



**CATÓLICA
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COMMUNITY PHARMACY MARKET IN PORTUGAL: WHAT ROLE DOES THE ONLINE CHANNEL PLAY?

Mariana Viegas de Carvalho

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Resumo

A presente dissertação visa estudar impacto do online no setor das farmácias comunitárias portuguesas. A pandemia de Covid-19 veio acelerar a procura por soluções digitais, o que fez com que as farmácias comunitárias portuguesas tivessem de se adaptar rapidamente, por forma a dar resposta às necessidades dos seus consumidores e a manterem-se relevantes no mercado. No entanto, a maioria das farmácias portuguesas ainda não tem um canal online disponível, pelo que é importante explorar se há de facto esta necessidade por parte dos consumidores.

A pesquisa realizada envolveu a realização de dois questionários, um direcionado aos consumidores (n=170) e outro direcionado aos farmacêuticos (n=63). Para além disso, foram realizadas 3 entrevistas representativas da Associação Nacional de Farmácias (ANF), Glint e Alliance Healthcare Portugal para recolha de dados qualitativos.

Os resultados revelam que tanto os consumidores como os farmacêuticos portugueses consideram que o futuro das farmácias comunitárias consistirá num sistema híbrido, combinando a loja física tradicional com o canal online. Adicionalmente, não existe qualquer associação entre aquilo que os consumidores e farmacêuticos consideram ser o futuro das farmácias e o local onde residem e o local onde se situa a farmácia, respetivamente. O papel das farmácias comunitárias portuguesas passará por uma maior disponibilização de serviços de saúde à comunidade.

Título: O setor das Farmácias Comunitárias em Portugal: Qual o papel do Canal Online?

Autor: Mariana Viegas de Carvalho

Palavras-Chave: Digital Transformation, Omnichannel, Community Pharmacies, Online, E-commerce

Abstract

This dissertation aims to study the impact of online in the Portuguese community pharmacy sector. The Covid-19 pandemic has accelerated the demand for digital solutions, which required community pharmacies to adapt quickly to meet consumers' needs and remain relevant in the market. However, most Portuguese pharmacies still do not have an online channel available. This is why is so important to explore whether there is in fact this need on the part of consumers.

The research involved two questionnaires, one directed to consumers (n=170) and the other directed to pharmacists (n=63). In addition, 3 interviews were conducted with representatives of the Associação Nacional de Farmácias (ANF), Glint and Alliance Healthcare Portugal to collect qualitative data.

The results reveal that both Portuguese consumers and pharmacists consider that the future of community pharmacies will consist of a hybrid system, combining the traditional physical store with the online channel. In addition, there is no association between what consumers and pharmacists consider to be the future of pharmacies and the location they live or the location of the pharmacy, respectively. The role of Portuguese community pharmacies will be to provide higher health services to the community.

Title: Community Pharmacy Market in Portugal: What role does the Online Channel play?

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Keywords: Digital Transformation, Omnichannel, Community Pharmacies, Online, E-commerce

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1. Introduction

In recent years, the internet has become a key part of people's lives. The emergence of COVID-19 accelerated the search for digital solutions, which required companies to quickly adapt and provide a high-quality service, always putting consumer needs as priority.

The community pharmacy sector is no exception. Despite being considered a traditional concept with sales focused on the pharmacist-client relationship, consumers have become more informed, thus demanding multichannel solutions. However, as most Portuguese pharmacies lack usage of new digital and technological tools, consumers might be looking for alternatives on other available websites.

That is why it is so relevant to understand the impact of online channels on the sector and analyse whether there is in fact demand for this digital solution. In addition, it is important to understand what consumers value in an online platform of a pharmacy, to understand how the sector can differentiate from other competitors that present very attractive prices. Currently, the main differentiating factor of the sector is the sale of prescription drugs. However, the online sale of this type of medicine has a lot of legal restrictions which adds some complexity to the process. That is why it is so important to study this topic and see if it makes sense for pharmacies to have an online presence and, if so, how they should do it.

