ALCANCE

YOU'VE GOT A MATCH! THE CHARACTERISTICS OF USER PROFILES ON DATING APPLICATIONS

DEU 'MATCH'?! AS CARACTERÍSTICAS DOS PERFIS DE USUÁRIOS DE APLICATIVOS DE NAMORO

¿DIO "PAREJA"? LAS CARACTERÍSTICAS DE LOS PERFILES DE USUARIO DE LAS APLICACIONES DE CITAS

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ABSTRACT

Objective: Post-modern society has brought about major transformations and challenges in the political, economic, technological, and social spheres. Liquid modernity directly impacts interpersonal relationships, which have been reconfigured by new technologies in a great social showcase (apps). Therefore, this article aims to present the main characteristics of user profiles in dating apps, seeking to answer how these users are different and which variables are relevant to identify them.

Approach: An online survey was conducted, based on the modeling scale of Ranzini and Lutz (2017) built from demographic, psychological, motivational, and self-presentation variables. A total of 318 questionnaires were collected and, using SPSS software, descriptive, cluster, and discriminant analyses were performed.

Results: The results showed the profile differences between four types of dating app users: "Liquid Human," "The Loner," "The Player," and "The Empowered". These profiles have heterogeneous behaviors, shaped mostly by gender and psychological issues (loneliness, self-esteem, and narcissism) and motives related to sex and entertainment.

Limitations: As limitations of this research, we can indicate the difficulty in ensuring the veracity of the answers since the interviewees were not approached directly, and the questions involved personality and self-reflection.

Value: This study reaffirms arguments already discussed by other authors about how emerging technologies are changing the way interpersonal relationships happen but advances academically in the sense of systematizing four user profiles in dating apps, as well as their uses and social purposes.

Keywords: Postmodern society. Social interactions. Dating apps. Consumption.

RESUMO

Objetivo: A sociedade pós-moderna tem apresentado grandes transformações e desafios no que concerne aos âmbitos político, econômico, tecnológico e social. A modernidade líquida impacta diretamente nas formas de relacionamento interpessoal, que têm se modificado por meio de novas tecnologias, que como uma grande vitrine social, reconfiguram relações sociais. Portanto, este artigo tem por objetivo apresentar as principais características dos perfis de usuários de aplicativos de namoro, buscando responder como estes usuários podem ser diferenciados e quais variáveis são relevantes para identificá-los.

Abordagem: Foi realizada uma survey, aplicada online, tendo como base a escala de modelagem de Ranzini e Lutz (2017) construída a partir de variáveis demográficas, psicológicas, motivacionais e de autoapresentação. Foram coletados 318 questionários e, por meio do software SPSS, realizaram-se análises descritivas, cluster e discriminante.

Resultados: Os resultados demonstraram a diferenciação entre perfis de quatro tipos de usuários de aplicativos de namoro: "Humano Líquido", "A solitária", "O pegador" e "A empoderada", perfis que possuem comportamentos heterogêneos, moldados majoritariamente por questões de gênero, por questões psicológicas (solidão, autoestima e narcisismo) e motivos relacionados a sexo e entretenimento.

Limitações: Como limitações desta pesquisa podemos indicar a dificuldade em garantir a ausência de erros no que tange à veracidade das respostas, visto que não foi realizada uma abordagem direta, e os questionamentos envolveram pessoalidade e autorreflexão.

Valor: Este estudo reafirma argumentos já discutidos por outros autores sobre como as tecnologias emergentes estão mudando a forma como os relacionamentos interpessoais acontecem, mas avança academicamente no sentido de sistematizar quatro perfis de usuários de aplicativos de namoro, bem como seus usos e finalidades sociais.

Palavras-chave: Sociedade pós-moderna. Interações sociais. Aplicativos de namoro. Consumo.

RESUMEN

Objetivos: La sociedad posmoderna ha presentado grandes transformaciones y desafíos en los ámbitos político, económico, tecnológico y social. La modernidad líquida impacta directamente en las formas de relaciones interpersonales, que se han modificado a través de las nuevas tecnologías, que, como gran escaparate social, reconfiguran las relaciones sociales. Por tanto, este artículo tiene como objetivo presentar las principales características de los perfiles de usuario de las aplicaciones de citas, buscando responder cómo se pueden diferenciar estos usuarios y qué variables son relevantes para identificarlos.

Acercarse: Se realizó una encuesta, aplicada online, basada en la escala de modelado de Renzini y Lutz (2017) construida a partir de variables demográficas, psicológicas, motivacionales y de autopresentación. Se recogieron un total

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de 318 cuestionarios y, a través del software SPSS, se realizaron análisis descriptivos, por conglomerados y discriminantes.

Resultados: Los resultados mostraron la diferenciación entre perfiles de cuatro tipos de usuarios de aplicaciones de citas: "Liquid Human", "The Lonely One", "The Catcher" y "The Empowered One", perfiles que tienen comportamientos heterogéneos, conformados principalmente por cuestiones de género, por motivos psicológicos (soledad, autoestima y narcisismo) y motivos relacionados con el sexo y el entretenimiento.

Limitaciones: Como limitaciones de esta investigación, podemos señalar la dificultad de garantizar la ausencia de errores en cuanto a la veracidad de las respuestas, ya que no se realizó un abordaje directo, y las preguntas involucraron personalidad y autorreflexión.

Valor: Este estudio reafirma argumentos ya discutidos por otros autores sobre cómo las tecnologías emergentes están cambiando la forma en que ocurren las relaciones interpersonales, pero avanza académicamente hacia la sistematización de cuatro perfiles de usuarios de aplicaciones de citas, así como sus usos y propósitos sociales.

Palabras clave: Sociedad pós-moderna. Interacciones sociales. Aplicaciones de citas. Consumo.

1 INTRODUCTION

In the process of technological transformation in which we live, social modifications are eminent, as well as the importance given to so-called social media. As a great social showcase, websites and online apps are reconfiguring social relations. The virtual world, adapted from the material world, has become fertile ground for enabling possibilities and reach that were previously limited.

