, 2020), making it an intriguing case study for us to study on a deeper level. Lastly, by focusing on the Portuguese market, we aim to contribute localized, rich and diverse insights that can inform businesses on global strategies for enhancing user experience and engagement in similar cultural context.

The rise of dating apps presents a complex dating landscape, the mass adoption of these apps has fundamentally transformed the landscape of modern romance, providing individuals with unparalleled, fast access to different potential partners and reshaping the dynamics of interpersonal relationships and its initial approach (Appinio Research, 2023). This technological phenomenon has not only facilitated connections but also introduced an intricate interplay of societal, cultural, and economic factors that shape the way people seek and establish romantic connections. In addition, the tensions within the dating app market are multifaceted, encompassing issues such as balancing monetization with user satisfaction, addressing ethical concerns surrounding data privacy, and challenging societal stigmas associated with online dating. Our research aims to explore these tensions and provide actionable insights for industry stakeholders on a localized environment.

Alongside the benefits of increased connectivity and expanded dating opportunities, ethical considerations have emerged as a critical aspect of the dating app landscape. These ethical considerations surround topics like data privacy and the algorithms governing user

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interactions raise critical questions about the nature of love and connection in the digital age and its monetization schemes that operate behind or the technology that makes it so efficient. “Ethics are contextually situated, shaped by a society’s understanding of morality and social conduct and rooted in the norms, practices, and cultural logic of any community.” (Boyd & Danah, 2016).

To gain a comprehensive understanding of dating apps, it will be important to explore the diverse and constantly evolving market these are situated in. There are numerous platforms available, each catering to specific demographics, interests, and even religious or political beliefs. It is crucial to comprehend the unique characteristics and target audiences of these apps and the approach these take towards them.

This work project will focus on a selection of well-known dating apps, including Tinder, Bumble, Hinge and Grindr. Our research aims to examine these apps, which will enable a deeper and rich understanding of the different business models, user preferences, and psychological factors at play within the broader dating app ecosystem. With the aim of gathering and analyzing information on the value perception of different aspects of dating apps, monetization approaches these apps utilize and preferences users have of the existing features offered to them for an extra cost. In addition, localized insights of the Portuguese market are expected to be provided to developers regarding most-valued attributes available for them to align the future development of the applications and its usage in a competitive and efficient manner, aligned with existing and future customer expectations. In addition, this work project will expand on how dating apps can confront and address the societal stigma that surrounds individuals who use dating apps, the impact AI has on the industry and its implication, and a final comment on the matter of exclusivity and stigma.

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In order to address the primary research question, “*What are the key factors influencing Portuguese consumers' preferences and usage patterns of dating apps?*” this work project will start by offering a detailed analysis of key market aspects that cannot be omitted. This includes an in-depth examination of the main software applications that operate within this market and are aligned with our research focus, their distinctive features that sets them apart from the competition, the different business models that can be found today in these apps, and the various challenges they face when applying so. Following this, an in-depth literature review will be conducted with the ultimate goal of shedding light on user-centric design on mobile interfaces, additional monetization strategies employed, consumer journey for possible subscriptions analysis, network and platform effects specific to this industry, churn dynamics faced, and the role of Customer Relationship Management as a strategy to mitigate and predict these challenges. Preliminary interviews will be set up with a diverse range of individuals from different backgrounds and age groups in Portugal, irrespective of their usage of the mentioned platforms. This aligns with our focus on delivering insights within the Portuguese market. Our goal is to capture diverse perspectives on the perceived value of the different features offered by dating apps. After the preliminary interviews are conducted, two detailed surveys will be administered and subsequently analyzed using SPSS software. The first survey will focus on employing factor analysis to capture the dimensions that are most impactful to the user experience, providing insights into the underlying structure of user preferences and behaviors. The second survey will be conducted through the tool Conjoint.ly, with the primary objective of understanding how customers allocate and assign value to the various attributes of dating apps. This conjoint analysis will help identify which features are most valued by users and how different attributes influence their choices, offering a detailed view of customer priorities and preferences. This comprehensive approach aims to provide a deeper insight into the factors that influence user satisfaction and preferences, ensuring a robust analysis of the

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data collected. In addition, we will broaden our research to cover other significant topics within the industry. These topics include the societal stigma associated with individuals who use the premium features of dating apps, the impact of AI on user interactions with the software, including potential threats and its possible solutions, and a comparison between the concepts of exclusivity and stigma within subscription plans. This expanded research will provide a comprehensive understanding on the various dynamics at play in the dating app ecosystem, further enriching our analysis and insights. To conclude, we will provide managerial recommendations along with in-depth conclusions supported by the literature review, interviews and analyses conducted. These recommendations will offer actionable insights aimed at enhancing the perceived value associated with subscriptions to dating apps within the Portuguese Market.

Given the research methods employed throughout this study, it is reasonable to conclude that Tinder is the leading dating app in the Portuguese market, followed by Bumble and Hinge. Grindr, serving the LGBTQ+ community exclusively, also gained significant popularity. Perceptual maps highlight Tinder, Bumble, Hinge, and Grindr's user perceptions, with Component 1 emphasizing interface and subscriptions, and Component 2 focusing on visibility and safety. In addition, the Conjoint analysis emphasized the specific importance of a "Weekly Subscription Fee," while "Privacy & Safety" ranked second, marking how users have concerns about data security, breaches and privacy.

Lastly, conclusions were derived considering additional research on two key attributes, the critical importance of privacy and pricing in shaping user preferences and subscription decisions across dating platforms. Our data analysis has evidenced a strong correlation between user preference and app selection, emphasizing the significance of robust privacy and safety measures. Also, our findings suggest that while price remains a primary factor in user

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decisions, a strategic combination of attributes and features can enhance the perceived value of premium subscriptions overall.

This study aims to enhance our understanding of consumer perceptions and preferences, particularly regarding subscriptions in the dating app industry, thereby contributing valuable insights to the existing body of scientific knowledge in this field.

2 Contextual Background

2.1 Market

The dating app market is a rapidly growing industry, revenue alone in the Online Dating market is projected to reach US\$3.15bn in 2024 and projected for continued growth (Statista, 2024). This growth is fueled by rising smartphone use, internet accessibility, and a growing openness to online dating, particularly among younger generations. Owing to the significant impact of the COVID-19 pandemic on social interactions and behaviors, dating apps are thriving like ever before. “The use of in-app video chatting on Bumble, a feature many users didn’t even know existed before the coronavirus spread, increased 93% (...), with in-app calls and video chats averaging 29 minutes. Hinge, similarly, saw a 30% increase in messaging on the app” (Pepper, 2020). However, it is equally important to acknowledge the transformative impact of COVID-19 on the current landscape. With lockdowns and social distancing measures limiting in-person interactions, many people have turned to dating apps as a safe and accessible way to connect with potential partners (Pui et al., 2022). The societal shift has significantly influenced user behavior in several ways.

The market for dating apps is highly diverse, with a wide range of platforms catering to different generational user bases. Age is a key factor in market segmentation, with specific

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apps targeting distinct demographics such as millennials, Generation Z, and individuals over the age of 50.

For millennials and Generation Z, popular dating apps such as Tinder, Bumble, and Hinge are widely embraced due to their user-friendly interfaces, casual approach to dating, and integration with social media (Appinio Research, 2023). These apps resonate with younger demographics seeking instant connections and engaging experiences.

In contrast, dating platforms like eHarmony and OurTime are tailored to adults aged 50 and above, focusing on compatibility matching and relationship longevity (Hochwald, 2024). These apps prioritize features that resonate with older users, such as security, privacy, and the facilitation of meaningful connections later in life.

Further segmentation is achieved through interests, such as fitness or faith (Richardson et al., 2020). The market caters to both casual encounters, such as Tinder and Bumble, and long-term relationships, such as Hinge and Match.com. Additionally, some apps leverage location for proximity-based connections, such as Happn and Grindr.

The online dating market is dominated by a few key players, including Match Group featuring apps like Tinder, Hinge, OkCupid (Match Group, n.d), other apps like Bumble belong to The Meet Group (Plenty of Fish, n.d), and individual players like Badoo (Badoo, n.d), and eHarmony (eHarmony, 2022). However, the market remains lively due to constant innovation and new entrants. The 'freemium' model is prevalent, offering basic functionalities for free while premium features, such as unlimited swipes or profile boosts, come at a subscription cost (Tinder, 2024). This strategy may raise questions about user retention after finding a face-to-face connection, but the industry leaders are confident in their ability to maintain a loyal user base. Dating apps use user data and algorithms for compatibility matching (Paul & Ahmed, 2024).

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To stand out, apps differentiate themselves through unique features, targeted marketing, and optimized user experience. In the future, the market will adopt AI-powered features such as chatbots and more sophisticated matching algorithms (Sharabi & Guest, 2023, Episode 273). Catering to even more specific demographics and interests will lead to growth. User safety and security will remain a top priority, with verification processes and improved reporting mechanisms becoming increasingly common.

To analyze the complexities of the dating app industry, it is crucial to understand its size, segmentation, key players, and driving forces.

2.2 Defining the Platforms

The dynamic nature of dating apps stems from the constant evolution driven by the pursuit of enhanced user experiences and relevance in the digital universe. In this landscape, technological advancements play a crucial role in shaping how users interact and connect with potential romantic partners. As new features, algorithms, and functionalities are introduced, dating apps continuously adapt to meet the changing preferences and expectations of their users. Moreover, the competitive nature of the industry compels dating app developers to innovate and differentiate their platforms beyond basic features to attract and retain users. This ongoing process of innovation and adaptation ensures that dating apps remain dynamic, responsive, and aligned with the evolving needs of their user base (Schwartz & Velotta, 2018).

At their core, dating apps function as digital intermediaries, connecting users based on shared interests, compatibility, and geographic proximity. These platforms transcend traditional barriers to meeting potential partners, offering a convenient and accessible way for individuals to explore romantic possibilities via their mobile phones. Whether users are seeking casual

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encounters, long-term relationships, or simply companionship, dating apps provide a platform for users to discover and connect with like-minded individuals (Hobbs et al., 2016).

Algorithms within dating apps play a crucial role in guiding user interactions by subtly shaping recommendations based on preferences, behavior patterns, and personalized suggestions. While users maintain decision-making power over their matches, algorithms leverage data analytics to curate tailored matches, enhancing the overall user experience and prolonged satisfaction.

The evolution of recommendation systems within dating apps marks a significant advancement in how individuals navigate and establish connections with potential partners. Through strategic curation and differentiation of match suggestions, these systems play a pivotal role in introducing users to profiles that align with their preferences, thereby reshaping and broadening their dating horizons. By leveraging sophisticated algorithms and user data analysis, dating apps optimize the matchmaking process, enhancing user experiences and increasing the likelihood of meaningful connections. As a result, recommendation systems have become integral tools in modern dating, empowering users to explore diverse relationship possibilities and ultimately find companionship in an increasingly digitalized world (Hu, 2023).

Dating apps are software applications specifically created to facilitate connections between individuals seeking romance, casual sex, or friendship. Typically downloaded onto mobile phones, which are the intended devices for their use, these apps employ algorithms that consider basic factors such as the user's age, gender, the desired partner's gender, and the distance users are willing to travel to meet each other (Orchard, 2019).

Dating apps in Portugal have seen a surge in competition, with numerous alternatives available for individuals seeking romantic connections. This report will concentrate on the primary

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dating applications available in Portugal — Tinder, Bumble, Hinge and Grindr — with additional players that cannot be omitted due to their significant presence and popularity, aiming to provide rich insights into the Portuguese dating app landscape. To provide a more complete and robust understanding of each platform and how each is differentiated in the market, a context for their operation and features will be outlined in this chapter. As a final remark, these apps are designed for mobile phones and its sole purpose of use is to connect with other users who share the same interest. Primary with a romantic intention although not exclusively with that end.

Tinder, launched in 2012, enjoys the distinction of being the first dating app introduced in Portugal. Its early introduction to the market has played a key role in its widespread popularity and its position with the highest number of active users among dating platforms. With its intuitive swipe-based interface, Tinder has revolutionized the way people find potential matches. The app's extensive user base allows for diverse connections, and its algorithm continually learns from user interactions to provide better match recommendations. Tinder's success can also be attributed to its simplicity and gamified user experience, making it a go-to choice for many individuals seeking romantic connections (Similarweb, 2024).

6 Consumer Preferences

6.1 Introduction to Conjoint Analysis

In this work project, we utilized Conjoint Analysis to understand user preferences and inclinations regarding different brands, prices, and the attributes offered by these services, specifically Tinder, Bumble, and Hinge. The main focus is to determine which elements of subscriptions plans – including attributes and prices – are most valued by users.

Conjoint Analysis is a statistical approach commonly employed in market research to assess the relative significance consumers assign to different attributes of a product or service. The fundamental concept behind this method is that any product can be decomposed into different attributes, each of which contributes significantly to the product's overall perceived value. Utilizing this technique enables companies to formulate effective strategies and evaluate how appealing their offerings are to consumers (Tim Stobierski, 2020). Typically, Conjoint Analysis requires at least two attributes or features, each with at least two levels, but generally involves no more than five attributes, each with up to six or seven levels (aytm, 2022).

For the progression of this study, we designed and executed an experiment in form of a survey. We then compared and analyzed the results based on the comparison of attributes and demographic outcomes, providing us with insights into consumer preferences within the context of paid subscription plans in dating apps. Furthermore, we conducted a series of comprehensive analyses to validate and further interpret the data. This included assessing the goodness of fit, analyzing the importance of each attribute to determine their relative impact on consumer decisions, and conducting a Partworth Utilities analysis. We also created a ranked list of concepts, analyzed price sensitivity, elaborated an analysis on the freemium model, and conducted baseline simulations with different scenarios.

6.1.1 Survey

To conduct our survey, we utilized Conjointly, an online platform specifically designed for creating and managing conjoint analysis surveys with advanced, user-friendly tools. This platform is particularly skilled at automating conjoint analysis experiments, a feature indispensable for market research. It provides a suite of resources aimed at helping businesses understand customer preferences and decision-making processes regarding various product features (Conjointly, 2024a)

Within Conjointly we selected the “Brand-Specific Conjoint” approach from the “Conjoint Analysis for Feature Selection and Pricing” suite. This choice was dictated by the inapplicability of other options and the specific needs of our research, which focuses on discerning how users value different attributes across brands. The “Brand-Specific Conjoint” method allows us to accurately gauge consumer valuation of attributes tied to individual brands’ subscription plans. This method is particularly effective for linking consumer preferences directly to brand-specific attributes, thus ensuring our findings are relevant and actionable within the context of dating apps (Conjointly, 2024b)

The survey employs a choice-based format, where respondents are presented with sets of product attributes that are randomly assigned. Participants are shown a series of scenarios from which they can choose or select “None of the above” if none of the presented options align with their preferences.

At the beginning of the survey, participants are immediately presented with a series of scenarios that combine the different brands, attributes, and pricing levels. The design of our survey was based on the insights furnished by our preliminary survey and interviews, which were fundamental in identifying the most important attributes for the conjoint analysis. Since consumers weigh product attributes differently, prioritizing those they find most impactful, it

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is imperative for businesses to accurately distinguish and select attributes that resonate most with consumer preferences (Liesionis & Pilelienė, 2007).

Drawing on insights from our preliminary studies, the selection of attributes was refined. The final list included the brand/dating app, possibility of seeing who liked you, privacy and safety level, the matching algorithm, option for unlimited swipes, and the cost of a weekly subscription (Appendix 5, Table 25).

Subsequent to the attribute selection process, each attribute was break down into specific levels, ensuring clarity for participants and the alignment of their choices with our analytical and research requirements.

Concluding the survey, some demographic information was collected from participants, including gender, age group, education level, employment status, sexual orientation, and monthly income (Appendix 5, Table 26). The inclusion of demographic questions is vital as they ensure that the sample accurately represents the intended population, enhancing the reliability and applicability of the findings (Hughes et al., 2016).

6.1.2 Methodology

In conjoint analysis experiments, participants assess pairs of profiles with randomly varied attributes to determine their preferences. This process uses statistical tests to evaluate the attributes' significance and other factors that help on the decision-making process. Moreover, it requires addressing multiple hypothesis testing due to the many features and levels tested at the same time with different combinations (Liu & Shiraito, 2023).