1.1. Relevance of the Study

Most community pharmacies have not yet realized the need to adapt to this new digital era or are sceptical - they do not believe that the demand will compensate for the investment over new digital and technological tools.

By conducting this case, the aim is to understand if there is, in fact, a need for community pharmacies to innovate by improving their offer of digital services, considering the inherent challenges. In addition, the aim is also to understand how pharmacists perceive the need to innovate and shed some light on the role of the digital when adding the location of pharmacies into the equation - cities versus villages. Furthermore, we will

deep dive to understand the impact of variable COVID-19 on the demand for online services to scrutinize if it was a one-time phenomenon or the beginning of a new trend.

Although personal contact still plays a key role in the success of community pharmacies, it is crucial to meet customer needs by constantly innovating to deliver a great quality service and have success in the long-term.

Many community pharmacies already present a wide range of offline services, such as individual drug preparation programs, nutrition consultations, rapid tests for screening human immunodeficiency virus (HIV), hepatitis C virus (HCV) and hepatitis B virus (HBV) infections, administration of first aid and vaccines, among others. However, it is important to understand if this is enough or if we are in a changing moment, where digital innovation stands out as a cornerstone to stay relevant and competitive in an ever-evolving market.

1.2. Problem Statement

The purpose of this study is to understand whether there is a consumers' need for community pharmacies to invest in more and better digital solutions, focusing specifically on the e-commerce solution.

1.3. Research Questions

RQ1: What is the impact of online transformation in pharmacies? Is it an opportunity or a threat?

RQ2: What consumers consider to be the future of community pharmacies? Is it different from consumers that live in big cities to the ones living in smaller cities?

RQ3: Do pharmacists think that investing in online makes sense?

RQ4: What is the best products portfolio to be available online?

RQ5: What will be the future role of community pharmacies in the future?

1.4. Methodology

This dissertation will use both primary data collected in Portugal, as well as secondary data sources based on market research reports. Regarding the primary data, quantitative research will be performed by running questionnaires with consumers in order to understand their purchase preferences and needs and also to pharmacists to have more clear information regarding their expectations and concerns with the future of pharmacies. In addition, qualitative primary research will also be performed with interviews to a representative of the Associação Nacional de Farmácias (ANF), of Glintt and of Alliance Healthcare Portugal to understand what their point of view regarding the online investment is and how they see the role of community pharmacies in the future. It will be very interesting to intercept the results of all this studies and analyse the perceived knowledge of what we think consumers might want versus what consumers real interests.

2. Literature Review

This chapter provides an analysis of the theoretical concepts that are essential to better understand the scope of this thesis.

The literature review is divided in three main sections, the first is Digital Transformation, the second is devoted to Omnichannel Strategy and the third one is regarding Online Purchasing. The first topic focuses on understanding the impact of digital transformation in Small and Medium Enterprises (SMEs) and its main drivers. The second topic reflects on the importance of having an omnichannel strategy and what might be the main challenges of implementing it. Lastly, there will be a reflection on how COVID-19 impacted online purchasing behaviour, focusing in the online pharmacy sector.

2.1. Digital Transformation

The global spread of COVID-19 led to months of quarantine. With such an event, a new reality appeared, impacting nearly every industry. This new digital era brought with it updated technologies that are being continuously incorporated, leading to new forms of business.

According to (Candelo, Casalegno, & Civera, 2021), the quick progress of cutting-edge technologies, such as digital platforms, social media, mobile connectivity, smart manufacturing, artificial intelligence (AI), and augmented reality, have truly revolutionized the everyday experiences of people - not only their operational methods but also their objectives within organizations. The profound changes witnessed encompass the reshaping of business strategies, and the reorganization and growth of entire entrepreneurial landscapes. Additionally, it has improved the entry points to innovative markets and approaches for engaging with them.

Before further exploring this subject, it is important to define some relevant concepts to this study.