Virtual love relationships seem a very logical possibility in the context of a fluid and instant-gratification society. Sexual and love relationships, through websites such as Tinder, Badoo, Grinder and POF, among others, have been analyzed from various perspectives (Tannus, 2018; Lefebvre, 2018; Vieira & Sepúlveda, 2017; Oliveira, Magalhães, & Andrade, 2016; Bonavitta, 2015; Silveira, 2015; Schrock, 2015; Reed & Johnson, 2014) aiming to meet the current postmodern demand.

With these new technologies, forms of relationships have changed, with relationships built through a screen, containing links between profile information or images, often with simple avatars. The urgency of the "now" in relationships has made 'à la carte' love a part of the natural routine for modern-day humans. In this configuration of society, it is necessary to rethink the new form of 'love' that has been reconfiguring itself using technologically mediated affective relationships, profoundly impacting the forms of connection, strength, and durability of these social relationships.

There is a large and varied offer of apps, content, appeals, and probabilities of meeting "someone special" that is at the user's fingertips, through their smartphone, anywhere and at any time. According to Oliveira, Magalhaes, and Andrade (2016), some of these apps can access databases with more than thirty million profiles, and among these, the message conveyed is that "there may be someone out there waiting for you!" We suggest that in liquid modernity, consumers use various subterfuges in this process of natural consumerism, where satisfaction and happiness are partial and have an expiration date. Therefore, they can never be fully achieved.

In dating apps, profiles need to be sellable, based on the identity projects and extensions of the self that manage to get more 'matches'. Without the acceptance of the person viewing the profile, the success of the conquest is null. Therefore, can we say that the goal is to profit from the immediate sale of 'commodified love'? Or have the configurations of relationships changed along with the available technologies? In this context, what are the different needs or desires of people who seek this product? Since 'love' in an extremely natural way seems to be within the reach of a 'match', this paper aims to produce a profile of users of these dating apps. More specifically, it seeks to answer the following research questions: How can users of dating apps be differentiated, and what variables can be used to identify them?

As to theoretical contributions, this study seeks to discuss the research panorama of digital consumption, mainly related to the reconfigurations of social interactions in the context of postmodernity, as well as identity projects related to the consumption process. According to Vieira and Sepúlveda (2017), research on the presentation of the self in virtual environments, especially in online social networks, is an emerging theme that has attracted increasing interdisciplinary academic interest. But there are gaps in the literature on this theme, due to the volatility of discussions of this nature, and to the fact that the content becomes quickly outdated because of the rapid technological advancement and its forms of social use (Vieira & Seúlveda, 2017; Wajcman, 2002; Livingstone, 2004). This study therefore proposes to fill one of these

gaps, by presenting the user profiles, uses, and purposes of dating apps, which have been continuously reshaping themselves, especially in recent years.

Discussing contemporary issues related to human life reconfigured into consumer objects (Bauman, 2008), this article brings managerial and practical contributions concerning the delineation of digital user profiles. It presents different groups, with their characteristics and consumption behaviors, favoring possible reconfigurations of services. It also gives an analysis of the different perceptions and motivations for deciding to use dating apps, and the emotions experienced by users. Companies that seek to understand their target audiences more deeply, through studies like this one, have higher market differentiation and more segmented offers, and are focused on the specific social, emotional, and symbolic needs of their audience, as demonstrated by the results of this study.

As to research methodology, quantitative cluster and determinant analyses were used, based on the variables of the model developed by Ranzini and Lutz (2017) in their article "Love at first swipe? Explaining Tinder self-presentation and motives". Based on these variables, an online questionnaire was sent to a random sample, with 318 respondents who had had some experience with dating apps. The results showed four different types of profile among dating app users, which we have denominated: "Liquid Human," "The Loner," "The Player," and "The Empowered," each of which has heterogeneous behaviors shaped mostly by gender issues, psychological issues (loneliness, self-esteem, and narcissism), and motives related to sex and entertainment.

2 IDENTITY PROJECTS AND THE EXTENDED SELF IN TIMES OF 'APPS'

The popularity of mobile dating apps (apps) has increased in recent years. There are several studies on dating apps, especially Tinder, that seek to understand how people first start using the app (Lefebvre, 2018), the authenticity process (Duguay, 2017), its effect on social relationships (Bonavitta, 2015), and even its effects on users' sexual behavior (Green, Turner, & Logan, 2018). The new ways of connecting, communicating, and relating are resulting in new ways of looking for love.

Dating sites have existed on the World Wide Web for years. According to Lefebvre (2018), online chat rooms with this purpose have existed since the 1990s, as well as the website 'Match.com', which was the first to envision love matching between strangers via the Internet. Since that time, virtual dating has evolved. Bonavitta (2015) points out that new technologies have changed the forms of love.

Among their varied forms, colors, tools, and features, dating sites have evolved to make use of geographic satellite locations through apps on smartphones. Schrock (2015) proposes four opportunities for mobile media: (i) portability, which represents the ability to use the media in different places and contexts; (ii) availability, through the connection and disconnection strategies that the mobile media offer; (iii) multimedia, which is represented by integrated cameras and other communication devices that favor and extend existing practices; and (iv) location, which has enabled new services based on geographic location (Schrock, 2015). Most dating apps available on the market make use of all four of these communication opportunities. The portability of smartphones means the app to be used anywhere and at any time, favoring its availability and increased use. The multimedia nature of the devices enables users to share photos and messages, essential for building a successful profile and for the continuity of relationships on the apps.

In terms of location opportunity, Location-Based Real-Time Dating (LBRTD) apps use the geographic distance between users as a key variable for finding potential partners. These new technological capabilities and adaptations have further increased the use of dating apps, strengthening the connection between online and offline modes, and encouraging users to meet in person (Ranzini & Lutz, 2017). One of the first dating apps to use geographic location with real-time smartphone dating was Grindr, an app for "gay, bi, trans and queer people" as its website states. Tinder replicated Grindr's GPS capabilities and is now the dating app market leader (Lefebvre, 2018).