Our research made use of the capabilities offered by the program Conjointly for executing the survey tailored to the standard requirements of a conjoint analysis. The platform's diversity of template designs afforded the flexibility to customize the presentation of the survey to best

fit the research needs. The “Basic settings” tab was used to detail inputs of various attributes and their corresponding levels – each carefully selected to represent the value propositions of different dating app features.

Advancing to the next step, the “Add questions” tab was utilized to create a set of demographic questions, serving as the end of the survey. These questions were integral in building a comprehensive picture of the participant sample capturing essential information.

When launching the experiment, the targeting strategy to potential respondents was reached out by the use of social media platforms such as Instagram, Facebook, and WhatsApp.

As the survey was shared, Conjointly tracking mechanism recorded all of the completed responses and filtered out those that did not meet the study’s objective. In addition, this filtering mechanisms has proven to be vital for the further construction of a representative sample – a pillar in ensuring the validity of our findings (Young, 2023). The platform’s mechanism combined with our monitorization allowed to come up with a sample that reflected the diverse landscape of dating app users, thus providing a solid base for the upcoming stages of data analysis.

6.2 Application

6.2.1 Attributes and Levels

The attributes selected for this study, as previously outlined, include the brand/dating app, possibility of seeing who liked you, privacy and safety level, the matching algorithm, option for unlimited swipes, and the cost of a weekly subscription.

Brand/Dating App

Selecting the brand as an attribute acknowledges that a brand's identity is filled with different product attributes, user relationships, and the brand's overall credibility, all of which are essential in setting a dating app apart in a competitive industry and shape user preferences (Keller & Richey, 2006). For instance, a brand's strength and recognition can significantly direct consumer choices, underlining the brand's importance in the conjoint analysis. The brands selected for the survey – Tinder, Bumble, and Hinge – are among the most popular and frequently used in Portugal (Cave, 2024). This choice is supported by insights drawn from our preliminary interviews, ensuring the brands are relevant of current user preferences within the focus market.

Seeing Who Liked You

Curiosity has long been recognized as a fundamental aspect of human nature, one that spurs the quest for knowledge and understanding, as discussed in different research on consumer behavior (Hsee & Ruan, 2020). Furthermore, the concept of social approval in online platforms, particularly in dating apps, is anchored in the deep human desire for social validation (Ballara, 2023).

The feature “seeing who liked you” appears as both an indicator of social recognition and also a prompt for connection within these social apps. This attribute is typically offered for dating apps' premium subscribers and is central to the research, which aims to understand its value to users. The survey delineates this feature into two levels: the availability of this feature that allows users to see who likes them (“Yes”) and its absence (“No”), providing a clear distinction of user preferences in the context of mutual interest acknowledgment.

Privacy & Safety

In modern digital interactions, particularly those involving dating apps, users tend to demonstrate a deep appreciation for their privacy. Unlike the other social media platforms such as Instagram and Facebook, dating platforms retain a deeply personal value. Sensitive personal information is frequently shared by users of dating apps, therefore protecting it is crucial.

The establishment of trust and self-determination in intimate relationships is heavily dependent on privacy and safety. The very basis of relationships cultivated through dating apps is predicted on the ability to share and reciprocate personal information. Significant psychological, relational, and emotional advantages result from this sort of personal self-disclosure (Ho et al., 2018). Therefore, it is fundamental to acknowledge and safeguard privacy as a right, particularly in the context of dating apps, where the consequences of revealing personal information are not merely abstract but tangibly impactful on the people's lives.

Moreover, the recognition of privacy as a right is indispensable in maintaining individual autonomy and guaranteeing a safe environment. People feel comfortable to express themselves in these digital spaces without the fear of judgment or adverse consequences. For this matter, the accessibility and permanence of sharing information online increases the need for a protective environment (Levy & Schneier, 2020).

This research assigns three different levels – Low, Medium, and High – to the attribute in the survey. Understanding the different characteristics of this feature is essential for an in-depth analysis as it exposes the various levels of user estimation of the significance of privacy and safety.

Matching Algorithm

Matching algorithms play a crucial part in online dating, but their effects go beyond simple matchmaking; they are instrumental in creating safer and more equitable user experiences. Dating online has evolved from simple profile perusal to intelligent algorithmic matching. These progressions are meant to improve the process of potential partners, thereby increasing user satisfaction. Notably, algorithms have become essential for improving the user experiences, mainly by streamlining the search for compatible partners (Sharabi, 2022).

Three levels were created for the research: Random, Based on User Preferences, and Based on Behavior. The initial level is analogous to a chronological model where matches are displayed in a time-based order corresponding to the order in which users join the app or the time, they last used the app, without any algorithmic filtering or prioritization.

Furthermore, the second level integrates user-directed criteria. Individuals may choose from a variety of filters and preferences (such as age range, interests, location, etc.), which the algorithm then uses to curate and suggest potential matches.

Finally, the last level introduced is based on the user's behavioral journey within the platform. Under this approach, the algorithm examines independently user profiles, preferences, and interactive behavior to recommend matches or to show compatible matches to users. This method relies only on the algorithm's ability to find compatible matches based on its understanding of user behavior and compatibility indicators.

Unlimited Swipes

In the dating apps industry like Tinder, Bumble, and Hinge, "Unlimited Swipes" is a paid feature available within their subscriptions plans. This feature allows users to swipe without limitations, giving them complete freedom to express their preferences. Swipe restrictions have been introduced by dating apps to counter the "choice overload effect", which suggests

that having too many alternatives can lower user satisfaction. According to some studies, having fewer options can make individuals happier with their decisions (Groenen, 2023). As a result, this attribute's analysis divides it into two levels: "Yes", which indicates the availability of unlimited swiping capabilities, and "No", denoting that there are limitations.

Weekly Subscription Fee

The pricing of subscription plans is a crucial component of dating apps business strategy and is defined as the regular fee users pay to access services continuously. This charge usually consists of various elements, including one-time activation fees, ongoing usage fees, and possible service cancellation fees. All of pricing formulation is indicative and based on a cost structure including general factors, such as marketing maintenance and operational expenses (Fruchter & Sigué, 2013).

An analysis of weekly subscription plans prices was conducted from the different dating apps (Tinder, Bumble, and Hinge). These apps showed a pronounced variability in prices between 12,99€ and 24,99€, with Bumble's plan "Bumble Boost" being an outlier at 5,99€. Such diversity shows the tiered nature of subscription models, where more expensive plans typically offer more features. Moreover, it is a common practice for these apps to offer a range of subscription lengths, with the price per week generally decreasing for longer commitments.

According to the preliminary interviews done for this study, participants tend to respond that prefer free plans due to the amount of features they offer that are enough and adequate for the basic needs. When considering paid plans, the main barrier is the cost. Research suggest that the availability of a free service option dramatically reduces the likelihood of users to switch to premium versions, as it satisfies their core requirements without incurring additional expenses (Wagner, 2013).

In response to these insights, a strategic decision was made to investigate the effects of lower prices through the conjoint analysis. Proposed prices – 3,99€, 5,99€, 7,99€, and 9,99€ - deviate from dating apps standard pricing structures and intend to gauge user price sensitivity. High prices are justifiable and successful when aligned with the observed value of the product. On the other hand, pricing that doesn't align with the product's perceived value risk becoming unprofitable. Therefore, this pricing experiment seeks to determine if lowering prices will improve market penetration and establish a more lucrative market niche (Dolgui & Proth, 2010).

6.3 Data Analysis

The survey was launched and distributed upon ensuring that all components were operating as intended and that all established survey requirements were being met. The initial accurate response was recorded on April 16, 2024, at 09:43 AM. Data collection ended with the last valid response on May 2, 2024, at 10:19 AM, coinciding with the generation of the data report for further analysis.

In the end, 533 entries were received by the survey; only 110 among them were deemed valid and included in the analysis. For a variety of reasons, the remaining 423 submissions were excluded. The main reason of exclusion was that participants “opened survey link, but did not complete survey”. Additional exclusions fell into the category of “incomplete survey”, which included several issues: “respondent did not look through all alternatives”, “respondent moved their mouse too little”, “duration on some conjoint sets was too short”, one case was marked as “average duration on conjoint sets was too short”, and one case was registered as “likely a robot response” (Conjointly, 2024b). The legitimacy and integrity of the data used for analysis were guaranteed by these measures.

6.3.1 Sample Demographics

Gender Distribution

Among the 110 total valid responses, there is evidence of a notable predominance of female representation. The majority of the sample self-identifies as female, comprising 63.6% of the respondents, followed by men representing 31.8%. Non-binary individuals account for 3.6% and a mere 0.9% prefer not to disclose their gender (Appendix 5, Table 27).

Age Group

The age distribution of the participants within the survey indicates a significant concentration in the 18-24 age group, representing 80.9% of the sample. This high level is consistent with the target demographic for many online dating apps, which frequently serve a younger population looking for social and romantic connections (Sukhanova, 2023). The second largest segment, with 15.5% of the sample, is 25-34 years old. This group comprises young professionals who are probably balancing career development with personal life.

The representation drops significantly for older age groups, with only 1.8% of the participants each in the 35-44 and 55-64 age ranges, respectively. This sudden drop in participation rates across older age groups might be the result of different technology adoption rates or even a lower propensity to engage with online dating platforms. Finally, there is a complete absence of participants over the age of 45, which highlights a clear bias towards a younger population in the data collection (Appendix 5, Table 28).

Education Level

The educational background of the survey respondents demonstrates a clear bias towards higher education, with 48.2% having a master's degree and 43.6% having a bachelor's degree.

This high level of educational attainment likely enhances their digital literacy, which may raise their expectations and degree of participation in dating apps (Hargittai, 2010). The majority of the sample have a university degree, as seen by the 8.2% of participants with only a high school degree or less (Appendix 5, Table 29).

Our survey reveals a significantly higher proportion of respondents with higher education degrees (48.2% Master's and 43.6% Bachelor's) compared to the national average of 19.8% in Portugal (INE & PORDATA, 2023). This discrepancy is largely attributable to the fact that the majority of our respondents are colleagues from our own and various other universities.

Employment Status

Students represent the majority of the survey participants (55.5%), which is consistent with the youthful demographic profile previously observed. The full-time employed population comprised 36.4%, which reflects a combination of higher education and professional activity. The sample's unemployment rate is 4.5%, and 2.7% of respondents are self-employed (Appendix 5, Table 30). These results suggest economic diversities that might influence decisions about online dating platforms' paid subscription plans.

Sexual Orientation

According to the survey results, 12.7% of participants identify as homosexual or gay, 25.5% as bisexual, and 60.9% as heterosexual. Other sexual orientations are minimally represented at 0.9% (Appendix 5, Table 31).

The survey's large proportion of heterosexual users does not overshadow the significant presence of bisexual and homosexual individuals. In fact, dating apps play a crucial role in the social lives of young Portuguese adults especially for non-heterosexual users who

frequently utilize these platforms as safe spaces to express and explore their sexual identities (Simões et al., 2023).

Monthly Income Levels

The participants in the survey reveal a diverse economic background., which is important in understanding their potential engagement with subscription-based dating apps. A considerable 39.1% of the respondents make less than 450€ a month, which emphasizes the financial constraints faced by the students and younger adults in the sample (55.5% and 80.9%, respectively).

On the other hand, those that earn between 701€ and 1100€, and 1101€ to 1600€ make up 12.7% and 10.9% of the sample, respectively. These numbers likely correspond with the previously verified full-time employment rate of the respondents, which suggests a reasonable ability to pay for upscale services. Notably, 14.5% of participants earn more than 1601€, which corresponds with a more stable economic condition and may lead to a larger inclination towards premium subscriptions plans. Furthermore, a smaller segment of the sample, 3.6%, earns between 450€ and 700€, and a portion of 19.1% expressed a preference not to disclose their income (Appendix 5, Table 32).

In 2024, Portugal's minimum wage was established at 820€ per month, and thus positioning it as benchmark for evaluating the financial capacity of the general public (TPN/Lusa, 2023). Understanding this background is crucial to understand the accessibility of dating apps subscription plans. According to the survey, the majority of participants earn less than 450€ a month, which is below the national minimum wage. These people are probably sensitive to price, influencing their willingness and ability to pay for extra features.

6.3.2 Goodness of Fit

A goodness of fit test quantitatively assesses how well a statistical model fits a set of observed data. In statistical hypothesis testing, this kind of tests are critical for validating the accuracy of model assumptions in representing real-world data (Maydeu-Olivares & García-Forero, 2010).

The Conjointly platform utilizes McFadden's pseudo R-squared to measure the goodness of fit. This measure expresses the percentage of the dependent variable's variation that can be attributed to the independent variables. Higher R-squared values, which can range up to a maximum of 1, indicate that a greater portion of the variance in the dependent variable is accounted for by the model (IBM, 2023).

A McFadden's pseudo R-squared of 78.4% was recorded by the platform, classifying it as a "strong fit". This high value indicates a robust association between the predictors and the result in our model, suggesting that the independent variables successfully explain a sizable percentage of the variance in the dependent variable. Such a high measure confirms the reliability of the model's predictions and highlights the significance of the selected attributes and levels in influencing respondent choices. Furthermore, this result emphasizes the effectiveness in capturing the essential patterns in the data, thereby providing a solid base for reliable decision-making.

6.3.3 Attribute Importance

As previously stated, there are five different attributes for each of the three online dating platforms (Tinder, Bumble, and Hinge). It was conducted a comparative analysis of these attributes to determine their relative importance to users, computed as the average importance across all three platforms, providing a comprehensive overview of user preferences.

The data revealed that the “Weekly Subscription Fee” holds the highest level of influence across all dating apps, representing 28.8% of the total importance. This significant proportion highlights a price-sensitive approach among users, reflecting economic considerations that influence consumers choices about subscription-based plans. Examining Portugal’s economic background is essential to comprehending better this situation, since consumers may be more cautious about their discretionary spending in reaction to the broader economic environment. It suggests that consumers evaluate these platforms’ perceived value in light of both their price and the features they provide.

“Privacy & Safety” is the second most important attribute with a rating of 22.4%. Users tend to prioritize the security of their interactions and personal data at a time when data breaches often occur. Furthermore, in the context of online dating, this emphasizes the importance of security and trust. This preference could be a reflection of a larger privacy concern in the society as well as the rising knowledge of rights to data protection, especially in light of laws such as the General Data Protection Regulation (GDPR) in the European Union.

Other attributes such as “Matching Algorithm” and “Seeing Who Liked You” received 17.4% and 19.5%, respectively, demonstrating a high demand for cutting-edge technology features that enhance user interaction and engagement. These numbers demonstrate a high demand for cutting-edge technology features that enhance user interaction and engagement. The “Matching Algorithm” exemplifies the technological complexity that users expect from these platforms, since it enables a more precise matching based on user preferences and behavior. On the other hand, “Seeing Who Liked You”, is a feature that allows for a more transparent user experience, fostering a sense of openness and direct engagement that can lead to more meaningful connections.

Finally, the least important attribute, “Unlimited Swipes”, represented 11.9% of the total importance, indicating that although user value having more options, this feature is not as critical compared to price or security. The comparatively lower weight give to the “Unlimited Swipes” feature may indicate that consumers value quality over quantity when it comes to potential matches (Appendix 5, Table 33 and Graph 12).

Each platform shows different preferences in terms of importance for these attributes. Tinder users assign the highest importance to the “Weekly Subscription Fee” at 30%, suggesting high sensitivity to price. “Privacy and Safety” follows in second at 25.3%, emphasizing concerns about safe interactions and data protection. Similarly, Bumble users demonstrate a price sensitive behavior by placing the highest importance on the “Weekly Subscription Fee” attribute at 28.4%. Moreover, they show considerable regard for “Privacy & Safety” at 19.5% and the “Matching Algorithm” at 17.8%. These results demonstrate how much Bumble users value secure interactions and effective matchmaking capabilities.

In contrast, Hinge users have a distinct preference pattern, with the highest value being the “Seeing Who Liked You” attribute at 23.6%, indicative of a focus on transparency and

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meaningful connections. However, similar to the other dating apps, Hinge users also consider the “Weekly Subscription Fee” to play a significant role (28%), which further emphasizes the universal importance of cost concerns in the online dating industry (Appendix 5, Table 33 and Graph 5).