According to (Mergel, Edelmann, & Haug, 2019), “digital” can be referred to as the use of digital technologies that modify not only an organization’s business procedures but also their organisational structure and culture. On the other hand, “digitised” refers to the

process of converting analogue information into digital formats. Companies all around use digitalisation to offer a more innovative and faster service. Not only that, but digitalization also reshapes their long-established business model into a digital one, increasing the organization's market competitiveness. (Rizwan Raheem Ahmed, 2022).

While digitisation is a relevant precursor to digital transformation, it does not necessarily guarantee that an organization has transformed its operations, culture, or business model. Digitisation involves the adoption of digital technologies to replace traditional, paper-based processes. However, digital transformation goes beyond this to fundamentally change how an organization operates and delivers value to its stakeholders, thus highlighting this way the importance of understanding its definition (Mergel, Edelmann, & Haug, 2019).

The same authors also refer that digital transformation is a continuous effort to move from analogic to digital, requiring a complete revision of the business goals, current processes, and consumer needs. This results in the creation of new digital services and new ways of service delivery that consequently lead to an increase of customer satisfaction and number of customers. Companies must recognize the distinction between digitisation and digital transformation and focus on the latter as a strategic imperative for remaining competitive and relevant in the digital age.

2.1.1. Digital Transformation in Healthcare

The existing literature on digital transformation in healthcare is limited (Raimo, De Turi, Albergo, & Vitolla, 2023). However, there is a growing recognition of the importance of digital transformation within the healthcare sector, with increasing attention from academics. Many companies have not yet realized its advantages and are still at an early stage of adopting digital transformation in their business (Binci, Palozzi, & Scafarto, 2021).

The goal of embracing digital transformation in healthcare is to assist and upgrade traditional activities along with the creation of new value propositions through digital initiatives. In order to ensure the success of such transformation, healthcare organizations need to be agile and take into consideration the requirements and needs of end users (Ghosha, Dohanb, Veldandic, & Garfield, 2023). Other authors defend that if

healthcare companies are meticulous in selecting and adopting digital technologies, when executed with cost-effectiveness in mind, it can potentially bridge gaps in healthcare accessibility and improve wellness of the community (Raimo, De Turi, Albergo, & Vitolla, 2023).

Focusing on the community pharmacy sector, the goal is to have an integrated healthcare network, generate agile and secure information flows, allowing everyone involved to make the best decisions for their patients in real time. According to (Martins, 2021), pharmacies should leverage on advanced customer relationship management (CRM) tools and loyalty programs to balance healthcare and business management, fostering this way proactive engagement with customers which will lead to a closer relationship. Moreover, pharmacies need to have a well-developed digital presence with straightforward access to essential information, interactive features, and an optimized e-commerce strategy.

2.1.2. Digital Transformation Challenges

Traditional non-digital companies such as community pharmacies, face a significant hurdle when embracing a digital transformation journey. However, those who successfully overcome the challenge can significantly increase their chances of long-term survival. Yet, the impact of digital transformation on small retailers and stakeholders is multifaceted, transforming the dynamics of interaction, their decision-making, and their value creation. By embracing the digital revolution, companies reshape the essence of relationships in the business landscape (Candelo, Casalegno, & Civera, 2021).

However, this is no easy task for small and medium-sized enterprises (SMEs) to follow, as many are still unprepared as is the case of community pharmacies. According to (Omrani, Rejeb, Maalaoui, & Dabié, 2022), small and medium sized companies and therefore community pharmacies, need to overcome the challenges associated with building IT infrastructures and be capable of implementing new technologies. The authors defend that developing a fully integrated strategic approach is crucial before adopting digital technologies. In other words, although implementing digital

transformation strategies improves performance (Teng, Wu, & Yang, 2022), SMEs should develop a meticulous strategy plan before adopting mimetic behaviours based on external pressure.

According to (Pettersson, et al., 2022), the main challenges of embracing digital transformation in healthcare are mostly related with the internal capacity for strategic modifications and with the skills that employees will need to get in order to work with new processes and technologies. Other authors highlight other challenges such as the initial investment that is needed, data security and healthcare regulations to protect patient information and ensure that there are no breaches of personal data that can compromise patient care (Saini, 2022).