The use of dating apps can be compared to a seductive "dream" of postmodern society, with its relentless search for instant happiness, shaped by the services offered and their possibilities (Oliveira, Magalhães, & Andrade, 2016). The concept of self, extended through the consumption of goods and services, was proposed in 1988 by Russel Belk, but due to technological changes and consequent dematerialization, the digital world has shaped new forms of the self. Today, networked information, photos, messages, music, or other data that are invisible and immaterial until accessed, extend the selves of postmodern society (Belk, 2013).

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In today's society of immediate and often virtual consumption, using goods and services as projects for identity and representations of the self seems essential to contemporary culture. Such consumption is configured as an arena where identities are reshaped. Identity is the human capacity to know who is who. Postmodern consumers present themselves as lacking identity and use their possessions and experiences to meet this demand (Larsen & Petterson, 2018).

According to Belk (2013), virtual possessions can cause specific extensions of the self, such as ideal and illusory self projections, fantasies of being a different person masked by an avatar (digital presentations of ourselves), or situations that would not be possible outside the virtual world. In this sense, what we notice in dating apps is the promise of happiness, often explicit in the app's advertising, which reinforces the idea that everybody needs someone to complete their existence; to share happy moments, brought together by the "dream" that is mediated by the virtual app. Thus, the feeling of happiness, so desired, is linked to a profile in the app (dematerialized object) that must be consumed (Oliveira, Magalhães, & Andrade, 2016).

Consumption experiences are registered in the consumers' minds. According to Holbrook and Hirschman (1982), for the consumer, the experience is, above all, an individual event with significant emotional importance, based on the interaction with a stimulus represented by the products and services consumed. In this context, the feeling of happiness must be sought, chosen, and consumed, and greatly impacts the identity of the contemporary individual.

Dating apps awaken and reconfigure the desire to find the ideal partner, fueled by the firm belief that this goal is available at the "click of a button". Thus, individuals use the dating app services in search of immediate satisfaction, extending selfies, and often reconfiguring identities. "More important than finding their happiness - preferably lasting happiness - is their continuous search" (Precht, 2012, p.257). In this sense, consumers are identity seekers choosing to seek fulfillment, autonomy, and the freedom to identify themselves. The identity project is at the heart of this context, where choices impact identity and represent it to the world. Knowing who we are and who others are, others knowing who we are, and knowing what others think about us, are concerns of contemporary life and are grounded in consumer culture (Larsen & Petterson, 2018).

Dating apps are appealing due to sensory marketing through emotional responses to the consumption of affective, imaginary, and sensory experiences. The goal is to create an emotional link between the subject and the brand (Glavam et al., 2015), stimulating sensations such as experiencing, using, and "falling in love." (Oliveira, Magalhães, & Andrade, 2016). The proximity between people in dating apps is usually evoked by an image of a dinner for two, or a sunset, and the users' perception that such situations add great emotional value to that offer (the consumption of the app).

Dating apps have similarities to social networks in that they seek to foster connections between people. However, they are based on different assumptions: the former seeks to create relationships that do not yet exist, while the latter supports relationships that, in general, have already been built offline (Ranzini & Lutz, 2017). In this sense, issues relating to identity and presentation of the self are specific to dating apps. The amount and configurations of personal information to be made available on the dating apps depend on the individual's goals and personal motivations, which relate directly to how they present themselves online. Duguay (2017) points out that digitally-mediated dating typically raises concerns regarding the individuals' authenticity.

The search for authenticity in dating apps raises questions about how exactly authenticity can be constructed between people. (Duguay, 2017) points out that authenticity is constructed through the ability to routinely reference a coherent self-narrative. Belk (2013) believes the digital world not only enables its users to extend their sense of self, but also enables them to present what kind of self they wish to portray, and their desired forms of relationship. By creating avatars, users can select, modify, or assess the representation of themselves in an easier and less risky environment of self-experimentation. But there are claims that social media and smartphones are making us narcissistic, selfish, deceitful, dishonest, compulsive, and vicious (Belk, 2013). According to Bartle (2003, p.161), "virtual worlds allow you to be who you are by letting you be who you want to be." Ranzini and Lutz (2017) suggest that the relationship between individual personality and impression management in online dating apps needs further study.

3 "À LA CARTE" LOVE

The process of technological and social changes that has taken place in the last twenty years is strongly marked by the emergence of online social networks, and their importance in the life of postmodern society. Bauman (2008, p.8) points out that "social networking sites spread at the speed of a virulent infection to the extreme [...] to the point of becoming a default address of a growing number of young men and women. These individuals continually show interest in using information and communication technologies (ICTs) to foster mediated relationships, whether for work relationships

(Linkedin), sharing common interests (Airbnb, Uber), finding friends, or extending friendship ties (Facebook) (Vieira & Sepúlveda, 2017).

More intimate relationships have also been fostered through ICTs, through online dating platforms such as Tinder, Grindr, Badoo, OkCupid, Adopt a Guy, POF, Happn, *Par Perfeito*, and many others. Vieira and Sepúlveda (2017) state that the behavior of seeking online mediated relationships is a consequence of the way individuals relate to others in today's society, from changes in personal and professional life to the insertion of technologies modifying human conduct.

Bonavitta (2015) believes that there is nothing to discuss concerning the proliferation of media. However, it cannot be said that there is a direct relationship between these media and the improvement of interaction, dialogue, and communication between people. What can be seen is that social relationships are in a process of continuous and interactive change, and social networks have modified not only these relationships but also forms of love. The author further states that 'love' has become ephemeral, liquid, and superfluous in this postmodern society.