By analyzing these preferences across the different platforms, it is clear that although users’ values are similar, each platform also serves diverse user priorities, which are reflected in their individual brand positioning and user engagement strategies.

7 Bonus

Within the fast-paced world of online dating throughout the years, the offer of premium plans has become a base for a more enhanced experience in the search of a partner. However, behind this appearing straightforward transaction, there’s a challenging relation between changing market dynamics, technological advancements, and societal points of view.

At its core, there’s this stigma around the usage of dating apps and the payment for premium services which hold the user from a higher freedom than these platforms can potentiate. Exploring the complexity of this stigma raised in traditional norms of finding love and the negative view of digital intimacy that impacts the consumer experience with these platforms.

Even if there are promising views regarding diminishing social scrutiny, artificial intelligence (AI) emerges now as a new trend, transforming every industry and very possibly the online dating world as well. From a more improved matching algorithm to a more augmented user experience, AI can apply a new meaning to premium plans, making them more valuable than ever.

As these new technological advancements occur, they will impact the new ultra-expensive premium plans developed by big players in the market. Tinder and others have pushed the

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boundaries of how premium they can go, launching an exclusive premium plan at an exorbitant price. Investigating the strategy behind these packages may reveal new market segments, exclusivity, or even new branding, showing once again how dynamic this industry can be.

This analysis presents a comprehensive overview of the current state of online dating and offers a glimpse into its future amidst the complex intersections of stigma, artificial intelligence, and exorbitantly priced premium plans in the dating app sector. By exploring the interrelationships between these themes, one can elucidate how commercial interests, technological progress, and human proclivities intersect to shape the dynamics of social interaction and companionship in our progressively digital world.

7.1 Stigma Associated with Dating Apps and Premium Plans

The usage of dating apps is often associated with a certain stigma, which has been noted in literature. Users of dating apps are frequently hesitant to disclose their usage and are even more reluctant to reveal that they have met their partner through online dating. This stigma is primarily observed among older individuals or those who have never used dating apps (Riger et al., 2017).

Erving Goffman, a renowned sociologist, established stigma as "*an attribute that is deeply discrediting*". In his work, *Stigma: Notes on the Management of Spoiled Identity* (1963), Goffman identified two types of stigmatized individuals: the *discredited* and the *discreditable*. The former refer to individuals whose aspects leading to stigma are apparent and cannot be hidden, such as their ethnicity. On the other hand, the latter refers to individuals whose aspects leading to stigma are not evident, such as an addict, and can be concealed from others.

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Shame can be understood as a form of *self-stigmatization* that arises from the internalization of social stigma. As individuals incorporate harmful social stereotypes, they may begin to experience feelings of guilt regarding their identity and sense of belonging (Crocker & Fiske, 1999).

7.1.1 Personalizing User Experience

By tailoring the features and offers of the app with the interest of the consumers, it allows for a more pleasing experience that hasn't been able to be provided since then. As was seen during this work project, users have different goals when using a dating app, different interests, and AI can adjust the online dating experience accordingly.

Additionally, AI can help users by telling them what to say or what to post. This is the case of RIZZ, an online dating assistant app fully supported by AI that suggests prompts to initiate a conversation or responses to a potential match, increasing the probability of success (Henshall and Shah 2023). Furthermore, AI algorithms can analyze the messages being sent and provide suggestions to improve your communication to achieve success or at least a more positive outcome (Levine 2024).

Besides functioning as a coach or supporter, machine learning software has the capability to analyze message exchanges, profile information and tones, and based on identified patterns within this data points, provide insights into potential compatibility, areas to touch or communication roadblocks (Consagoustech 2023).

7.1.2 Improving the Matching Algorithm

Roman Khaves, co-founder of RIZZ, states that in the future, with AI optimizing the matchmaking algorithm, it's expected that the users will be directly matched with someone

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by suggestion of the algorithm without the need of swiping right or left (Henshall and Shah 2023).

Justin McLeod, founder of Hinge, shares the same view. On an interview for the Financial Times, the co-founder claims that *“AI allows us to function more and more like a matchmaker”* (Criddle 2023). The dating apps are gathering and analyzing all the information they can, from the swipes to everything that leads to a successful date. The ML algorithms will be then able to analyze all this data and find patterns that lead to *“less and less people you have to go through in order to find the right one.”*

7.1.3 AI Dating Bots

As previously mentioned, AI facilitated the development of software which functions as dating coach, as exemplified by RIZZ. However, there's a thin line between a supportive tool that provides suggestions or message ideas and a software who speaks on one's behalf.

Some people have been exploring AI capacities to represent themselves on online dating platforms. This is the case of Aleksandr Zhadan, a 23-year-old AI product manager from Russia, who following a breakup after a 2-year relationship, understood exactly what he wanted in a future match. Due to that, Zhadan started programming on a software that could represent him on dating apps. Shortly after, Chat GPT was launched, and this helped the bot tremendously in achieving good level to finally replace him. The bot would be able to analyze profiles features such as interests and pictures and swipe left or right depending on it. Furthermore, the software was capable of initiating conversations, inviting to dates and even stop chatting in case the perception of the potential match capabilities didn't fit with what Aleksandr looks for. Eventually, with the further development of Chat GPT to its 4.0 version, the bot improved into a more complex level, allowing it to transition conversations from the dating app to telegram, checking Aleksandr schedule to book dates, inviting on dates after 60

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messages and even restarting conversations with previous matches that, in bot's view, had potential. Eventually, through rekindling a conversation, Aleksandr found his perfect match, Karina, and moved together. Only then did she discover that most of the time she had been chatting with a bot rather than with his partner (Levine 2024).

The usage of bots can be ethically condemned, especially when it leads to successful outcomes, however, it can serve as a viable solution for a lot of individuals leading busy lives that are unable to dedicate time into swiping and engaging in conversations with multiple potential matches until achieving a date. Not only this, but it can also aid mitigate demotivating facts that usually lead individuals to stop using dating apps. As mentioned in our preliminary interviews by multiple respondents, saturation, and disappointment with the lack of success were some of the main challenges identified and associated with the discontinuation of dating app usage. A 23-year-old male interviewee expressed, *"I think the biggest challenge would be the ghosting, I know it's part of it, but after a while it becomes demotivating, and I really think it's a major reason for people to stop using"*. By using the bot for conversations, the individual may not perceive the ghosting and rejection he gets which can lead to the user not leaving the dating app or at least staying on it for a longer period.

Furthermore, the bot could help alleviate the frustration that some users feel with starting conversations. This pressure increases even more with the structure that some dating apps have. That's the case of Bumble, a platform that gives the power to initiate conversations only to women and the messages must be sent within the 24 hours after the match was made otherwise the connection will be lost. As noted by another interviewee, *"It's hard to do the first step, I'm more used to have men come to me, I'm not that comfortable in being the starter."*

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Introducing an optimized AI bot as a premium feature could potentially bolster the number of paid plan subscribers and reduce the dissatisfaction of users stemming from ghosting and rejection.

7.1.4 The Rise of Fake Accounts with the Emergence of AI

As the field of artificial intelligence (AI) continues to develop, the ability to create fake personas on digital platforms has become easier than ever. The possibility of producing lifelike images with the new highly sophisticated AI image generators with just a prompt is a new method that supports individuals in creating fraudulent accounts and bots on dating apps.

Unfortunately, with the rise of deepfakes, fake images are not the only issue nowadays. Deepfakes leverage recent advancements in artificial intelligence to produce highly realistic videos and audios. Although this technology is not yet fully developed and there are quite some noticeable gaps between the virtual and authentic versions, it already presents a challenge to society. Nowadays, one method to verify accounts involves obtaining audio or video recordings from individuals, as this type of medias were very difficult to fabricate. However, this new technology may exacerbate issues such as catfishing and romance scams, as it will be even harder to distinguish the real individual from their simulated counterparts. As a result, deepfakes have the capacity to potentially undermine the existing sense of trust in online dating, which is already total somewhat precarious (Fletcher, Calli Tzani, and Ioannou 2024).

7.1.5 Improving Security and Verification with AI

However, AI can also combat its own developments supporting fake accounts and bots. Many companies are actively working towards incorporating AI-based systems that can help block

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inappropriate content, give warnings on suspicious messages, detect, and disable bots through patterns, and identify AI-generated images (Levine 2024).

Regrettably, online conversations quite often face inappropriate communications, including hate speech, abusive language, and even unsolicited sexual content. Currently, users have the option to report this type of behaviors which is subsequently assessed and evaluated by a platform worker to determine the appropriate consequences the user should face (Bumble 2024). Machine learning algorithms can be trained to detect and flag this type of communication automatically and apply sanctions automatically, from removing immediately the message to account banning in cases of recurring infractions (“How GenAI Can Help Companies Go Beyond Social Listening” 2023).

The AI bots previously explored operate primarily on pattern recognition. For instance, in the mentioned case of Aleksandr Zhadan, his bot would invite for a date after 60 messages (Levine 2024). AI tools are capable of analyzing user accounts, identifying these types of patterns which could be rapid swiping, repetitive messages, or unnatural conversation behaviors, and subsequently take action to suspend these accounts. Moreover, in the scenario where a dating app offer its own AI bot as a premium feature for example, this detector can be utilized to prevent users from attempting to use external bots instead of paying for the app’s proprietary one.

Regarding AI image generators such as deepfakes, there are currently platforms who help identify the nature of the images. This is the case of the company AI or NOT, which has more than 100 thousand users. This AI detector “*compares the input image to known patterns, artifacts, and characteristics of various AI models and human-made images to determine the origin of the content*” (“AI or Not” 2024). Online dating platforms can partner up with these

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types of companies and implement their technology in accounts evaluations but also in images being sent through conversations.

In the years to come, it is likely that the use of AI in the fight against fraudulent activity on digital platforms will only continue to grow and evolve, as developers and researchers work to stay one step ahead of those who seek to exploit these tools for nefarious purposes.

7.1.6 Important Takeaways

As a result of recent these recent technological advancements, the premium plans could potentially explore the development of sophisticated features, including the implementation of an AI-powered dating assistant. This assistant would analyze the chats and provide suggestions on the best responses according to the characteristics of the person being interacted with. Additionally, dating platforms could also develop a premium AI matching algorithm that leverages data patterns from individuals to match them instantly with compatible partners.

7.2 Tinder Ultra Expensive Premium Plan

Although from our surveys there's a strong rejection of high prices on premium plans, Tinder has been increasing its prices in recent times and launched a plan more expensive than ever. In September 2023, Tinder from Match Group launched an even more expensive premium plan, named Tinder Select, which costs up to 500\$ per month, 6.000\$ a year (Vasani 2023).

7.2.1 What is Tinder SELECT?

This particular plan offers access to an array of unique features which include the ability to direct message an individual, up to two times a week, without the need of matching with this them. Additionally, users can appear in the accounts of those who the user liked, even if they

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do not have a premium plan. The plan also enables the subscriber to view and be visible to the most sought-after profiles within the Tinder's community. Furthermore, users will also gain early access to new features that are launched within the application (Saleh 2023).

Tinder Select seems to rely on the sense of exclusivity as one of its primary features, with only a few users (less than 1%) being granted access to the plan. These users must exhibit high levels of activity (with frequent swiping's, conversations, and an overall engagement) and must meet the strict 5-Point Select Screen™ requirements, which are based on certain guidelines pertaining to the number of pictures, interests, goals, and account verification ("Tinder SELECT Membership" 2024). Additionally, there's also a sense within the community that Tinder is prioritizing potentially attractive profiles that are deemed attractive by a majority of the users.

Even if an individual is able to be approved and selected for the aforementioned plan, one last obstacle remains, financial capacity to bear the exorbitant monthly fee of 499\$. This particular pricing strategy underscores the plan is designed for a very narrow audience. This strategic decision hints that Tinder might be attempting to reach new audiences and establish a new brand identity.

7.2.2 Exclusivity and Scarcity in Online Platforms

Exclusivity leverages one of the most intriguing marketing and business strategies, scarcity. The scarcity principle was initially mentioned in 1984 by Robert Cialdini, in his book *"Influence: The Psychology of Persuasion"*, as a way to increase the value of opportunities by reducing its availability.

Consumers often perceive the effect of high demand for a product, which creates a sense of competition among them to acquire it. Additionally, the perception is further reinforced by

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user's sensitivity to the fear of missing out (FOMO) as they strive not to lose the opportunity to benefit from the acquisition of the product. Lastly, the limited availability of the product is often related with the sense that it takes a considerable amount of time to produce, which inherently attributes a higher value to it.

Tinder is employing this scarcity principle by making the plan exclusive. The app is not a first mover in this strategy in the industry, there are other apps who emphasize its exclusivity, namely The League and Raya.

The League, considered the world's most popular exclusive dating app, boasts a lengthy waitlist of users (Barrie 2015). The app focuses more on ambitious and successful individuals. Although everyone can apply, there is a waitlist, and the selection criteria considers factors such as education and career milestones, which are directly imported from LinkedIn, as well as interests sourced from Facebook. After users submit their application, the accounts undergo through algorithm screening process, with approval granted only to those who meet their requirement. The only way to expedite this process is through referrals of individuals who are already members (The League 2016).

Meanwhile, Raya is an exclusive dating app more focused on celebrities, from influencers to athletes, which operates on a recommendation-only model. Individuals must secure a referral from an existing user of the app to initiate their application process and requires at least six user recommendations to be able to finally join in (Anderson B. 2024). Furthermore, even those who have enough recommendations can have their access to the community denied. This was evidenced by the case of Vicky Pattison, a prominent British social media personality with 3.2 million followers on Instagram, who got rejected due to a perceived lack of alignment with the app's fit (Vice 2016). Raya comes as a solution for high-profile individuals who often face challenges on using mainstream dating apps, such as dealing with fake accounts and

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having hard times with potential matches believing their identity. The app's exclusivity is bolstered with a mysterious aspect, as the company deliberately hides certain information regarding its features, prices, and user base, possibly due to the desired discreteness that the celebrity users might desire (Vice 2016).

7.2.3 Contradiction between Stigma and Exclusivity

The creation of exclusivity by brands goes against the normalization theory mentioned and needed to decrease the stigma over dating apps and their premium plans. By using scarcity as a marketing strategy to grow the user base, companies may be hindering the overall ideal of diminishing the social pressure associated with online dating.

In this regard, Tinder seems to be targeting two different audiences. Although the majority of the app's users are younger generations who may not have the financial freedom to subscribe to such a premium plan, Tinder might have recognized that this is not their target for these plans. Instead, the company may be focusing on retargeting efforts to capture the attention of a more affluent demographic who may be more affected by the elitism factor than by the stigma.

The pursuit of exclusivity strategies may improve performance results of dating platforms in revenue generation and subscribers in the short term. Nevertheless, companies must navigate this landscape with caution. The tension between exclusivity and normalization emphasizes the need for a more refined approach that prioritizes acceptance and inclusivity while improving performance and profitability. As the online dating industry continues to develop, keeping this balance will be fundamental in shaping a future where dating apps are embraced as integral facets of contemporary social interaction, devoid of stigma and exclusivity.

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To conclude, further exploration of the psychological and sociological implications of these marketing strategies, as well as their impact on different demographic groups, could provide valuable insights for a comprehensive understanding of this topic.

8 Conclusion

8.1 Discussion

Technological improvements and changing consumer behavior have had a huge impact on the evolution of the dating app industry. However, despite the global proliferation of dating apps, the Portuguese market shows unique characteristics with a huge room for growth and improvement in user perception and market penetration. This work project has investigated the complex dynamics of consumer interaction and preference within relatively unexplored and sometimes mistrusted market. This study uses an integrated method comprising perceptual mapping, conjoint analysis, and market research to clarify the subtle consumer behaviors influencing the adoption and usage of dating apps in Portugal. The findings underscore the necessity for targeted marketing strategies and user-focused service innovations that are specific for the Portuguese consumers.

The perceptual maps findings revealed distinct positioning of Tinder, Bumble, Hinge, and Grindr, offering instrumental insights into consumer perceptions across different attributes. Component 1 has a significant impact on fundamental factors of the user experience, such as user interface and subscription models, suggesting their importance in determining how satisfied users are. Component 2, on the other hand, records elements such as visibility and safety boosts, showing their importance but a less central role to the incremental app

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experience. The proximity of Tinder and Bumble on the map raises the possibility of intense competition and potential customer misunderstanding due to their overlapping offerings. In contrast, Hinge and Grindr's distinct positions suggest unique value propositions that might provide them competitive advantages by catering to specific user preferences.