When focusing on the Portuguese community pharmacies, there are still a lot of challenges related with digital transformation. According to (Martins, 2021), there is a pressing need for an integrated healthcare network, with community pharmacies playing a pivotal role in bringing healthcare closer to citizens, in collaboration with other healthcare services and professionals.

2.2. Omnichannel Strategy: Dynamics and Main Challenges

Over the past decade, the retailing world has changed dramatically. Aspects like the online channel (e-commerce purchasing) and new additional digital tools, such as support tools (e.g., Skype, Teams, Microsoft Office, etc.), are responsible factors for such drastic transformation. All this combined resulted in changing the execution of the retail mix and the behavioural change of shoppers. (Verhoef, Kannan, & Inman, 2015).

An omnichannel strategy, which consists of providing customers with a seamless shopping experience across multiple touchpoints, has gained relevance in shaping modern commerce, retaining customer loyalty, and boosting profitability. Omnichannel is the gold standard. It represents a firm's seamless integration of multiple channels and customer touchpoints. The aim is to deliver a consistent, progressive customer experience throughout the purchase decision process, regardless of the entry channel the customer uses at any given stage of the process (Taylor, Brockhaus, Knemeyer, & Murphy, 2019).

According to (Beck & Rygl, 2017), the evolution from multichannel to omnichannel retailing resulted in digital transformation. Technological innovations like Augmented Reality (AR) and Virtual Reality (VR) are enhancing the omnichannel experience, leading to deeper customer immersion and engagement (Grewal, Roggeveen, & Nordfält, 2017).

Implementing an omnichannel strategy can directly increase sales online and in-store by leveraging the synergies between various channels (Brynjolfsson, 2018). Other authors defend that a successful implementation of an omnichannel strategy can bridge the gap between the online and offline worlds (Beck & Rygl, 2017) and enhance customer engagement and experience, directly affecting customer loyalty and company profitability (Verhoef, Kannan, & Inman, 2015). Furthermore, it allows businesses to capture, analyse, and act on customer data in real time, ensuring a more personalized shopping experience across channels (Bell, Gallino, & Moreno, 2018).

While the omnichannel strategy holds promise for enhancing the customer experience and boosting business outcomes, its successful implementation poses numerous challenges. Such challenges can range from various channel integrations, data management complexities, and even the reconstruction of a supply chain, plus technological and resource constraints. Some companies may find it unfeasible or unprofitable to implement an omnichannel strategy. According to (Giada, Zilliani, Teller, Ieva, & Ranfagni, 2022), the main reasons for companies considering it non-viable are the “increased competition” and “related price pressure” that after the pandemic have become strengthened.

Integrating multiple sales channels, especially when coordinating different technology stacks, processes, and teams, brings a lot of complexity to the process (Beck & Rygl, 2017). Without proper channel integration, businesses risk offering inconsistent experiences to customers, which can destroy trust and loyalty (Verhoef, Kannan, & Inman, 2015).

In addition, when implementing an omnichannel strategy, there is a need to manage and analyse vast amounts of customer data across channels, emphasizing the necessity for advanced analytical tools and qualified personnel (Bell, Gallino, & Moreno, 2018).

Resource allocation is one of the main challenges, particularly when ensuring that staff is trained adequately to manage and operate in an omnichannel environment (Grewal, Roggeveen, & Nordfält, 2017).

Prior to the pandemic, omnichannel was a differentiating factor, allowing businesses to stand out from competitors by offering consumers a high diversity of services and experiences. However, the COVID-19 pandemic underscored its significance and potential. (Giada, Zilliani, Teller, Ieva, & Ranfagni, 2022). According to (Verhoef P. C., 2021), the definition of omnichannel will progressively evolve. With new technologies constantly emerging in the markets, purchasing behaviour will become more digital. So according to the author, it will become less relevant to connect both the offline with the online world, as these technologies may produce a shopping experience much like the traditional offline interactions.