The "a la carte" love offered by apps, and fueled by photos and profile descriptions, seeks the moment, the instantaneous, "perfection in the eye of the beholder." Bonavitta (2015) states that it is a more individualistic love, without the need for future projection or giving something in return. It is a sellable love, in which the more attributes an image can capture, or the more creative a profile is, the greater the likelihood of finding the 'loved one'. Or rather, the better you sell the product (which is yourself!) and arouse the desire to be consumed through the advertising you make of yourself, the greater your chances of being happy. Society is ruled by consumption, and often, you are the item to be consumed.

Baumam (2008) discusses the phenomenon of the consumption society or society for consumption. He argues that the entire current capitalist system is maintained by consumption and, in this system, the individual becomes a sellable commodity, which is transfigured into actions, behaviors, and consumption to be socially accepted. However, this consumption that qualifies the individual in society is highly fluid. The wheel of capitalism is sustained by the continuous growth of consumption, and individuals' understanding that through consumption, they become part of society.

In dating apps, the process of consumption is no different. Individuals connect and become involved in some type of relationship, but many of these are liquid. In Bauman's (2004) terms, this means that consumerism has altered the meaning of relationships, turning turn them into another commodity. For the author, relating is currently based on liquid love, where relationships are generated by technology and instability. Instead of 'relationships', 'connections' are promoted, and instead of 'couples', 'networks'. The rhythms of globalization and capitalism and these 'a la carte' options allow individuals to adapt to new bonds that satisfy today's idea of love (Bonavitta, 2015).

Love in dating apps is considered by Bauman (2004) as fragile and superficial, guided by the excess not only of suitors but of continuous experimentation. Vieira and Supúlveda (2017) show in their work that an excess of connections can lead to new perceptions of oneself and others, as well as changing the shape of these relationships virtually and offline. Tannus (2018) and Bauman (2008) complement that the virtual world mitigates difficulties around the social skills needed for flirting. On the one hand, users are spared to a greater or lesser degree from experiencing negative emotions, such as rejection. On the other hand, positive emotions are also likely to be slowed down. Also, according to Tannus (2018, p.41-42):

> Self-esteem is raised with each Match, without much concern for the unmatched Likes, creating a bubble that responds to the not always honest stimuli of the app. The emotions in this game reflect the conflict between the scarcity of romantic love against the abundance of options in a marketplace of hearts (Likes). From automatic enchantment to a constant grudge, to the availability of a match in the human catalog that is always in your pocket, clamoring for more Matches. When one knows how to create a profile (or would it be a type of ad?) within what is expected, the algorithm runs again bringing more matches and false promises of a truly fantastical fairy tale.

From this perspective, is the virtual world bringing about the disappearance of love and loving bonds? Or are these relationships simply being reconfigured? As society continuously changes, do the needs and desires also change, as well as identities? Current relationships rely on the present and rarely last long (Bonavitta, 2015). Bauman (2008) assures, however, that among individuals there is a desperate need to "interconnect" and, in the end, this is what encourages the display of private life on the public stage, which would be a consequence of liquid modernity.

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4 METHODOLOGICAL PROCEDURES

This study is based on a quantitative research methodology of the descriptive type. This type of research has the scope to describe group characteristics, uncover or check the existence of relationships between variables, and estimate the proportion of elements of a specific population that have certain behaviors or characteristics. To define the profile of dating app users, we used conglomerate or cluster analysis, which seeks to classify cases into relatively homogeneous groups, where each group tends to be similar to each other and different from the others. Allied with the cluster analysis, the discriminant technique was added, seeking to build group profiles from the relationship between these groups to the other predictor or independent interval variables (Hair Jr et al., 2005; Malhotra & Birks, 2007).

To achieve the objectives of this research, a closed questionnaire was structured based on the variables used in the modeling proposed by Ranzini and Lutz (2017) in their paper entitled "Love at first swipe? Explaining Tinder self-presentation and motives". In this modeling, the authors seek to explain the self-presentation of Tinder app users through demographic, personality factors, and motives for use. Demographic factors and three categorical variables were used, broken down, and presented in Figure 1. Based on the scales constructed and validated by Ranzini and Lutz, these variables were replicated to identify the profile of dating app users as a whole.

Variable	Types of variables
Self-presentation	Real / Authentic
	Decieving
Psychological	Self-esteem
	Narcisim
	Lonliness
Motives	Connection/sex
	Friends/social network
	Relationship/partner
	Travel
	Self-validation
	Entertainment

Figure 1. Categorial variables used
Source: Elaborated from Ranzini and Lutz (2017).

Given that the work of Ranzini and Lutz (2017) was applied to American users focusing only on Tinder, it was necessary to adapt and concentrate some variables to avoid redundancy in the Portuguese language. The application of a pre-test showed that the respondents were not comfortable with the length of the questionnaire, and had some difficulties in filling it out.

The questionnaire was built and made available online through Google Forms. A total of 318 completed questionnaires were returned, meeting the saturation criterion proposed by Hair Jr. et al. (2005, p.98): "the ideal sample number varies in the minimum proportion of 5 to 10 cases for each variable". Given that the questionnaire was structured under 29 categorical variables, the number of respondents exceeded the authors' maximum indication.

Online questionnaires have the advantages that they make it possible to randomly reach a large number of respondents, and they avoid problem of missing answers, as the program will only accept the questionnaire once all the questions have been answered.

To avoid a neutral pattern of answers, the researchers decided that a 4-point Likert scale should be used, i.e. be composed only of the statements: strongly disagree, partially disagree, partially agree, and strongly agree, where only one answer was allowed, and had to be filled out before progressing through the questionnaire.

The questionnaires were applied between October 4 to 12, 2018. They were disseminated through the social networks Facebook and Instagram, email contacts, the instant messaging application WhatsApp, and organic forwarding from the first respondents to their contact network. The sample cannot be considered restricted to a region or state as it was composed of respondents residing throughout the Brazilian territory.