The results of the conjoint analysis have elucidated key consumer preferences in the dating app industry, especially with relation to Tinder, Bumble, and Hinge. The findings show that consumers strongly prefer affordable subscription plans, underscoring the significance of price in user decision-making. Privacy and safety also emerged as critical factors, indicating that users emphasize trust and security when selecting a platform. These suggests that dating apps might obtain a competitive advantage by focusing on transparent and robust security measures and by implementing adaptable pricing strategies to serve a wide range of user base. Additionally, features like the possibility to see who like one's profile and the existence of an effective matching algorithm, were also valued, pointing towards opportunities for dating apps businesses to enhance user interaction and customization in order to increase engagement and satisfaction.

Privacy & Safety Concerns

Our combined data has demonstrated the critical role that privacy and safety play as pivotal attributes in the decision-making processes of users across different dating platform, including, Tinder, Bumble, and Hinge. The study's data shows convincingly that user preference and app selection are heavily influenced by privacy and safety, which are not just coincidental concerns. In a deeper analysis, from the report provided by the Conjointly platform, it's possible to verify data of "preference for levels" of each dating platform that were analyzed on the conjoint analysis. From the three chosen levels (Low, Medium, and High), the three platforms clearly revealed user preference for high levels of privacy and

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safety. User of Tinder showed a considerable resistance to low levels (-16%) and a substantial preference for high levels (13.1%). Similar, however less obvious, tendencies were verified with Bumble users, who preferred high levels by 9.7% and aversion to low one by -7.9%. Lastly, Hinge users responded most negatively (-13%) to inadequate privacy and safety and most favorably (10.3%) to high levels.

Robust security measures are in great demand across all platforms analyzed, as evidenced by the obvious preference for higher levels of privacy and safety. These results are consistent with global trends since a study on “Leading concerns regarding online dating among adults worldwide” recorded that a great portion of users were concerned about the authenticity of personal identities on profiles and others were worried about online misrepresentations (Statista, 2024).

In addition to concerns about authenticity, there is a significant risk associated with data breaches in the context of online dating. Such breaches not only compromise user confidence but also have serious repercussions for personal privacy and security. For instance, the Ashley Madison data breach, the most widely used app for affair dating, vividly highlighted the severe consequences of inadequate data protection, where personal information of 37 million users were revealed, causing a public scandal and personal crises (Cross et al., 2019). This emphasizes the need to implement strict security policies to protect user information.

Attributes and the Price-Value Trade-off

Customer value derives from a balance between the benefits a consumer gains and the sacrifices made from using, in this case, the dating app (Xu et al., 2015). While sacrifice is usually associated with monetary expense (Niemand et al., 2015), for this analysis, we will focus on the attributes as the benefits, although recognizing that customer value may

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encompass many more factors (Xu et al., 2015) which would be extremely demanding to thoroughly define.

Our preliminary findings revealed consumers would tend to opt for the free version of the apps rather than deciding to upgrade it, which led us to conduct our conjoint survey using lower prices to understand whether this would improve consumer evaluations. In the end, price was still the most influential factor in dictating customer preferences - this fact seems to indicate that the original prices offered by dating apps could have even more weight in steering consumers away from paid subscriptions.

When looking at consumer value as this trade-off between perceived quality and sacrifice, if we focus on the free part of a dating app, it requires no payment (sacrifice) while also having benefits associated with it (Niemand et al., 2015) - this may be a force working against the users' perceived value of the premium subscription as it requires a considerably higher sacrifice (Niemand et al., 2015).

Having focused on the "sacrifice" end of the balance made by consumers, we can now explore the opposite end, looking into the attributes. Despite not being the main factor in consumers' decisions, the feature "See Who Liked You" still holds a significant weight. This could be due to curiosity making users more willing to pay to quench a need to reduce uncertainty (Hill et al., 2016) or the higher exclusivity - as this feature is most often behind a higher paywall - of this feature could lead to a higher appeal (Monteiro, 2022).

As for having "Unlimited Swipes", this feature holds slightly less influence over consumers' selection, but it still has a noteworthy impact. The decrease in significance (compared to "Seeing Who Liked You") could be related to the opposite feeling of the feature being relatively accessible - Bumble users only need to pay 5,99€ in order to unlock this feature. Nonetheless, in some psychological studies, findings have alluded to swiping being

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considered an addictive feature, with some users struggling to detach from this feature (Thomas et al., 2023), so the possibility of having unlimited swipes could feed into this possible addiction.

Throughout our earlier analysis, the utility and significance of attributes such as Privacy and Safety, and Matching Algorithms to dating app users have already been vastly examined. Privacy and Safety displaying a crucial importance to consumers and users showing a great dispreference for random Matching Algorithms.

While evaluating how consumers behaved towards premium subscriptions, we found that although one of the main influencing factors in consumers' decisions is price, the right combination of attributes and features may persuade a user to pay a greater amount. Some studies have shown that, while price value and enjoyment may be factors in the decision to move from the free version of a subscription to a premium one, once that bridge is crossed, users evaluate other elements, such as the discovery of new content, to determine whether to retain the subscription (Mäntymäki et al., 2019).

There may be a disparity between how users perceive the free subscription in terms of quality. It could be true that they are attaching more value to it than expected, making a decision to upgrade less appealing (Niemand et al., 2019). Still, our conjoint research has hinted towards the fact that the right mix of attributes may help consumers see significant value in the premium subscription. Therefore, brands need to understand the trade-offs and consumers' perceptions relating to the paid subscription and the free-of-charge alternative to outline the various subscription plans and prices.

Customers' Perception of the Free Subscription

When analyzing a dating app's offering, although its premium subscription should have features and attributes that are valuable to the user to entice them into upgrading, the

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importance of the free portion of the app, its users, and its offerings, cannot be put to the side as they also display great importance.

Firstly, free users also hold some value, mainly due to their referrals (Kumar, 2014), so it is important to keep them satisfied; secondly, the free portion of the app is usually the gateway into the premium version (Wagner et al., 2014), allowing users to understand the basic functionalities of the app and the community around it.

Being that one of the goals for dating apps would be the conversion of users from the free to the paid subscription, even though we want users to be satisfied with the service to attract them, the service cannot be so good that consumers are ultimately unmotivated to upgrade their subscription (Martins and Rodrigues, 2024).

The balance between an offering that is good enough to bring in consumers but not too good as to drive them away from the premium plan is a challenging one; The reality is that in our preliminary findings, users are satisfied with their current version of the app, despite its limitations. This is something that can simultaneously be seen as something positive for the brand as well as indicating some drawbacks.

Economic Effects of Free Subscription Preferences in Dating Apps

The findings from our research indicate a significant preference among users for the free models of dating apps, with a majority of respondents expressing satisfaction with these services and showing little interest in upgrading to premium plans. This preference has implications for the economic strategies of companies operating within the dating app market.

The preference for free options can challenge revenue generation in dating apps, which probably relies on premium subscriptions. In fact, the freemium model incentivizes consumers to acquire premium features through referrals as an alternative to making direct purchases.

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This strategy increases the number of users but may decrease premium income since customers who would have otherwise paid for subscriptions opt for referrals (Li & Belo, 2022). As a consequence, these companies should improve their marketing approaches in order to better promote the value of premium features and convert more free users to become paying customers. Additionally, the expenses associated with obtaining new users and the percentage of users that convert to paid subscriptions are crucial indicators of an app's financial stability. With a worldwide average Cost Per Install (CPI) of \$4.61 for Android and \$5.11 for iOS users, this is another aspect where online dating platforms need to enhance their marketing efforts in order to not only attract new users but also to convert them in paying subscribers (King, 2024).

Many dating apps have diversified their income streams in order to overcome the difficulties of generating revenue only from paid subscriptions. These include of one-time payments for features like super likes and profile boosts, which let users improve their experiences without having to make ongoing payments (Abu-Dalo, 2023). Another important factor is in-app advertising, whereby apps generate revenue by displaying advertisements to free users. Furthermore, other revenue-generating options include affiliate marketing techniques and virtual gifting, which also engage users with related products and social features (Stetsenko, 2021).

The changing conditions of the dating app market are a reflection of broader trends in the behavior of digital consumers, who expect high-quality free services. Companies across the technology landscape need to modify their business plans to meet these expectations while finding fresh strategies for generating revenue from their user base. Moreover, dating apps need to be flexible as the market evolves, modifying their business plan to accommodate shifting customer tastes while preserving their sources of revenue.

Low User Engagement in Portuguese Dating Apps: Analyzing the Barriers

During the analysis of the Portuguese dating app market, a notable tendency of low user engagement with dating platforms was revealed. The study's data, gathered from different surveys, showed that a sizeable portion of the population was not actively using these services. Specifically, the preliminary survey registered that of the 111 respondents, 27 had never used dating apps, and 58 had never used them at all. In the conjoint analysis, out of the 533 entries, a major criterion used to exclude entries was the failure to complete the survey, which could be attributed to a lack of interest or relevance, as the possibility that many participants were not current users. Furthermore, the perceptual maps survey substantiated this trend, where out of 100 responses 68 respondents indicated no current or past use of dating apps.

The market adoption of these platforms in Portugal might be significantly impacted by this apparent reluctance or disengagement, which could be influenced by a variety of social, cultural, and privacy-related aspects. Cultural resistance and the potential stigma associated with online dating are considerable barriers. The prevalence of family and community connections as conventional means of meeting potential partners persist in many societies, leading us to believe that this undermines the necessity or value of digital alternatives. Moreover, concerns about data privacy and the security of personal information on these apps could discouraged potential users from registering or fully engaging with these services.

Dating ideals and customs may vary throughout cultures. The overall dating definition involves a pattern that is unclear and ambiguous because of significant cultural production effects and different assessments based on personal experiences (Stoicescu, 2019). Therefore, this could imply that the use of dating app services may be less common in societies with strong traditional dating customs. Furthermore, this reflects a resistance in these communities due to the deeply rooted cultural traditions that prioritize traditional methods of dating, which

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may be related to the conservative structure of Portuguese society. Even though Portugal's society has changed from being largely conservative to being more liberal, especially in urban areas, remnants of conservatism persist. The potential preference for conventional dating methods may be explained by this persistently traditional impact, suggesting a less education about these platforms.

Feature-Driven User Preferences

The component plot, also known as the perceptual map, is a graphic representation that illustrates how different attributes of products or services are interpreted by consumers. This study, by mapping various attributes, provides important insights into user preferences and the market positioning of four well-known dating apps: Tinder, Bumble, Hinge, and Grindr. These findings offer insights into how different features are perceived across these platforms and highlight potential areas of strength and differentiation among them.

The component plot (perceptual map) reveals that each dating app is associated with unique attributes that define its user experience and market position. Although both Tinder and Bumble are positively related to all the features, the map also suggests two different clusters.

Tinder appears to be positioned closely with attributes related to the “user interface”, “unlimited likes”, and “value for money”, underscoring its appeal as a user-friendly app that offers good value. This aligns with Tinder's reputation for fostering a broader user base and facilitating a high volume of interactions through an easy-to-use interface. Moreover, being closely aligned with so many attributes could also be indicative of the app's popularity in Portugal (in 2016 the CEO reported that Portugal has around 200 million swipes every month (Pimentel, 2016)).

Bumble, on the other hand, is closely aligned with safety and the feature of “seeing who liked you”. Women have which may reflect its branding as a safer, more respectful dating

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environment, particularly for women. This positioning leverages Bumble's unique selling proposition where only women can initiate contact after matching, giving more power to women – who are usually more prone to harassment in these apps (Aljasim and Zytka, 2022) – and, consequently, enhancing perceptions of safety and control.

The map also suggests a clustering of features like “search filters” and “visibility boosts” around central points between Bumble and Tinder, indicating that these features are significant but not strongly distinguishing for any single app. Industry standards show that while consumers view these features as necessary for a better and positive dating app experience, they do not significantly differentiate one app from another (Yadav, 2023). This could imply that while such features are important, they are not perceived as unique to any specific platform but rather as standard expectations across dating apps.

Hinge's positioning near the profile features and subscription model suggests it is perceived differently from the other apps, possibly due to this app having a narrower target, focusing more on fostering long-term relationships. Hinge's positioning on the perceptual map could imply that users see it as offering more in-depth profiles and a pricing model that supports serious relationship seekers.

Grindr, displayed at the opposite end of the spectrum, seems less associated with these safety features, which could indicate a perception of lower safety or different priorities in its user base, which primarily consists of the LGBTQ+ community. The app's focus might be more on accessibility and immediate connectivity without the same emphasis on safety features prominent in more mainstream. As a matter of fact, Grindr has been associated with some issues of data collection, being considered the most “data-hungry” app during a study that aimed to analyze how much data dating apps were collecting and how this data was the user and associated with the users (Vainilavičius, 2024). Grindr having the least favorable

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perception could also be related to the niche it is targeting versus the demographics our perceptual survey reached. While, as mentioned, Grindr is focused on LGBTQ+ men our survey's demographic was mainly heterosexual and predominantly female (with 52% of responses belonging to this gender demographic). The demographic skew towards female respondents might explain the higher weight that Bumble users place on safety and control features. Bumble distinguishes itself by prioritizing female user, allowing them start conversations. Unlike other dating app where anyone may send a message after a match is made, this exclusive function gives women a stronger sense of security and control.

The component plot highlights how different apps can leverage specific features to differentiate themselves in a crowded market. For Bumble, it's safety and transparency, for Grindr, it may involve accessibility and community focus, while for Tinder and Hinge, the differentiation seems to lie on user experience and relationship orientation, respectively. When it comes to creating features that appeal to their target market, these insights are essential. Dating apps may better distinguish themselves and meet the changing demands of their users by emphasizing features like safety, user interface, and profile depth, as verified during the analysis.

8.2 Managerial Recommendations

Enhancing User Safety in Portuguese Dating Apps Through Education

Dating apps should take proactive steps in order to improve user safety and privacy in Portugal and worldwide, as previously mentioned. These platforms can implement a comprehensive user education program as a measure. This involves routinely offering users tools and information to help them understand the value of protecting privacy and recognizing potential security risks. The program could include articles and in-app lessons that describe how to use privacy settings effectively, identify common scams, and protect personal information.

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As an example, to further inform users, these apps could offer concrete, real-world examples of privacy violations and excessive data sharing. Through the display of these scenarios, users can better understand the risks and learn how to take the appropriate safety steps. Users can also receive step-by-step guidance from the education program when creating their app profiles, not only for a matter of effective data protection, but also for a better user experience. This would include advice on how to securely connect with others while preserving personal data. Additionally, periodic reminders could be sent to users to review and update their privacy settings, ensuring that they remain relevant as the app evolves.

Dating platforms may foster a more solid, trusting relationship with its users by actively integrating them in their own safety management. This will eventually increase user satisfaction and retention. Moreover, this strategy would comply with national and EU data privacy laws and solidifying the app's reputation as a secure platform. In the specific case of Portugal, it would follow the rules established by the *Comissão Nacional de Proteção de Dados (CNPD)*.

Bridging the Gap Between Perceived Value and Subscription Fee

Going back to the balance between perceived value and willingness to pay, as stated, there needs to be a recurring assessment of the value consumers give to a certain plan and the plan's actual offer and price. This assessment should be done to understand if there is a gap between the two sides of the scale or if they are aligned. This gap could stem from a misalignment between the perceived value of a brand's offering from the brand's perspective and the consumers.

In some cases, it could be that users are not valuing a certain attribute in the amount they would be expected to. Some studies have suggested that providing users with a free trial of the premium version may consequently increase user conversion propensity (Koch and

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Benlian, 2016). This strategy would address undervalued attributes by helping consumers understand what they are missing out on the other side of the paywall, comprehending in more depth the true value of the premium attributes to them. When done with the correct timing and when providing the users with a satisfactory experience, free trials can be very effective in getting the consumers to go from a free subscription to a paid version (Foubert and Gijbrecchts, 2016).