2.3. Online Purchasing Behaviour

The outbreak of the COVID-19 pandemic led to significant shifts in the consumer purchasing landscape, particularly in the domain of online shopping. Across the world, governments imposed lockdowns and social distancing mandates, leading consumers to turn to e-commerce platforms for their daily needs, setting new trends, behaviors and challenges (Fittler, et al., 2022). The pandemic acted as a catalyst, accelerating the shift from physical to digital, making digital transformation mandatory for all business sectors (Fletcher & Griffiths, 2020).

These significant shifts also applied to the pharmacy sector. Although online pharmacies started to emerge at the beginning of the 21st century, the absence of established regulatory measures and verification processes led to consumers not seeking this online solution due to a lack of trust and poor customer experience of the process (Lobuteva, Lobuteva, Zakharova, Kartashova, & Kocheva, 2022). With the arrival of the pandemic, community pharmacies had to accelerate the search for better solutions. These days, acquiring medications from authenticated and certified online pharmacy platforms has emerged as an accepted practice among developed countries (Lobuteva, Lobuteva, Zakharova, Kartashova, & Kocheva, 2022).

According to (Fittler, et al., 2022), online pharmacies enable patients to make well-informed choices and seek the most competitive prices for their prescriptions. Additionally, the authors defend that this channel offers individuals the discretion to acquire medications related to conditions they might find difficult to discuss or buy face-to-face. While the rise in online pharmacy usage can be attributed to external aspects like pandemics and governmental constraints, it's imperative to address the potential implications on patient safety and the regulatory oversight of drugs.

Although there is a higher demand for online solutions, it is fundamental that businesses understand what consumers value in the online purchasing process and ensure that their expectations are met. Customers highly appreciate the hedonic and routine linked with products, influencing online shopping experiences. Marketers can use this detail to make the online purchasing experience more exciting. Moreover, marketers can enhance consumer engagement using social media for word-of-mouth marketing and promoting special deals (Yang, et al., 2023).

In addition, technological advances should focus on user-friendly interfaces, especially to appeal to those less technologically inclined. The COVID-19 pandemic underscores the importance of retaining customers, with regular shopping being one of the main factors in post-pandemic e-shopping. High-quality e-shopping services, including faster delivery and safer products, are crucial, as are refining payment gateways and ensuring well-trained delivery employees. Given the prevalent concern about online shopping risks, marketers must address discrepancies in product quality and online descriptions, as those are primary areas of customer dissatisfaction (Yang, et al., 2023).

3. Case Study

3.1. The role of Community Pharmacies

In Portugal, the practice of pharmacy has evolved significantly since its beginning, in 1449, when practitioners, initially known as apothecaries, were primarily involved in preparing medicinal substances. Over time, the profession has transitioned towards a community-centred approach, focusing on offering an extensive range of services aimed at addressing the comprehensive healthcare needs of the local community (Ordem dos Farmaceuticos, s.d.).

Today, community pharmacies play an indispensable role in Portugal's National Health Service (SNS), offering widespread access to quality healthcare services, particularly in regions where they remain the only healthcare provider. Community pharmacists are actively engaged in various aspects of public health, including disease prevention, early detection and promoting healthier lifestyles, positioning them as central figures in the healthcare system.

Furthermore, they are involved in an array of complex services that revolve around therapeutic management and medication reviews. These services, which are integral to achieving positive therapeutic outcomes, cater specifically to individuals with chronic conditions and those transitioning between different levels of care. They are also pivotal in promoting the responsible use of medications, including the advocacy for generic drugs, which has financial benefits both for the patients and the SNS.

Community pharmacies have broadened their scope to include services such as vaccination programs, with an increasing number of citizens preferring these venues due to convenience and trust in pharmacists. Additionally, they contribute to public health initiatives beyond medical care, including programs focused on environmental conservation and promoting healthier lifestyles. These efforts signify the crucial and multifaceted role of pharmacists in the modern healthcare landscape, underlining their commitment to evolving in line with the dynamic needs of the community (Ordem dos Farmaceuticos, s.d.).