The analysis was conducted using SPSS (Statistical Package for the Social Science). Firstly, descriptive analyses of the data were performed (frequencies and cross-tables), then the Cluster and Discriminant Analysis techniques were applied. For the cluster analysis, non-hierarchical clustering and K-means clustering typology were used (Hair Jr et al., 2005). From the classification of the sample into four clusters, the Discriminant Analysis technique was performed to identify independent variables that could distinguish the proposed clusters. The discriminant technique made use of the stepwise method for its application. The results of the field research are presented and discussed below.

5 RESULTS AND DISCUSSION

5.1 Sample characterization

The aim of the sample characterization is to descriptively present the sample analyzed in this study, as well as the most interesting demographic data regarding the respondents. This survey has 318 answers, with 78 respondents (24.5%) currently using dating apps and another 240 respondents (75.5%) who have used a dating app at least once. These respondents were analyzed together, as the research aimed to find the profile for people who know and have used dating apps.

Of the 318 respondents, 199 were female, 118 were male, and 1 marked the option 'other' concerning gender. Regarding sexual orientation, the sample consisted mainly of heterosexuals (75.5%), followed by bisexuals (12.3%), homosexuals (11.3%), asexuals (0.3%), and other sexual orientations (0.6%). The respondents were mostly young people between 21 and 30 years (62.3%), followed by people between 18 and 20 years old (19.2%), and people between 31 and 40 years old (15.4%). The educational background of the respondents was composed of individuals with incomplete higher education, complete higher education, or post-graduation, with these categories comprising more than 92% of the sample.

Most of the respondents lived in towns in the interior of the country, outside the main capital cities (around 72%). This information was questioned because of issues such as physical proximity, image exposure, and even ease of face-to-face social interactions for people living in rural areas, which could lead to a disinterest in dating apps. However, when relating the place of residence with the use of apps, it was found that there is a significant relationship between the variables (p<0.045) and that majority of people, whether living in the capital or living in rural areas, had used dating apps in the past, but no longer did so. But among the respondents who still used dating apps, the percentage of those living in the capital cities (32.2%) was higher than for those living in rural areas (21.5%).

Regarding the relationship statuses of the respondents, 55% were single, 33.6% were dating, 4.7% were married, 3.8% were in a stable union, and 2.8% were separated or divorced. No widowed respondents were identified in this sample. For respondents who had used dating apps in the past but no longer used them, the majority were either single (42.5%) or dating (43.3%). The relationship between relationship status and use of a dating app is highly significant, at 1%. However, there is no significant relationship between the respondents' relationship status and place of residence, which makes it impossible to state whether the single people cited above live in a city or rural area. Therefore, there is no evidence to determine whether place of residence i.e. city or small town/rural area, is a factor that favors or inhibits the use of dating apps.

Those who had stopped using dating apps were asked to give the reasons why they had done so. The vast majority said they had met someone, though not necessarily on the app; a significant proportion said they "felt discouraged by the app's proposal," and the rest gave other reasons (Figure 2).
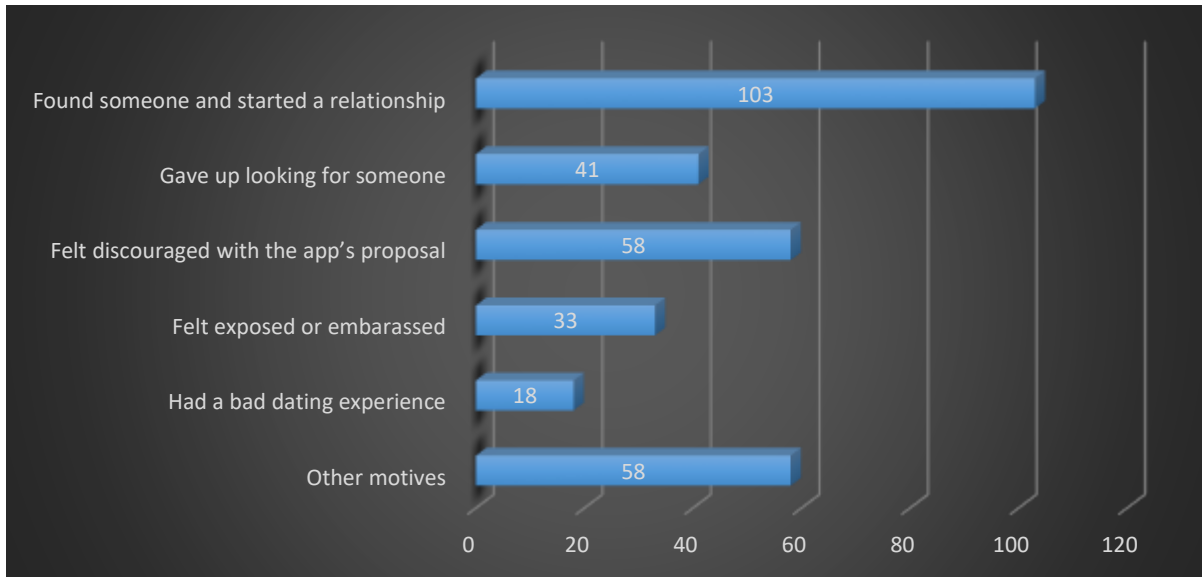
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Figure 2. Reasons for not using dating apps
Source: Research results, 2018.