It is important that users of an app fully understand the benefits associated with upgrading their subscription; if this applies and users are not properly educated on the benefits of the premium membership, a brand's ability to monetize users will be negatively affected (Kumar, 2014). On the other hand, thinking of the free version of the app as an advertisement for the premium version, when users can make judgments regarding more additional attributes of the paid subscription, they have been shown to be more likely to upgrade (Wagner et al., 2014). So, allowing users to try out the premium features first-hand can be an effective strategy in educating them on their value.

On the other hand, the case may be that the users are, in fact, not undervaluing the mix of attributes associated with a specific premium plan; it could be that the brand has overvalued its service and given it a price that most consumers are unwilling to pay. Brands should pursue extensive research on customers' perceptions and how they value the various combinations of attributes to evaluate the prices for their plans in the best way possible and guarantee that the price-to-value ratio is significant.

Moreover, there should be continuous research and improvement given consumers' price sensitivity and preferences are ever shifting, and placing significant value on the service in comparison to its fee is pivotal in increasing willingness to pay (Thomas M. Wagner et al., 2014).

Research and Development in Brand Performance

When it comes to the free side of dating apps, as we have discussed, there needs to be a balance between the positive perception of what the app offers and these benefits not interfering with the user's willingness to upgrade (Martins and Rodrigues, 2024). Although one may feel inclined to just put the free attributes leading to a positive public perception behind a paywall, it is important to note that, focusing only on the free-of-charge offerings, the switching costs between apps may be regarded by users as very low (Holm and Günzel-Jensen, 2017). To more easily manage the perceived value of the app (as a whole) either by possibly limiting some free features, or increasing the value of premium subscriptions, the brands should strive to innovate and differentiate themselves through various means so that a decrease in perceived value of the free subscription does not lead a consumer to leaving the app.

One way to strive for innovation and possibly improve customer loyalty and retention would be through extensive and continuous investments in Research and Development (Holm and Günzel-Jensen, 2017). As previously explored, Match Group (who owns Tinder and Hinge) and Bumble are both investing in AI innovation (Levine, 2024), these apps should keep investing in this area in order to come up with differentiating features that would give them a competitive edge.

Besides aiming towards the improvement of the app's backend features, the research and development should also focus on frontend development, in which user experience is a vital factor (Ravee.in, 2023). The frontend development should be customer-centric to improve brand perception, user engagement, and, consequently, lead to improved retention and conversion of users (Ravee.in, 2023).

In hand with the explored concern of users regarding their privacy and safety while using dating apps, innovation could also be used towards this facet. Features such as risk-predicting

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AI or enhanced safety during in-person meetings have both been imagined as app components these brands could explore (Aljasim and Zytko, 2022).

Concluding, continuous investment in Research and Development is crucial for dating apps to foster innovation and, as a result, evolve the brand and guarantee user satisfaction and loyalty, as well as possibly attract new customers.

Leveraging Customer Relationship Management in Dating Apps

In addition to the aforementioned implications, seeking technological innovations with the intent to increase the value of the app to differentiate it, Customer Relationship Management (CRM) has been utilized as a tool to understand factors such as customer lifetime value; and consequently, provide insights to help predict the profitability of users (Voigt and Hinz, 2015). This reveals how CRM can be considered as key to maximizing the financial gains of a brand.

Dating Apps already collect user data in order to shape their matching algorithms (Germain, 2023), so it only makes sense to leverage this data with the goal of building the best and most personalized relationship possible with each customer. By better understanding their consumers, the apps could more easily identify their values - not only the values they identify with but also their value to the brand - and needs, using segmentation through CRM to open possibilities such as targeted communication strategies. Having distinct segments based on user characteristics or behaviors tailored messages could be sent to specific segments - through notifications or email campaigns - highlighting their unique traits or even premium features that could be of special interest. To guarantee that the messages were reaching the consumers they should be spread out through the various touchpoints - email, app notifications, SMS.

Constructing a sense of community can help in the creation of a relationship between the user and the brand that enhances customer loyalty (McAlexander et al., 2002). As a matter of fact, research has shown that high user involvement can be a factor in lowering the churn rate

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(Brüggemann and Lehmann-Zschunke, 2023). With this in mind, it is also a possibility that dating apps could use CRM initiatives to create a sense of involvement and inclusion in users. Having a community platform created by the brand could foster this sense of community while simultaneously creating a forum through which users could share their knowledge and clarify problems. Moreover, a community platform could work as a place for users to leave feedback which brands could use to improve their offerings. Since feedback is essential for brands to understand how well their strategy is fitting their chosen positioning and targets in the long run this could also enhance customer relationships and brand profitability (by providing the right service to the right customer).

Also, through the collected data, the dating apps could understand who their most active and engaged consumers are or even who the top advocates - users who are contributing the most with word of mouth - and reward these types of behavior in order to incentivize their loyalty to the brand. These “top users” could get benefits such as free merch, early access to new features, and more.

CRM facilitates data collection and allows the brand to have better and smoother interactions with their users since they have access to the user's needs and past issues they might have encountered (Dursun et al., 2017). This should, of course, not interfere with the prioritization of Privacy & Safety, since we have seen this is a feature dating app users strongly value.

Finally, it is also crucial that throughout the various CRM initiatives or campaigns, their success is measured to understand which are the most and least effective in engaging customers and increasing their loyalty.

All in all, value creation for consumers is essential when trying to differentiate a dating app. This can be achieved through various methods: the leveraging of innovation with research and development investments, as well as through the implementation of Customer Relationship

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Management initiatives, and will aid dating apps in decreasing the churn rate and increasing customer loyalty.

Boosting Engagement with Culturally Inclusive Marketing Strategies

As previously stated on the discussion topic, low user engagement is one major obstacle that the Portuguese dating app market analysis reveals. This resistance may have its roots in the community's social, cultural, and privacy concerns. In particular, the stigma attached to online dating, the persistent adherence to traditional methods, and the lack of population education in this digital matter pose significant barriers. Moreover, the acceptability and integration of these modern internet alternatives can still come from the long-seen Portuguese society's conservative tendencies.

To surpass these barriers and improve user engagement, it is crucial to recommend inclusive marketing strategies to implement that align with Portugal's varied cultural environment. By bridging the gap between traditional values and the modern conveniences offered by dating platforms, these new strategies should work to create a more inclusive and less stigmatized environment, within the Portuguese population.

Dating apps should incorporate diversity representation in their advertising materials. By enhancing the varied demographic representation, these platforms have the potential to foster inclusion and resonate with a broader range of Portuguese users. Specifically, advertisements that include a diverse range of profiles – including those from different age groups, lifestyles, and ethnic backgrounds – not only promotes inclusion but also counters the stigma associated with online dating by normalizing it. Advertising that promotes inclusiveness and diversity has the potential to change societal attitude towards a more positive one (Wilkie et al., 2023). Accurate and diverse representation can lead to improved self-esteem and social integration, thus impacting user and potential customer attitudes towards the advertised brand and product.

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As a result, this positive attitude fosters more user engagement, which attracts more users turning them into engaged ones. This highlights the positive correlation between user engagement and consumer attitude, demonstrating that customers with high brand engagement levels also have higher levels of brand loyalty product satisfaction, and perceived brand value – all of them consumer attitude factors (Razmus, 2021).

To further boost user engagement in the Portuguese market of dating apps, these platforms could think about creating community-based projects and establishing strategic alliances with local organizations. These efforts can help address social and cultural obstacles, build trust, and expand the user base. Dating apps could create social encounters to promote in-person contacts between users as well as instructional sessions on digital literacy and online safety. This would emphasize the sense of community and offers value through socializing and education. For instance, in New York City, Bumble has organized “The Bumble Hive”, which evolves pop-up venues where members and potential new users may attend social events, networking opportunities and interactive sessions (Bumble, 2024). In a similar manner, this could be arranged in Portugal where people participate in interactive activities.

Moreover, forming partnerships with local cultural and social organizations can help dating apps to find a wider audience among the Portuguese population. Collaborating with organizations that represent various racial, ethnic, and age groups can enhance legitimacy and inclusivity over these platforms. These alliances may also support the values and interests of various community segments. In fact, Tinder collaborated with an American LGBTQ advocacy organization called the Human Rights Campaign (HRC) to grant direct in-app access, which offers resources and advice for coming out and leading an open life in every life aspect (Tinder, 2023). In Portugal, the different online dating apps may collaborate with local cultural associations to co-host cultural events and workshops that appeal to different demographic groups.

Strategic Positioning for Enhanced User Engagement in Dating Apps

This perceptual map suggests several strategic implications for the involved companies. For instance, Bumble might continue to emphasize safety and respectful interaction in its marketing strategies to attract users who prioritize these aspects. For Bumble, several targeted recommendations could enhance user safety and privacy. This platform could improve its AI-driven safety features by enhancing its machine learning algorithms alongside with an automated content moderation. Improving these algorithms can help in putting quality connections ahead of quantity, enhancing the user experience as a whole. Moreover, similar to Uber, which notifies riders via a push notification if there is an unexpected long pause or potential crash (Kerr, 2019), Bumble could have a button where users press when starting a first date, allowing the app to monitor for strange behavior. To protect user safety, this could also cause a push notification. However, it is imperative that Bumble balances between user privacy and these potential additional safety features. Improvements should safeguard user information without being intrusive.

In contrast, Tinder could focus on enhancing its user interface and affordability aspects to maintain its broad appeal. Some recommendations may be put into practice to improve these Tinder aspects. For example, including an AI-powered function that makes customized recommendations for nearby restaurants and activities based on user's locations and interests. Furthermore, providing a gamified quiz feature where users complete entertaining tests and have their answers matched to other users. Additionally, creating incentives by offering premium features based on daily logins, swipes, or being the first to send a message, allowing users to redeem points for premium features (Super Likes, profile boosts, etc.). These strategies combined could help Tinder in preserving its broad appeal and competitive advantage (L.Frank, 2023).

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Hinge could benefit from further promoting its relationship-centric approach, possibly enhancing features that allow users to showcase more personality and preferences in their profiles, aligning with its subscription model that targets serious daters. Educating users on Hinge's features and value proposition could help the brand improve its popularity and better the impressions users have regarding the attributes.

Furthermore, it is possible to understand how a brand's positioning can have a great effect on the user's perceptions of an app. Being positioned in a certain way and focusing on the needs of the specific target will help the brand understand which attributes should be developed and explored. In return, having the right attributes made in the right way will get the target of each app to more positively respond to what the brand is offering. Brand success and perceptions can be very strongly related to its positioning (Fayvishenko, 2018) as it is especially important in a very competitive and populated market such as the market for dating apps (Zhen-Zhon, 2015).

For future development, these apps could consider how emerging technologies or changes in social attitudes could affect user preferences related to these attributes. Continuous user feedback and market research will be essential to adapt and innovate in ways that align with evolving user expectations. The analysis of the perceptual maps provides a clear illustration of how different dating apps are perceived by users in terms of safety, usability, and feature sets. By understanding these perceptions, dating app developers can better tailor their products to meet the desires and needs of their target audiences, ensuring continued relevance and competitiveness in the fast-evolving market of online dating.

This in-depth examination of user perceptions not only aids in market positioning but also highlights the importance of continuous innovation and adaptation in response to user feedback and changing market dynamics. It's important to do regular updates to meet

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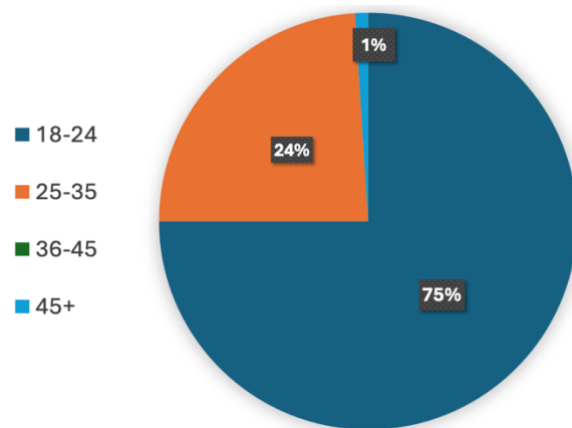
consumer expectations and keep up with new technologies. Dating apps may maintain their relevance and competitiveness by integrating AI-driven functionalities, enhanced safety measures, and personalized user experiences. Innovations makes a company stand out from competition, promotes growth, and enables it to adapt to unanticipated obstacles (Boyles, 2022).

8.3 Limitations and Future Recommendations

Several limitations emerged throughout the study, which should be considered and addressed in future research. A crucial component of our research is the integration of preliminary interviews, a conjoint survey, and the development of a perceptual maps survey. These methodologies are foundational in academic research, as they contribute significantly to the credibility of the conclusions drawn. The validity of research outcomes is not only evaluated based on the insights they yield but also through a thorough understanding and recognition of the potential limitations associated with the study.

The primary limitation of this analysis is rooted in the demographic composition of the samples used in the study, which was conducted within a university setting. This context inherently limits the sample to predominantly students, who fall into two main age groups: 18-24 and 25-35. These participants likely share similar educational backgrounds and possibly similar socio-economic statuses as well.

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Graph 8 - Age Distribution within the Perceptual Maps Survey

While this homogeneous group provides valuable insights into the perceptions and preferences of young adults in an academic environment, it simultaneously restricts the broader applicability of the findings. The results may not accurately reflect the diverse perspectives and experiences of the wider population that varies significantly in age, education level, cultural background, and economic status. Consequently, the study's conclusions must be approached with caution when considering their extension to a more heterogeneous audience. This limited generalizability highlights the need for additional research encompassing a more diverse array of participants to ensure that the insights gained are reflective of the general population. Such research could help in developing a more comprehensive understanding of the dating app perception.

Furthermore, the homogeneity of the sample poses significant challenges in terms of the generalizability of the findings. The preferences and behaviors associated with dating app usage are profoundly influenced by demographic factors. For example, younger users might prioritize features that enhance social connectivity and entertainment on dating apps, reflecting their more extensive social networks and a higher propensity for digital interaction in social settings. In contrast, older users often seek more security, privacy, and seriousness

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in potential matches, valuing deeper communication and more meaningful connections. As a result, findings tend to align with those of this generation, which can cause the results to be skewed.

There are considerable differences in technology adoption and usage patterns among various demographic groups. On one hand, younger adults tend to engage more actively with mobile dating applications, driven by larger social circles and a greater receptiveness to online interactions as a means of forming relationships (Vaterlaus et al. 2016). On the other hand, older adults approach these platforms with greater caution, prioritizing substantive dialogue and a thorough understanding of potential partners before progressing in a relationship (McWilliams & Barrett, 2014).

Consequently, conclusions drawn from a homogeneous group may not accurately reflect broader consumer behaviors and attitudes.

These variations highlight the necessity to consider for future research a broader array of demographic characteristics when examining the use and impact of dating apps. A more diverse sample could provide insights that are more reflective of the general population, thereby enhancing the applicability and relevance of the research findings.

To overcome this limitation, future research should adopt a stratified sampling approach that ensures representation across various demographic strata, including different age groups, educational levels, and cultural backgrounds. This approach will allow to capture a more comprehensive data set that reflects the diverse landscape of dating app users.

Along with the age concern, one of the main challenges was the low number of respondents who gave answers during the survey. There is a variety of possible reasons for this shortcoming, starting with the niche market focus on Portugal, which inherently limits the

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audience to a smaller regional segment. Additionally, the recruitment channels that were used were for people most accessible to the researcher's age, hence hugely reducing age diversity among the participants. This is a crucial point, as that may have led to the data mostly representing the views of the younger population, hence perhaps overlooking the perspectives and preferences of the older population, who are active on the same applications but may not hold similar user expectations and experiences.

Moreover, it is believed that the cultural stigma attached to the use of dating apps might have also kept some respondents at bay. There still is a great social stigma attached to these platforms, notably in many cultures such as that of Portugal. This can affect open discussion of uses and, therefore, studies towards them, arguably meaning people are affected by more risk than their lesser risk-taking counterparts. Also, another key point that contributed to the low number of responses received is represented by the reluctance of individual participation in surveys that might point to a general trend of 'survey fatigue,' or the phenomenon of potential respondents being increasingly resistant toward participating in market research on the grounds of it being invasive or time-consuming.

Furthermore, our study required feedback on some specific areas as perceived security, user interface, profile features, and value for money for premium plans. This focus may have narrowed the interest only towards the current and potential users of the dating apps themselves, leaving behind a bigger audience that might have provided lighter on the general perception and acceptability of the platforms. It may involve those who, due to dissatisfaction or concerns, stopped using such tools. This would have produced feedback related to really important issues concerning the negative aspects of these kinds of apps.

The timing and distribution of the response survey could also be responsible for influencing these low response survey rates. This may be in the form of the distribution time of the survey

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in case it was spread out during times with low online engagement or the distribution channel of the survey with very little reach. This might be further compounded by the very rapid changes in digital habits: potential respondents may prefer newer, more dynamic forms to provide feedback rather than the surveys.

To address this issue in future research, several strategies could be employed to increase participation rates and ensure a more representative sample.

Firstly, broadening recruitment ways has the potential to increase participant numbers. Future research could try incorporating a variety of venues to engage potential responders. This includes not only major social media sites used by the researcher's immediate demographic, but also community forums, professional networks, and specialist online platforms. Partnering with universities, companies, and community organizations can also provide access to a larger demography, increasing the sample's diversity.

Secondly, it may help to define incentives for survey participation. It can play a pivotal role in boosting response rates. Offering rewards, entries into drawings for larger prizes, or presenting participants with a summary of the study's findings can all help to motivate more involvement. To attract diverse participants, these incentives must be structured to appeal to a broad variety of demographic groups.

Furthermore, reducing the perceived burden of doing surveys is critical for encouraging greater participation. Designing surveys that are brief and respectful of respondents' time can help in this regard. Ensure that the survey interface is user-friendly and available on a variety of platforms, including smartphones, to reduce potential obstacles to participation. By resolving these issues, future research can greatly expand their reach and enhance the quality of data obtained.

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One inherent constraint is the advancement of technology, namely the algorithms that drive the operation of dating applications. These matching algorithms are critical to the success of such platforms because they efficiently create meaningful relationships, which determines user pleasure. Concerning this, the effectiveness of algorithms in predicting user compatibility can significantly influence user retention and satisfaction. As algorithms improve, user expectations adjust accordingly, demanding more accurate and intuitive app interactions (Rosenfeld, 2017). As technology advances, these algorithms evolve, using increasingly complex artificial intelligence and machine learning techniques to enhance both the user experience and the consequences of these digital interactions.

At the same time, consumer expectations are far from static. They evolve in tandem with users' increasing technological acumen and as new tech trends come to the forefront. This dynamic between evolving technological capabilities and user expectations creates a constantly shifting landscape for dating apps.

Future research should continuously evaluate the effectiveness of new algorithmic innovations in dating apps. Longitudinal studies could be particularly valuable in tracking changes in user satisfaction and expectations over time.

Regarding the tech side of the matter, another relevant limitation is represented by technological access and internet connectivity. This is an important factor to consider when analyzing the results of this research. This problem may result in the underrepresentation of people who have limited access to modern technological equipment or dependable internet. This can have a substantial influence on the representativeness of your statistics. This bias may be especially noticeable in areas or populations where there are digital divides, which may limit the applicability of your findings to a larger audience.

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For instance, if a study predominantly captures responses from users with high-speed internet access, it might overlook the experiences and perceptions of users who rely on slower, less reliable internet services. These users might experience dating apps differently, potentially facing more frustrations or limitations that could affect their overall satisfaction and usage patterns. Additionally, differences in device type, such as between users on high-end smartphones versus those on older or less capable devices, can also influence user experiences and perceptions of app functionality and design.

Future studies should try to incorporate a more technologically diversified participant population to address this constraint. This could entail using focused recruitment techniques to guarantee that participants from low-bandwidth locations or those who utilize older technologies in their primary role are included. When doing data collecting in places with restricted access to the internet, researchers may also take into account offline techniques like paper surveys and in-person interviews.

In addition, employing adaptive designs in online surveys that adjust to different internet speeds and device capabilities can help in reducing dropout rates among participants with slower internet connections. These methods ensure that the survey is accessible to all users, regardless of their technological circumstances, providing a more comprehensive and inclusive set of data. Such approaches will help in achieving a more balanced view of the dating app market, reflecting a wider range of user experiences, and increasing the external validity of the study findings. By doing this, researchers can produce findings that are more reflective of the entire spectrum of dating app users, thus enhancing the reliability and applicability of the research in real-world settings.

Furthermore, our study has significant limitations due to the highly dynamic nature of the dating app market. As it evolves quickly, app features are continually updated, and consumer preferences change, findings can become obsolete quickly. As technology advances,

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competitors act, and societal attitudes toward online dating change, this market has a fluidity that can change user behavior and preferences within a short period of time. For instance, a new app feature that improves privacy settings or enhances user matching algorithms could significantly change user satisfaction and engagement levels, affecting the validity of previously gathered data. Similarly, the entry of new competitors into the market can shift user preferences and expectations, as new features or business models provide alternative choices to consumers.

Events like the COVID-19 pandemic have demonstrated that external factors can have dramatic effects on digital habits and social interactions, resulting in spikes in online dating activity or changes to communication and interaction within apps. A stable and accurate picture of user perceptions and behaviors will be challenging for researchers in the face of such unpredictable changes.

To effectively overcome this limitation, it is advised that future research adopts a longitudinal study design. This method involves collecting data at multiple intervals, which facilitates the tracking of changes and trends over time. Such an approach enables researchers to accurately identify and analyze shifts in user behavior and market dynamics, providing a dynamic perspective on the evolution of the sector.

Furthermore, employing a flexible research design that can easily adapt to new app features or changes in functionality is crucial. This flexibility ensures that the study remains pertinent and reflects the most current trends. Regular updates to the literature review and staying abreast of industry developments are also vital. These practices help researchers interpret their findings within the correct context, making certain that the conclusions are not only data-driven but also mindful of the broader market environment.

Incorporating insights from industry experts and including grey literature, such as industry reports and white papers, could further enrich the research. These sources often contain

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cutting-edge information and projections that are not available in academic literature, offering a comprehensive view of market trends and potential future directions.

By integrating these approaches, future research can more effectively navigate the challenges of the rapidly evolving digital marketplace, thereby yielding findings that are timely, relevant, and robust.

Other limitations might be relevant. The design of our survey, particularly the inclusion of a response option labelled "prefer not to say," and the omission of providing "all possible options," represents a potential limitation in our study. This approach may hinder our ability to fully capture the depth and breadth of respondents' preferences and opinions. By not offering a comprehensive range of choices, we risk missing out on nuanced perspectives or specific reasons why respondents may opt out of the available selections. Such gaps in data can prevent a thorough analysis of participant views and could skew the interpretation of the results.

Future research could benefit from refining the survey design to incorporate a broader range of response alternatives. This change would aid in the collection of additional data, allowing researchers to capture a wider range of viewpoints and preferences. Expanding response categories to reflect a more nuanced knowledge of participant perspectives not only improves data quality, but also increases the validity and usefulness of study findings. This technique may result in a more accurate and comprehensive picture of user behavior and attitudes, delivering deeper insights.

In this study, we focused on the four most popular dating applications on the market. While this gives a thorough overview of the key companies, it also has limitations because to the limited number of platforms evaluated. The Portuguese dating app industry, known for its dynamic and developing character, is an especially fascinating case study for further

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investigation. Future research might benefit from investigating the possibility of integrating developing platforms in their analysis to acquire a better grasp of their roles and behaviors within this particular market scenario.

Future study should take these developing companies into account to provide a more complete picture of the Portuguese market environment. This expanded focus could reveal how these new entrants are shaping consumer expectations and how established platforms might need to adapt to maintain their market share. Such studies will be crucial for stakeholders looking to capitalize on the evolving trends within the digital dating sphere.

In addition, it has been difficult to interview experts within the dating app industry. The lack of responses to the messages made it impossible to get a high number of responses. Therefore, the preliminary interviews were unable to provide insights from experts of the field to the initial stages of the study.

Researchers in the future would benefit from utilizing more exhaustive methods of reaching out to specialists.

It is important to consider that this study relies on self-reported data, which introduces the risk of self-report bias. Often, self-report bias occurs when respondents give inaccurate answers to survey questions due to factors such as social desirability bias, memory problems, or misinterpretation.

Depending on how social norms are perceived, participants may underestimate socially unacceptable behavior or overstate desirable behavior in dating apps. Moreover, respondents might not be able to recall their past interactions, particularly if a significant amount of time has passed since those events. As a result, the study's validity and application may be affected by skewed or unreliable findings.

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To mitigate the impact of self-report bias, future research should consider integrating alternative data collection methods that provide a more objective assessment of user behaviors and attitudes. One approach could involve using app usage data or activity logs, which offer concrete insights into how users interact with dating apps, such as the frequency of logins, duration of use, or patterns of swiping and messaging (King & Bruner, 2000).

Additionally, triangulating self-reported data with qualitative methods, such as in-depth interviews or focus groups, can provide context and verification for survey responses, helping to identify discrepancies or underlying motivations that may not be captured through quantitative measures alone.

Future research can gain more reliable and valid insights into users' behaviors and attitudes towards dating apps by addressing self-report bias through these strategies, enabling it to draw more accurate and actionable conclusions that reflect the realities of user experiences.

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10 Appendix

Appendix 1. Preliminary Survey

Table 8 - Preliminary Survey Questions

Dating Apps Experience (1 question)	Do you currently use dating apps?	Yes
		No, but I've used them in the past
Usage of Dating Apps (7 questions)	How long have you been actively using dating apps?	No, I've never used them
		Less than 6 months
		6 months to 1 year
		1-2 years
		2-5 years
		More than 5 years
		Which dating apps are you familiar with? (Select all that apply)
	Bumble	
	Grindr	
	Badoo	
	Hinge	
	Happn	
	OkCupid	
	Boo	
	Meetic	
	Jaumo	
	Which dating apps have you used, even if not currently? (Select all that apply)	Tinder
	Bumble	
	Grindr	
	Badoo	
	Hinge	
	Happn	
	OkCupid	
	Boo	
	Meetic	
	Jaumo	
	On average, how much time do you spend on dating apps per day?	Less than 30 minutes
	30 minutes to 1 hour	
1-2 hours		
2-4 hours		
More than 4 hours		
What is your primary goal for using dating apps? (Select the one that best applies)	Seeking long-term relationships	
Casual dating		
Meet new people and explore potential connections		
For confidence and validation		
I'm just curious		
Other (please specify)		
Physical appearance		
Shared interests and hobbies		
Similar values and life goals		
Sense of humor		
Intelligence and conversation skills		
Location proximity		
Other (please specify)		
How would you rate your overall satisfaction with the dating apps you use? (Scale from 1 to 5)		

Awareness and Usage of Premium Features (7 questions)	Are you aware of the premium features offered by dating apps?	Yes, I am fully aware
		Somewhat aware
		No, I am not aware
	Have you ever used premium features on a dating app?	Yes (<i>jump to question 14</i>)
		No (<i>jump to question 13</i>)
	If you have not used premium features, what is the primary reason for your decision? (Select all that apply)	Cost
		Lack of interest in additional features
		Doubt about the effectiveness of premium features
		Concerns about privacy/security
		Other (please specify)
	If you have used premium features, how satisfied were you with their effectiveness in enhancing your dating app experience? (Scale from 1 to 5)	
	Which specific premium features do you find most valuable or appealing? (Select all that apply)	Advanced Matching Algorithms
		Unlimited Likes/Swipes
		Boosts/Super Likes
Enhanced Search Filters		
Knowing Who Liked Your Profile		
Ad-Free Experience		
Ability to Rewind/Undo Swipes		
Other (please specify)		
How frequently do you utilize premium features once subscribed?	Very frequently	
	Frequently	
	Occasionally	
	Rarely	
	Never	
Have you ever felt that the best matches are available only through the premium plan?	Yes, I have felt that the best matches are mostly in the premium plan.	
	No, I do not believe the best matches are restricted to the premium plan.	
	I am unsure.	
Perceptions of Premium Models (5 questions)	How do you perceive the value proposition of premium features on dating apps compared to their free counterparts?	Significantly higher value: Premium features offer a substantial improvement over free features for the cost.
		Somewhat higher value: Premium features offer a moderate improvement over free features for the cost.
		Equal value: Premium features offer similar value to free features for the cost.
		Other (please elaborate)
	Do you feel any societal pressure or stigma associated with paying for premium features on dating apps?	Yes, I feel significant societal pressure or stigma.
		Yes, I feel some societal pressure or stigma.
		No, I do not feel societal pressure or stigma.
		I am unsure.
	What factors would make you more inclined to subscribe to a premium plan on a dating app? (Select all that apply)	Free trial period
		Discounts or promotional offers
		Positive reviews/testimonials from other users
		Guarantees or assurances of success
		Enhanced security/privacy features
Other (please specify)		
Have you ever canceled a premium subscription after successfully getting a match? If so, what were the main reasons for your decision?	Dissatisfaction with premium features	
	Financial concerns	
	Achieving the desired outcome (e.g., finding a partner)	
	Never subscribed to a premium plan	
	Other (please specify)	
How do you perceive the value of premium features on dating apps in the long term, considering factors such as initial excitement, sustained engagement, and overall satisfaction? (Open-ended)		

Suggestions for Improvement (3 questions)	What pricing structure for premium plans would you find most appealing? (Select one)	One-time payment for lifetime access
		Monthly subscription
		Quarterly subscription
Annual subscription		
Other (please specify)		
	If you could suggest one improvement to the existing premium models of dating apps, what would it be? (Open-ended)	
	How do you think dating apps could better cater to the needs and preferences of their premium subscribers? (Open-ended)	
Demographic Information (6 questions)	Gender:	Male
		Female
		Non-binary/Other
		Prefer not to say
	Age:	18-24
		25-34
		35-44
		45-54
		55-64
		65+
	What region of Portugal are you currently residing in?	North
		Center
		Lisbon Metropolitan Area
		Alentejo
		Algarve
		Azores
	Madeira	
	Education Level:	High School or below
		Bachelor's Degree
		Master's Degree
		Doctorate Degree or higher
Employment Status:	Employed	
	Self-employed	
	Unemployed	
	Student	
	Retired	
	Other (please specify)	
Sexual Orientation: (Optional)	Heterosexual/Straight	
	Homosexual/Gay	
	Bisexual	
	Other (please specify)	

Table 9 - Interviewees ratings over the predefined attributes.