The respondents were asked which dating apps they used (Figure 2). The aim of this question was to find out which apps people were aware of and downloaded the most (e.g. Tinder, Grinder, Badoo, etc.). This question was left open, allowing the respondents to include other apps not mentioned in the survey. Hence, the total number of respondents is higher than the total sample, given that some mentioned more than one app.
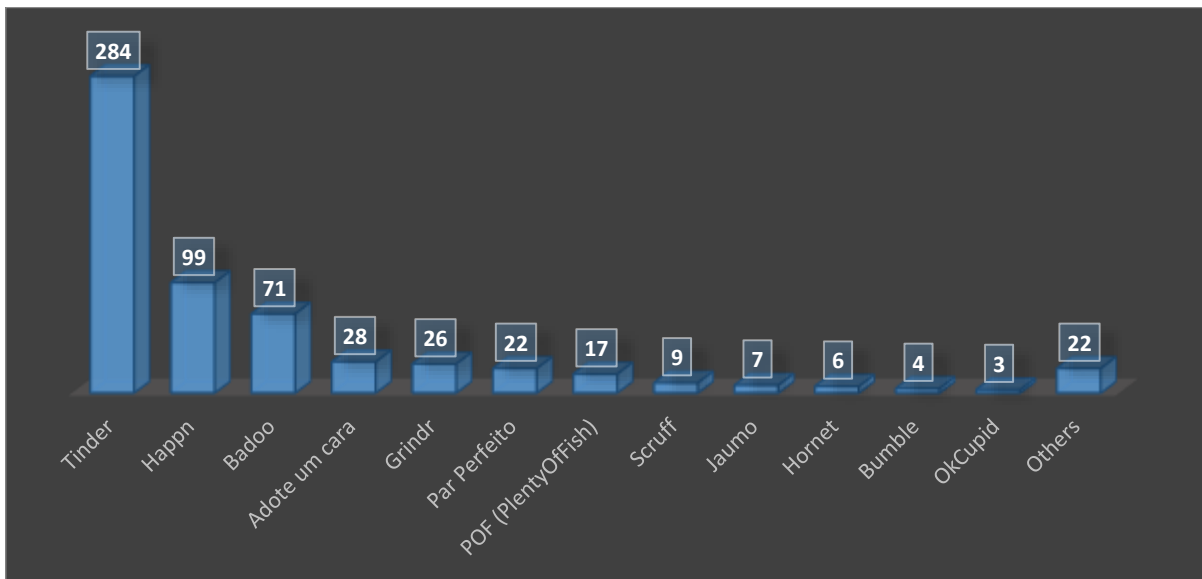

Figure 3. Dating apps used
Source: Research results, 2018.

We found that among our sample, Tinder was still the most used app, followed by Happn and Badoo. Although Tinder is still the most popular dating app worldwide, with the highest download rate, Happn has been growing rapidly and taking space in the market (Öberg, 2017).

We can conclude that the sample analyzed was comprised of people who are mostly women, heterosexual, with higher education, living in rural cities, and single. For those respondents who still used dating apps, 'Tinder' was the main reference, and for those who no longer used apps, the main reason for this was that they had started a relationship.

5.2 Cluster Analysis

The cluster analysis aimed to divide the sample of 318 respondents into groups, based on the internal similarities between, based on their responses to the survey questions about use of dating apps and on the 29 categorical variables.

After an initial analysis, it was decided to divide the respondents into four (4) clusters, with the characteristics of each cluster representing a profile of dating app users. The frequency distribution of respondents in each of the clusters is shown in Table 1.

Table 1.
Distribution of respondents in clusters

Cluster	Frequency	Percentual (%)
1	60	18.9
2	92	28.9
3	56	17.6
4	110	34.6
Total	318	100

Source: Research results, 2018.

Clusters 4 and 2 have the highest number of respondents, with cluster 4 is the largest cluster. Meanwhile, clusters 1 and 3 have the lowest number of respondents, but are balanced among themselves.

Some cross-analyses were performed between the 4 clusters and the demographic variables, seeking to gain a better understanding of the respondents' profiles. Of the demographic variables already analyzed descriptively in the first subtopic of this chapter, the Chi-square test was highly significant (1%) only for the variable 'gender'. However, we will assume, for the purposes of this analysis, a significance level of 10% for the Chi-square test. Thus, the demographic variables 'sexual orientation' (0.056), 'age' (0.086), and 'level of education' (0.083) are also elements used to differentiate between the clusters.

In terms of specific characteristics, Cluster 1 is comprised of both men and women, and other (1 respondent marked this option); as to sexual orientation, it includes heterosexuals, homosexuals, bisexuals, and others; In terms of age, the respondents are mainly aged between 18 to 30; and, as to level of education, most of the respondents in this cluster had incomplete higher education.

Cluster 2 consists mainly of heterosexual women, aged between 18 and 30 years old, and with an almost equal balance of complete and incomplete higher education.

Cluster 3 is comprised of men, with diverse sexual orientations (heterosexual, homosexual, and bisexual), aged between 21 and 40 years, and with incomplete, complete, or post-graduate higher education.

Cluster 4 is comprised mainly of heterosexual women, aged between 21 and 30 years, and with incomplete, complete, or post-graduate higher education.

Based on the clusters formed in this analysis, it can be seen that the largest group is Cluster 4, comprised of heterosexual women, aged between 21 and 30 years, educated to at least incomplete college level. Cluster 1 is the most diverse group as regards gender and sexual orientation, and is the one with the lowest levels of education. It can also be seen that Cluster 3 is a group of men with diverse sexual orientations and the highest age level of all the clusters. We noticed two clusters comprised essentially of women (Clusters 2 and 4). In both of these clusters, sexual orientation is the same, but they differ in age, with Cluster 2 being younger , and by level of education, as Cluster 4 has a higher level of education, as would be expected given the older average age in this group.

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5.3 Discriminant Analysis

Having differentiated the respondents into four groups, through the Cluster Analysis, we sought to understand the differences between them and complement the profile of the clusters. For this purpose, we performed Discriminant Analysis, using the Stepwise method, aiming to create the discriminant function, where the insertion of the variables in the function occurs from the explanatory power that each one has (Corrar, Paulo, & Dias Filho, 2007).

The set of independent variables was composed of twenty-nine variables, based on the model of self-presentation on Tinder proposed by Ranzini and Lutz (2017), structured based on a 4-point scale assumed to be interval. The Wilk's Lambda method was used to insert the variables into the discriminant functions.

In this analysis, 12 variables were discriminated, with a percentage of 83.6% correctly classified cases. Figure 3 below shows the 12 variables used to discriminate the 4 clusters under analysis, and the factors of the Ranzini and Lutz (2017) model to which each variable belongs.