	#1	#2	#3	#4	#5	#6	#7	Average
Profile Features	4	4	5	4	5	4	4	3.7
User Interface/Design	5	4	5	5	3	5	4	3.9
Subscription Model	1	2	2	1	2	1	1	1.3
Matching Algorithm	2	4	4	5	5	5	4	3.6
Search Filters	5	1	5	4	4	4	4	3.3
Safety/Security	5	5	3	4	2	5	4	3.4
Visibility Boosts	2	5	5	4	2	3	3	3.0
Unlimited Swipes	1	3	4	2	1	4	3	2.1
Seeing Who Liked You	4	4	5	5	4	5	5	3.9
Success Rate/Reviews	4	5	3	1	4	5	4	3.1
Exclusivity	2	3	3	4	4	2	3	2.6

Appendix 2. Preliminary Interviews

Table 10 - Preliminary Interview Questions

Starting Questions (4 questions)	Do you currently use dating apps?
	Which dating apps do you use?
	How often do you use dating apps? (daily, bi-weekly, weekly, occasionally)
	What is your primary goal for using dating apps? (casual dating, long-term relationships, etc..)
Characteristics/ Attributes for Conjoint Analysis (12 questions)	What are the features that you value the most when choosing a dating app?
	Can you rank the importance of this attribute from 1-5: Profile Features
	Can you rank the importance of this attribute from 1-5: User Interface/Design
	Can you rank the importance of this attribute from 1-5: Subscription Model
	Can you rank the importance of this attribute from 1-5: Matching System/Algorithm
	Can you rank the importance of this attribute from 1-5: Search Filters
	Can you rank the importance of this attribute from 1-5: Safety/Security Features
	Can you rank the importance of this attribute from 1-5: Visibility Boosts
	Can you rank the importance of this attribute from 1-5: Unlimited Swipes/Likes
	Can you rank the importance of this attribute from 1-5: Seeing Who Liked You
	Can you rank the importance of this attribute from 1-5: Success Rate/Reviews
	Can you rank the importance of this attribute from 1-5: Exclusivity
Challenges and Opportunities (4 questions)	What are some of the biggest frustrations you encounter when using dating apps?
	What are the biggest challenges you face when trying to find a compatible partner on dating apps?
	What features or services would make you more likely to consider a premium subscription for a dating app?
	How do you see the future of dating apps evolving and what changes do you anticipate in the upcoming years?
Premium Plans (5 questions)	Have you ever considered using a premium subscription for a dating app?
	If so, what factors did you consider in your decision?
	What features or benefits did you find most appealing about the premium plans?
	What price would you be willing to pay for a premium subscription with the features you find most valuable?
	What are some reasons you would hesitate to pay for a premium subscription on a dating app?
Demographic Questions (6 questions)	Age
	Gender
	Location
	Occupation
	Education Level
	Sexuality

Appendix 3: Perceptual Maps Survey

Table 11: Survey Content

Starting Questions (4 questions)	Do you currently use dating apps?	yes / no
	Which dating apps do you use?	Tinder - Hinge - Bumble - Grindr
	How often do you use dating apps? (daily, bi-weekly, weekly, occasionally)	Daily - Weekly - Monthly - Occasionally
	What is your primary goal for using dating apps? (casual dating, long-term relationships, etc..)	Casual dating - One night stand - Long-term relationships - Social networking - still figuring it out.
Attributes for Perceptual maps Analysis (12 questions)	How do you rate the user interface on each platform?	1. Very poor - 2. Poor - 3. Indifferent - 4. High - 5. Excellent
	How do you rate the profile features on each platform?	1. Very poor - 2. Poor - 3. Indifferent - 4. High - 5. Excellent
	How do you rate the subscription model on each platform?	1. Very poor - 2. Poor - 3. Indifferent - 4. High - 5. Excellent
	How do you rate the value of money of the premium plan on each platform?	1. Very poor - 2. Poor - 3. Indifferent - 4. High - 5. Excellent
	How do you rate the algorithm on each platform?	1. Very poor - 2. Poor - 3. Indifferent - 4. High - 5. Excellent
	How do you rate search filters on each platform?	1. Very poor - 2. Poor - 3. Indifferent - 4. High - 5. Excellent
	How do you rate the safety on each platform?	1. Very poor - 2. Poor - 3. Indifferent - 4. High - 5. Excellent
	How do you rate visibility boosts on each platform?	1. Very poor - 2. Poor - 3. Indifferent - 4. High - 5. Excellent
	How do you rate the success rate on each platform?	1. Very poor - 2. Poor - 3. Indifferent - 4. High - 5. Excellent
	How do you rate exclusivity on each platform?	1. Very poor - 2. Poor - 3. Indifferent - 4. High - 5. Excellent
	How do you rate unlimited swipes/likes on each platform?	1. Very poor - 2. Poor - 3. Indifferent - 4. High - 5. Excellent
	How do you rate seeing who liked you on each platform?	1. Very poor - 2. Poor - 3. Indifferent - 4. High - 5. Excellent
Demographic Questions (6 questions)	Age	18-24; 25-35; 36-45; 46+
	Gender	Male - Female - Non binary - Prefer not to say
	Location	North - Algarve - Alentejo - Centre - Lisbon area - Madeira - Azores
	Occupation	Employed - Unemployed - Student - Self-employed - Retired - Other
	Education Level	High school or below - Bachelor's degree - Master's degree - Phd or higher
	Sexual orientation	Heterosexual - Homosexual - Bisexual - Other - Prefer not to say

Appendix 4: Perceptual Maps Results

Table 12: Sample Characteristics – Age

Age	Entries	Percent
18-24	75	75%
25-35	24	24%
36-45	0	0%
45+	1	1%

Table 13: Sample Characteristics – Gender

Gender	Entries	Percent
Female	52	52%
Male	44	44%
Non-binary	3	3%
Prefer not to say	1	1%

Table 14: Sample Characteristics – Location

Location	Entries	Percent
North	15	15%
Center	13	13%
Lisbon Metropolitan Area	60	60%
Algarve	5	5%
Alentejo	2	2%
Madeira	2	2%
Azores	3	3%

Table 15: Sample Characteristics – Occupation

Occupation	Entries	Percent
Employed	49	49%
Unemployed	9	9%
Self-employed	0	0%
Retired	0	0%
Student	54	54%
Other	0	0%

Table 16: Sample Characteristics – Education

Education	Entries	Percent
High-School or Below	10	10%
Bachelor's Degree	35	35%
Master's Degree	54	54%
PhD or Higher	1	1%

Table 17: Sample Characteristics – Sexual Orientation

Sexual Orientation	Entries	Percent
Heterosexual	69	69%
Homosexual	14	14%
Bisexual	14	14%
Other	1	1%
Prefer not to say	2	2%

Table 18: Sample Characteristics – Dating App Usage

Do you use Dating Apps?	Entries	Percent
Yes	32	32%
No	53	53%
In the Past	15	15%

Table 19: Sample Characteristics – Dating App Usage – Which Apps?

What Dating Apps do you use/have used?	Entries	Percent
Tinder	38	81%
Bumble	22	47%
Hinge	17	36%
Grindr	12	26%

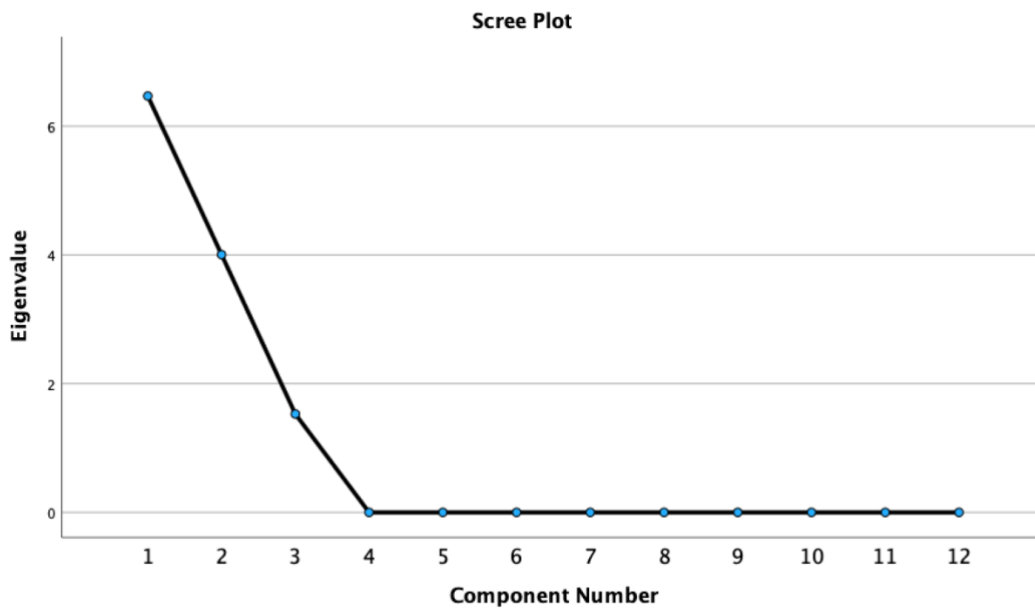
Table 20: Sample Characteristics – Dating App Usage - Frequency

How often do you use Dating Apps?	Entries	Percent
Daily	14	30%
Weekly	24	51%
Monthly	6	13%
Occasionally	3	6%

Table 21: Sample Characteristics – Dating App Usage - Objective

Primary Goal	Entries	Percent
Casual Dating	26	55%
Long-Term Relationships	4	9%
One Night Stands	9	19%
Social Networking/Making Friends	2	4%
Still Figuring it Out	6	13%

Graph 9: Variance scree plot



Graph 10: Perceptual maps – Attributes positioning.

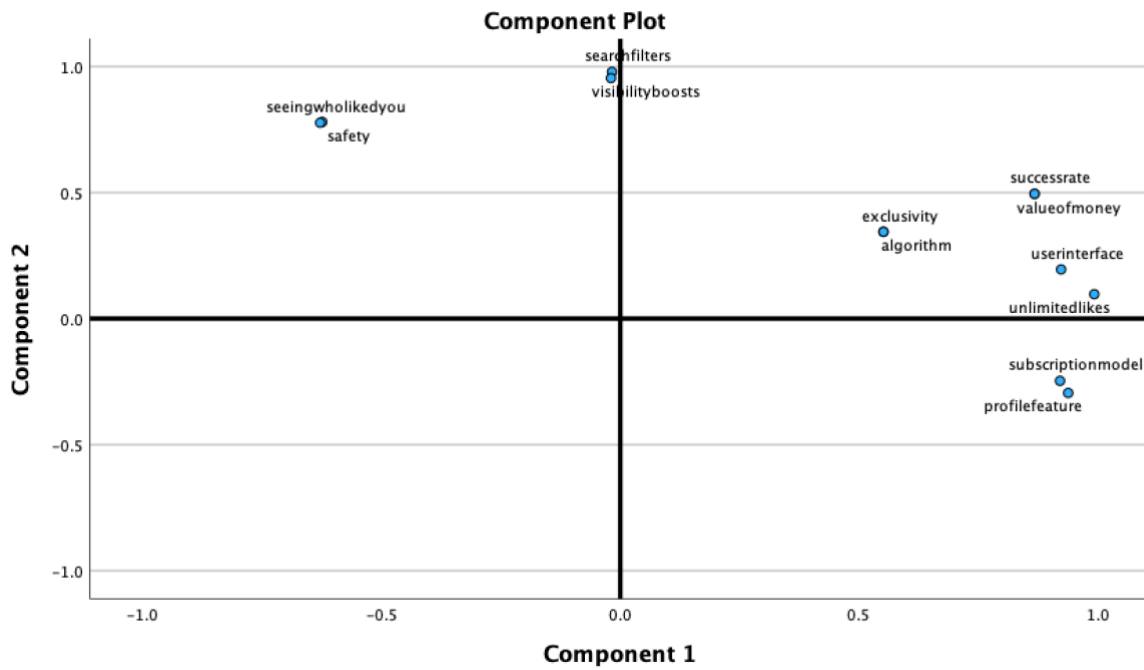


Table 22: Attributes coordinates

Attributes	Component	
	1	2
unlimitedlikes	.993	.097
profilefeature	.938	-.295
userinterface	.923	.195
subscriptionmodel	.921	-.247
valueofmoney	.868	.495
successrate	.868	.495
exclusivity	.551	.344
algorithm	.551	.344
searchfilters	-.017	.979
visibilityboosts	-.019	.954
safety	-.624	.780
seeingwholikedyou	-.629	.777

Table 23: Variance and cumulative variance explained.

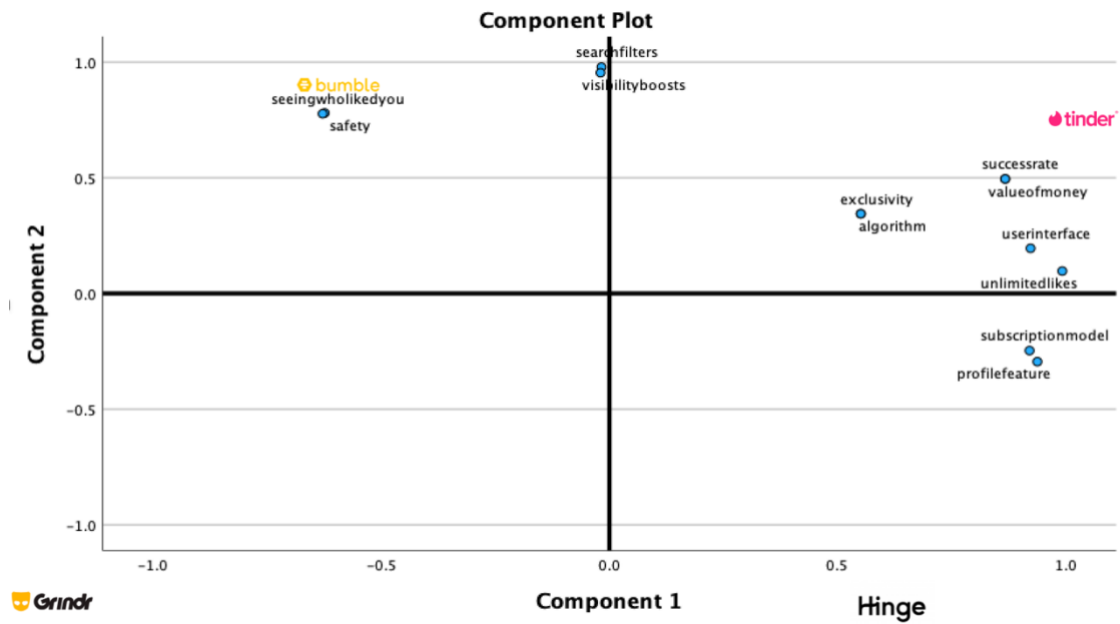
Total Variance Explained

Component	Total	% of Variance	Cumulative %
1	6.468	53.898	53.898
2	4.004	33.366	87.265

Table 24: Dating platforms coordinates.

Platform	Component 1	Component 2
Tinder	.87548	.69186
Hinge	.55993	-1.35902
Bumble	-.05069	.80888
Grindr	-1.38472	-.14172

Graph 11: Perceptual maps – Platforms positioning



Appendix 5: Conjoint Analysis

Table 25: Attributes and Levels

Brand / Platform	Tinder
	Bumble
	Hinge
Seeing Who Liked You	Yes
	No
Privacy & Safety	Low
	Medium
	High
Matching Algorithm	Random
	Based on User Preferences
	Based on Behavior
Unlimited Swipes	Yes
	No
Weekly Subscription Fee	3,99 €
	5,99 €
	7,99 €
	9,99 €

Table 26: Demographic Questions Conjoint Analysis Survey

Demographic Questions	Gender	Woman
		Man
		Non-binary
		Prefer not to say
	Age Range	18 - 24
		25 - 34
		35 - 44
		45 - 54
		55 - 64
		65+
	Education Level	High School or Below
		Bachelor's Degree
		Master's Degree
		Doctorate Degree or Higher
	Employment Status	Employed
		Self-employed
		Unemployed
		Student
		Retired
		Other
	Sexual Orientation	Heterosexual
		Homosexual/Gay
		Bisexual
		Other
		Prefer not to say
	Monthly Income Level	Less than 450€
450€ - 700€		
701€ - 1100€		
1101€ - 1600€		
1601€+		
Prefer not to say		

Table 27: Sample Characteristic - Gender Distribution

Gender	%
Woman	63.6%
Man	31.8%
Non-binary	3.6%
Prefer not to say	0.9%
Total	100%

Table 28: Sample Characteristic - Age Distribution

Age	%
18 - 24	80.9%
25 - 34	15.5%
35 - 44	1.8%
45 - 54	0,0%
55 - 64	1.8%
65+	0,0%
Total	100%

Table 29: Sample Characteristic – Academic Education Level

Education Level	%
High School or Below	8.2%
Bachelor's Degree	43.6%
Master's Degree	48.2%
Doctorate Degree or Higher	0,0%
Total	100%

Table 30: Sample Characteristic – Employment Situation

Employment Status	%
Employed	36.4%
Self-employed	2.7%
Unemployed	4.5%
Student	55.5%
Retired	0.0%
Other	0.9%
Total	100%

Table 31: Sample Characteristic – Sexual Orientation

Sexual Orientation	%
Heterosexual	60.9%
Homosexual/Gay	12.7%
Bisexual	25.5%
Other	0.9%
Prefer not to say	0.0%
Total	100,0%

Table 32: Sample Characteristic – Monthly Net Income

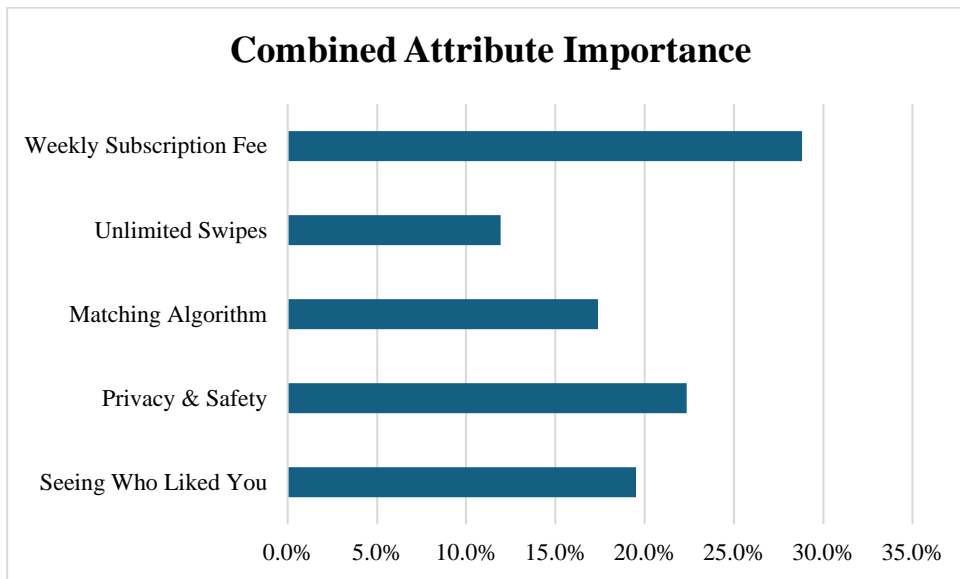
Monthly Income Level	%
Less than 450€	39.1%
450€ - 700€	3.6%
701€ - 1100€	12.7%
1101€ - 1600€	10.9%
1601€+	14.5%
Prefer not to say	19.1%
Total	100%

Table 33: Attribute Importance (Individual for each platform and combined)

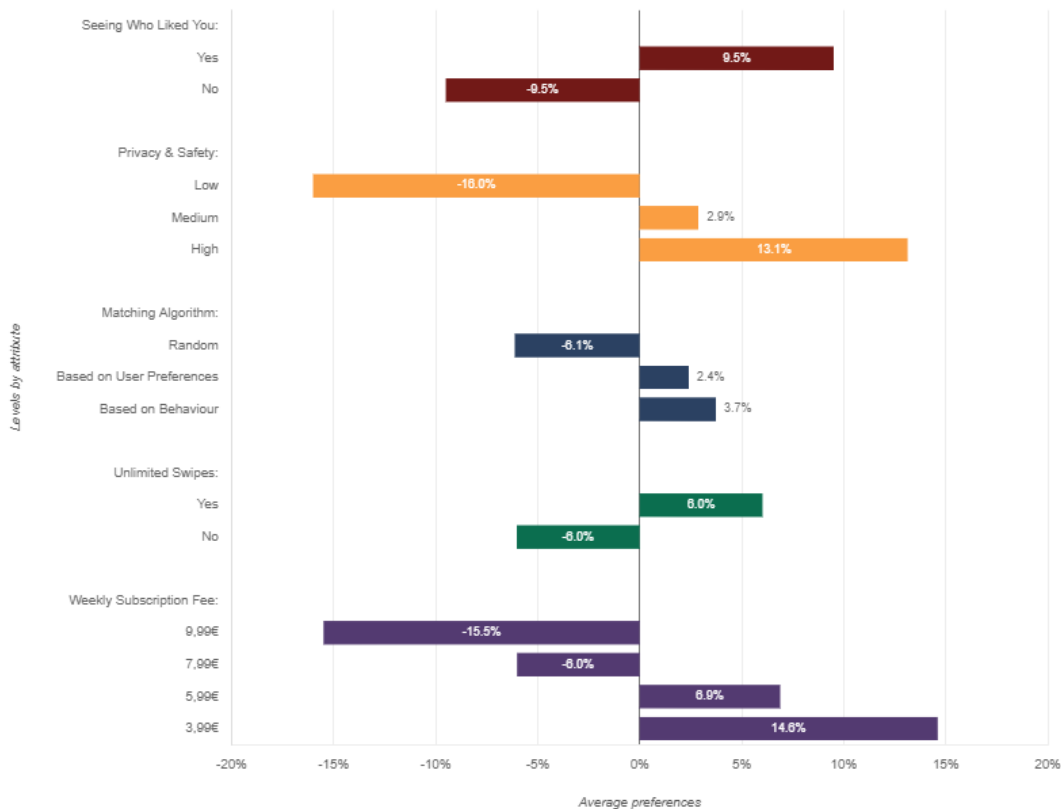
Tinder	Seeing Who Liked You	15,16%
	Privacy & Safety	25,30%
	Matching Algorithm	19,48%
	Unlimited Swipes	10,08%
	Weekly Subscription Fee	29,99%
Bumble	Seeing Who Liked You	19,76%
	Privacy & Safety	19,46%
	Matching Algorithm	17,79%
	Unlimited Swipes	14,56%
	Weekly Subscription Fee	28,44%
Hinge	Seeing Who Liked You	23,65%
	Privacy & Safety	22,31%
	Matching Algorithm	14,93%
	Unlimited Swipes	11,10%
	Weekly Subscription Fee	28,01%

Combined Attribute Importance	
Seeing Who Liked You	19,52%
Privacy & Safety	22,36%
Matching Algorithm	17,40%
Unlimited Swipes	11,91%
Weekly Subscription Fee	28,81%

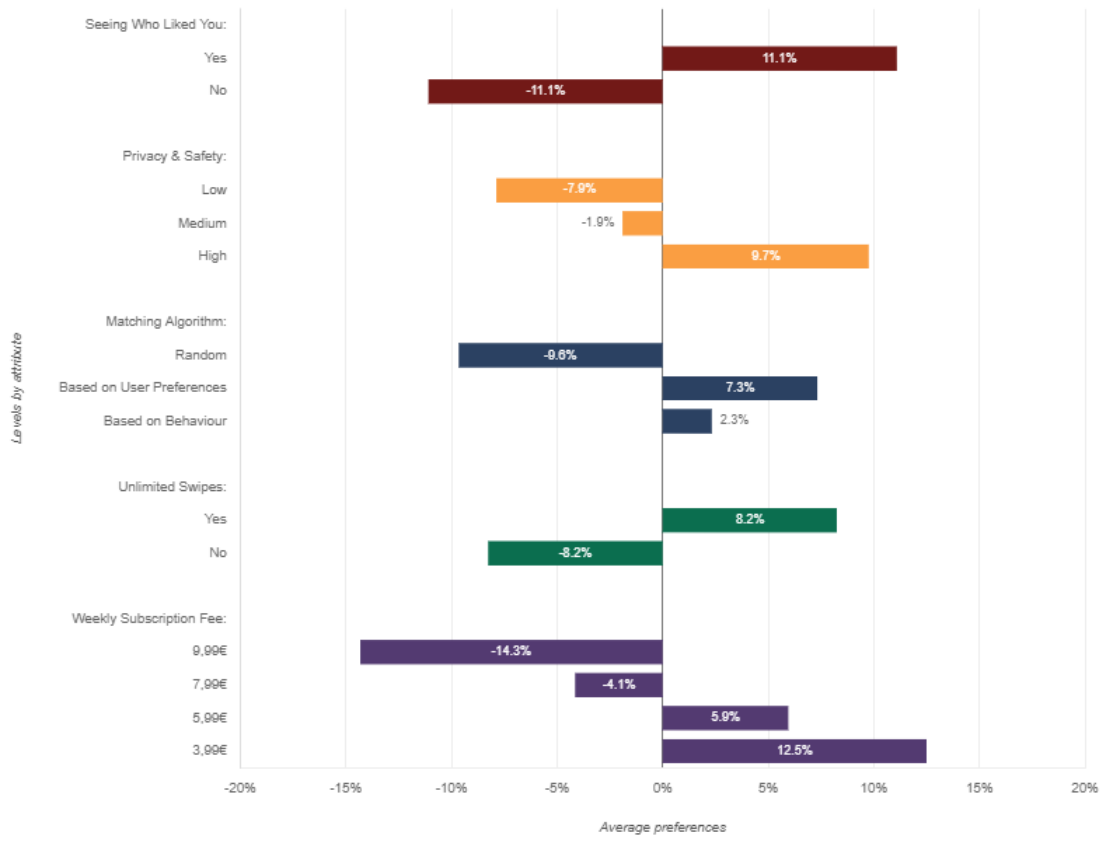
Graph 12: Combined Attribute Importance



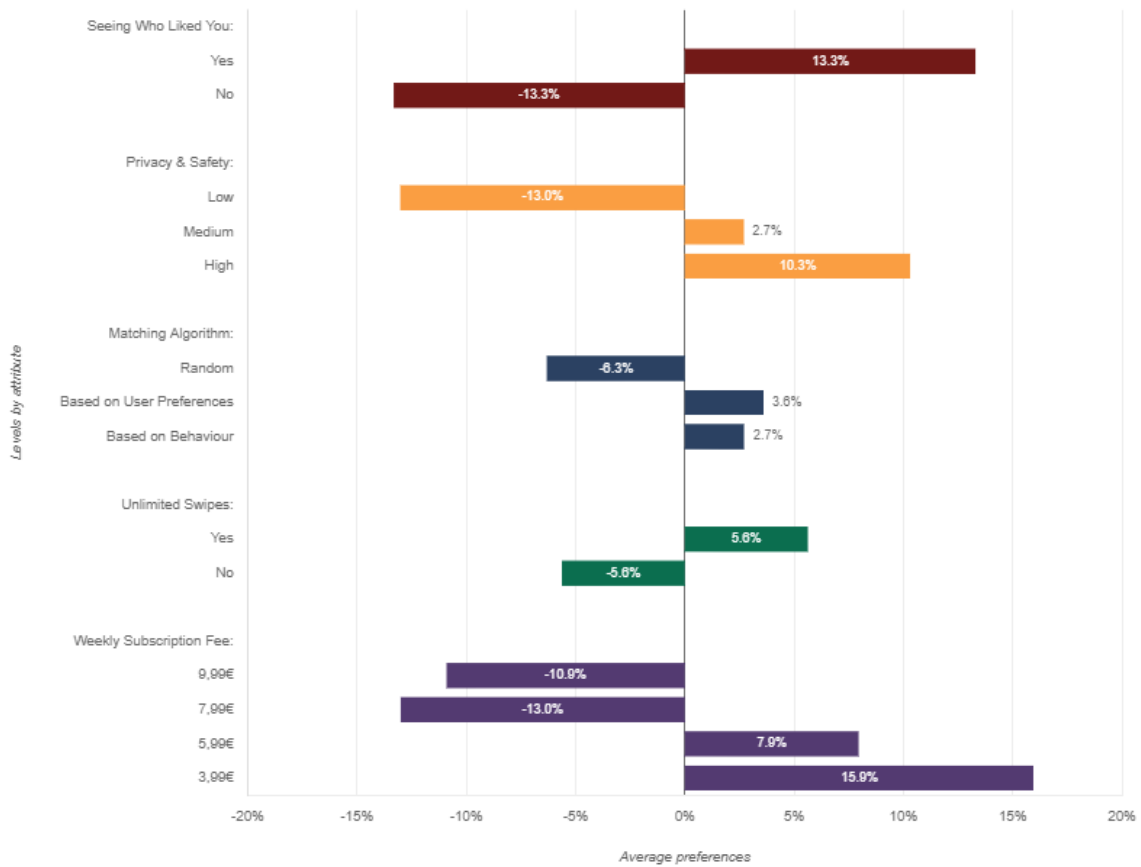
Graph 13: Tinder – Preferences for Levels



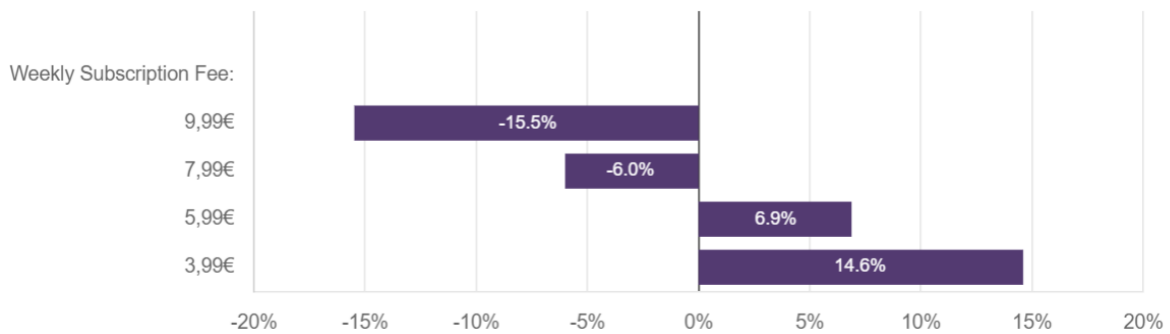
Graph 14: Bumble – Preferences for Levels



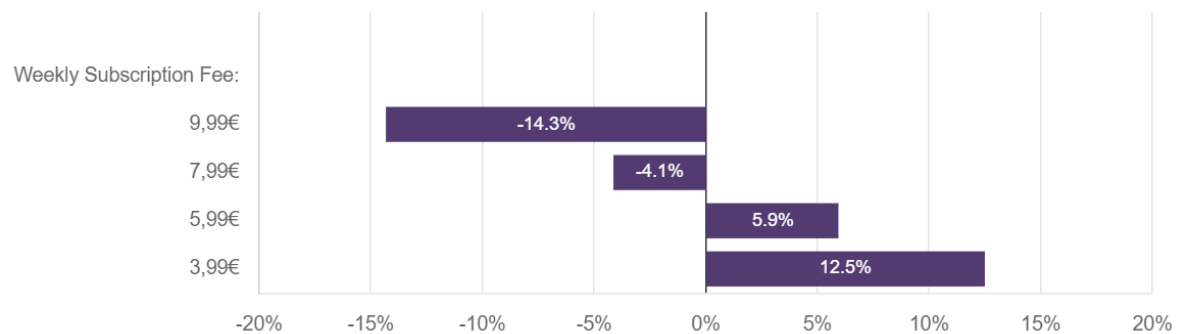
Graph 15: Hinge – Preferences for Levels



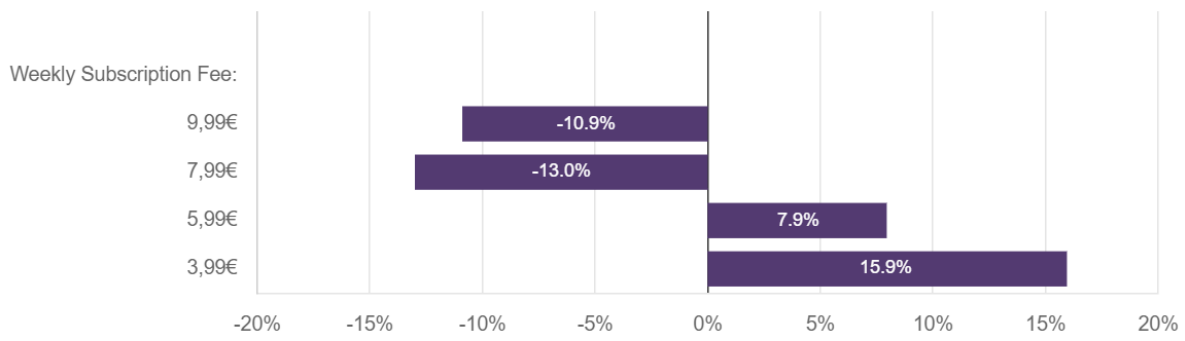
Graph 16: Tinder – Average Consumer Preferences



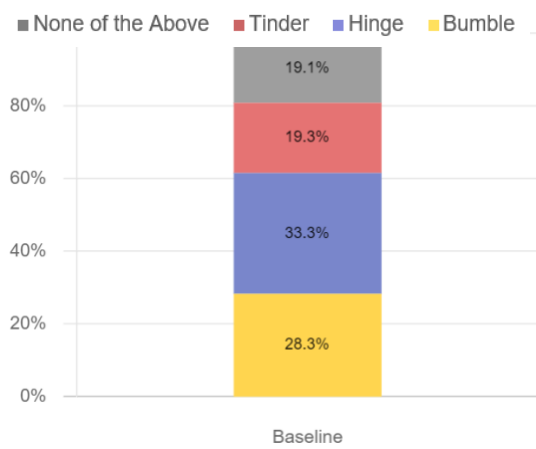
Graph 17: Bumble – Average Consumer Preferences



Graph 18: Hinge – Average Consumer Preferences



Graph 19: Baseline Simulation 1 – Preference Share



Graph 20: Baseline Simulation 1 – Preference Share