Discriminant variable	Factor the variable belongs to
M1 – Seeking friendship	Psychological: loneliness
N3 – Casual Sex	Reason: connection/sex
K4 – Positive self attitude	Psychological: self-esteem
S1 – Satisfy social curiosity	Reason: Entertainment
N2 – Sexual curiosty	Reason: connection/sex
L1 – Praise embarasses	Psychological: narcissism
M2 – Seeking company	Psychological: Loneliness
R1 – Approval of others	Reason: self validation
Q1 – Meeting people for travel	Reason: travel
S2 – Looking at people's photos	Reason: Entertainment
P1 – Long-term relationship	Reason: relationship/partner
L2 – To attract attention	Psychological: narcissism

Figure 4. Discriminant variables and the factors to which they belong
Source: Research results, 2018.

The discriminant variables presented in Figure 4 show the diversity of factors that compose them. It can be seen that among the groups, psychological issues. such as feelings of loneliness and self-esteem, as well as motives such as connection and/or gender, represent important elements of opinion differentiation among the respondents.

Figure 5 shows each discriminant variable, and its behavior in relation to the 4 clusters under study. In order to summarize the information and elucidate the behavior of the clusters as regards these variables, this table presents a summary of the most prominent behavior (mode) in each cluster about each discriminant factor. In some situations, there was a uniform divergence of opinion concerning the variable; these cases were described as 'no tendency.

Discriminant variables	Cluster 1	Cluster 2	Cluster 3	Cluster 4
M1 – Seeking friendship	Totally agree	Totally/partially agree	Totally/partially disagree	Totally disagree
N3 – Casual Sex	Totally/partially agree	Totally disagree	Totally/partially agree	Totally disagree
K4 – Positive self-atitude	No tendency	Totally/partially agree	Totally agree	Totally/partially agree
S1 – Satisfy social curiosity	Totally/partially agree	Partially agree	Totally disagree	Totally/partially agree
N2 – Sexual curiosity	No tendency	Totally disagree	Partially agree	Totally disagree
L1 – Praise embarasses	Totally/partially agree	Totally/partially agree	Partially agree	Partially agree
M2 – Seeking company	Partially agree	Totally/partially agree	No tendency	Totally/partially disagree
R1 – Approval of others	No tendency	Totally/partially disagree	Totally disagree	Totally disagree

(To be continued)

(Conclusion)

Discriminant variables	Cluster 1	Cluster 2	Cluster 3	Cluster 4
Q1 – Meeting people for travel	Partially agree	Partially agree	Totally/partially disagree	No tendency
S2 – Looking at people's photos	Partially agree	No tendency	Totally disagree	No tendency
P1 – Long-term relationship	No tendency	Partially agree	Partially disagree	No tendency
L2 – I don't want attention	Totally/partially disagree	Totally/partially disagree	Partially agree	Partially agree

Figure 5. Discriminant variables and cluster behavior
Source: Results of the research, 2018.

Based on Table 4, we sought to trace a behavioral profile of the components of each cluster in relation to the discriminating factors. That the factors with more weight in configuring the profiles are placed higher in the table, while those with less weight are placed lower down.

Concerning the behavior of the clusters for each discriminant variable, Cluster 1 is composed of lonely people who are seeking sexual relations; they also seek to satisfy their social curiosity, but are somewhat shy. This group would be characterized as lonely people in search of sexual and social connections. Bauman (2004) points out that nowadays, the form of relating is liquid, generated by technology and instability, and that instead of relationships, connections are promoted.

The respondents of Cluster 2 view themselves as lonely but have a positive attitude about themselves. They are not looking for sex, but have a degree of social curiosity, while also being shy, and are looking for a long-term relationship. We profile this group as lonely people seeking long-term social relationships but without immediate sexual intentions. For this user profile, Tannus (2018) and Bauman (2008) point out that the virtual world mitigates difficulties regarding the social skills needed for flirting.

The respondents of Cluster 3 are not lonely, have no social curiosity, and have positive self attitudes. At the same time, they are actively seeking casual sex, and are not interested in a long-term relationship. They are still somewhat shy, but do not seek social approval. We define this group as socially engaged, self-reliant, and sexually adventurous. For this group of users, Bauman (2004) points out that love guided by dating apps is characterized by fragile, superficial ties, given the excess of suitors and the opportunities for continuous experimentation, corroborating the profile with shy users, with short-term connections. Vieira and Supúlveda (2017) show, in their work, that having too many connections can lead to new perceptions of oneself and others (reconfiguration of identity), as well as changing the form of these relationships, both virtually and outside the network..

Finally, Cluster 4 is comprised of people who do not feel lonely and are not searching for a sexual relationship. However, they have a certain social curiosity and a positive relationship about themselves. They are not looking for social approval, nor are they seeking to stand out from others. This group is comprised of sociable, self-sufficient people seeking to satisfy their social curiosity, but without sexual intentions. Bauman (2008) assures, however, that among individuals there is a desperate need to "interconnect" and, in the end, this is what encourages the display of private life in the public scene, which would be a consequence of liquid modernity. Projecting oneself using 'avatars', and extending oneself in the virtual world, can be an interesting way to satisfy social curiosities.

To respond to the objective of this research, we gathered demographic information about the clusters and the information about the discriminant factors, in order to draw up a final profile of dating app users. Figure 6 presents this summary, and the authors' proposed name for each cluster.

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Cluster profiles		Codename
Cluster 1	People of various genders and sexual orientations who are lonely and seeking sexual and social bonds.	**"Liquid human"**
Cluster 2	Heterosexual women who are staunch loners with no sexual intentions, seeking long-term relationships.	**The "Loner"**
Cluster 3	Older men of diverse sexual orientations, who are socially engaged, sexually adventurous, and self-sufficient.	**The "Player"**
Cluster 4	Heterosexual women with a higher educational background, sociable, self-sufficient and without sexual intentions, but with social curiosity.	**The "empowered"**

Figure 6. Cluster profiles
Source: Results of the research, 2018.

The codenames presented in Table 5 for each user profile are not intended to offend or demeaning any specific image. The aim is simply to give these characters common-sense characteristics, in a light-hearted form.

The 'Liquid Human' is the group of individuals who seem immersed in liquid modernity, for whom relationships are immediate and short-lived. These individuals constantly feel lonely; they are continually seeking to consume dating apps in order to relate socially and sexually. This character has no clearly-defined gender or sexual orientation.

The 'Loners' are a group of lonely women, but this psychological factor does not affect their choice to use dating apps. They seek social relationships that can generate lasting long-term relationships. Lefebvre (2018) points out that many use dating apps (such as Tinder) in search of interpersonal, romantic, and platonic connections and communication relationships.

The 'Player' represents a profile of male users who have diversified sexual orientations, are self-sufficient, and are seeking sexual adventures. This profile corroborates the findings of Ranzini and Lutz (2017), that the search for sex is more predominant among homosexual and bisexual users than among heterosexual users. However, we can add that this behavior also refers to the 'Liquid Human' who has several sexual orientations and several genders.

The 'Empowered' is a cluster comprised mainly of self-reliant women. They have a higher level of education and are sociable, and self-sufficient. They have social curiosity and affirm that they use dating apps for this reason. Duguay (2017) mentions, in her study, that heterosexual women see online dating as a being for the "desperate". This profile is not actively seeking relationships, or using the apps for their proposed purpose.

According to Belk (2013), virtual possessions can lead to specific extensions of the self, such as ideal and illusory self projections, fantasies of being a different person masked by an avatar (digital presentations of ourselves), or trying out situations that would not be possible outside the virtual world. From the virtual possession of an avatar in a dating app, we can assume that 'empowered' would have a direct effect on this person's identity in real life. Moreover, a successful 'player' avatar would directly impact the reconfiguration of this man's identity. Also, according to Belk (2013), the digital world not only allows the expansion of the sense of self, but the configuration of which type of self one wishes to extend.

Nevertheless, there are some important concerns about the authenticity of individuals in the virtual medium. Choices regarding their representation in the virtual world directly impact the identity project that is configured (Larsen & Petterson, 2018). It is possible that the 'liquid human' and the 'player' present avatars that possess striking characteristics for their users' identity projects in the real world. Evidence suggests that the virtual medium reshapes narcissism, selfishness, dishonesty, compulsiveness, addiction, and falseness in individuals (Belk, 2013).

6 FINAL CONSIDERATIONS

The aim of this study was to present profiles of dating app users. It uses the modeling scale of Ranzini and Lutz (2017) as a basis, built from demographic, psychological, motivational, and self-presentation variables. As mentioned earlier, the results of the cluster and discriminant analysis showed the differentiation between profiles of four groups of dating app users, namely: "Liquid Human," "The Loner," "The Player," and "The Empowered.

In short, the "Liquid Human" group is more immersed in liquid modernity, uses dating apps in search of immediate and short-lived relationships. The "Loner" seeks social ties that can generate long-lasting relationships. The "Player" is a "bon vivant" and uses apps to support his sexual behavior. The "Empowered" seeks to satisfy her social curiosity, but without sexual intentions.

These four profiles of dating app users have heterogeneous behaviors, mostly shaped by gender, psychological issues (loneliness, self-esteem, and narcissism), and motives related to sex and entertainment. Lefebvre (2018) points out, in his studies, that Tinder, as a type of dating app, has been commonly seen as a sex app promoting casual relationships and short-lived experiences. Belk (2013) states that social media makes us more narcissistic, selfish, and individualistic.

Another issue observed, and that deserves further study, is that Cluster 4 (the "empowered") is looking for a service that is not necessarily among the proposed purposes of the dating apps. According to this group's profile, dating apps can deliver a service that is not necessarily related to seeking affective or sexual relationships.

This research advances academically in the sense of proposing four different profiles of dating app users, a theme on which there are virtually no previous studies in the literature. The motivations for using dating apps, already pointed out theoretically and in this study, are important for describing the differences between users of these apps, but there are issues to be further explored.

Therefore, further research is suggested in the future, to: a) replicate the methodology adopted in this research for other populations of users of dating or relationship applications seeking to validate the results of our study; b) conduct qualitative research in order to delve deeper into the behavior of dating app users based on the four profiles identified in our study; c) deepen the analysis of the relationships between loneliness and self-esteem and the use of dating apps, given that these apps do not necessarily help to mitigate these issues; d) seek to understand how impression management works, given that it is important for allowing users to highlight information that may be desirable to potential partners. Rather than openly lying, users tend to present their best characteristics, extending themselves through avatars, according to their motivations and personal factors

As to the limitations of this research, it is worth noting that as we chose not to identify and approach the respondents directly, it cannot be stated with complete certainty that all 318 respondents have actually used or currently use a dating app, even though this question was asked early on in the process of filling out the online questionnaire. Moreover, as the focus of some of the questions involved personality and self-reflection, errors regarding the accuracy of the answers are possible.

This study reaffirms the argument already proposed by several authors, including Oliveira, Magalhaes, and Andrade (2014), Bonavitta (2015), Silveira (2015), Lefebvre (2018), Reed and Johnson (2014), and Tannus (2018) that new emerging technologies are changing the way interpersonal relationships are initiated, transforming the traditional models of affective engagement into pre-interactions mediated by mobile technology, regardless of whether this change is positive or negative for society.

To conclude, we quote an excerpt from the work of Tannus (2018) that reflects on love in the era of high-bandwidth: "Sitting in a blue armchair, Tinderella, in the company of her bluebirds, swipes the screen to the left in a constant dislike of the profiles she sees. Between interactions with the bluebirds and apparent boredom, she stops at one profile, Princeton, who is only a mile away. This is the opening scene of the animation 'Tinderella: A Modern Fairy Tale' from the American joke channel *College humor* on Youtube. Tinderella and Princeton don't get married in the end; the modern fairy tale ends when she leaves his apartment at dawn. Happily ever after, they never see each other again."

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