3.2. Legal Framework

The community pharmacy, although being a private institution, is heavily regulated by specific legislation, given its significant role in providing numerous healthcare services to the population. The entity responsible for supervision to ensure free access to medicines with equality and safety is Infarmed.

In 1965, the law stated that only properly qualified pharmacists could own pharmacies. In 2007, there was a publication of a new law, in which non-pharmacists could be the owners of community pharmacies, requiring only the existence of a duly qualified Technical Director (Pita & Bell, 2016). Despite the liberalization of pharmacy ownership, there are still limitations in place, such as the maximum number of pharmacies one owner can have, which is four. Moreover, this owner cannot represent the pharmaceutical or medical sectors, and certain entities as healthcare providers or wholesale drug distributors.

In addition, the legislation facilitated the transfer procedures for community pharmacies, allowing relocation within the same municipality if it does not affect the established pattern of medication dispensation to the local patients. However, this relocation requires authorization from Infarmed, which, in turn, seeks binding advice from the local governing body where the pharmacy is located.

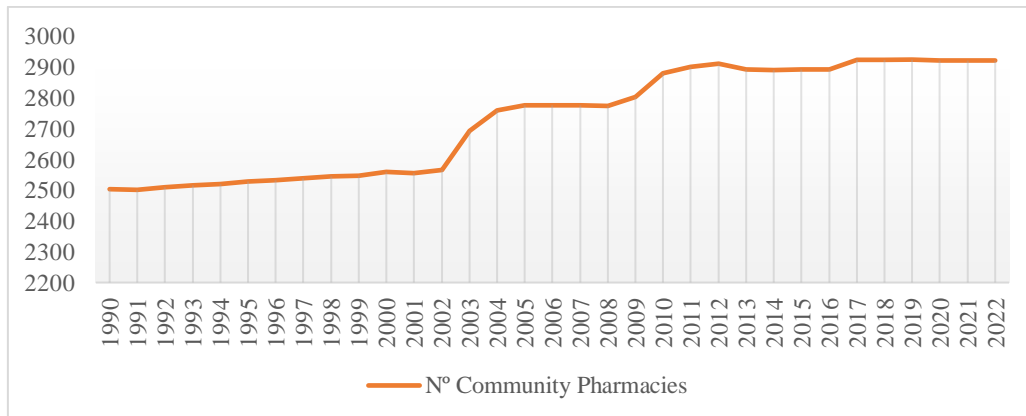
In 2005, the sector underwent profound changes with the publication of the Decree-Law no. 134, which permitted the sale of non-prescription medications outside pharmacies, fostering greater competition within the sector. This law also liberalized the retail prices and margins of these drugs with the aim to enhance competition. However, the establishments selling these medications must fulfil specific legal requisites, less strict when compared to community pharmacies. To operate, these establishments need to register in Infarmed and appoint a qualified technical responsible, who can be either a pharmacist or a properly qualified pharmacy technician, provided they are not employed in another sector branch (Nunes & Barros, 2011).

With the publication of this law, the main differentiating factor of the community pharmacy sector became the sale of prescription drugs. All the changes that the sector has undergone have implied a huge adaptation and constant innovation.

3.3. The Community Pharmacy Market in Portugal

3.3.1. Number of Community Pharmacies in Portugal

The number of community pharmacies in Portugal grew by 16% between 1990 and 2017. However, as of 2017, the number of community pharmacies has been constant, with 2921 in 2022 (Pordata, 2022).



Graphic 1 - Evolution of Community Pharmacies in Portugal (Source: Pordata)

3.3.2. Market of non-prescription medicines

As previously explained, in 2005, a new law dictated the end of exclusivity of the activity of dispensing non-prescription medicines by community pharmacies. In addition, it established a free price regime. These caused a huge change in the market, in particular in the one of medicine products which are not subject medical prescription, both from an economic and political point of views.

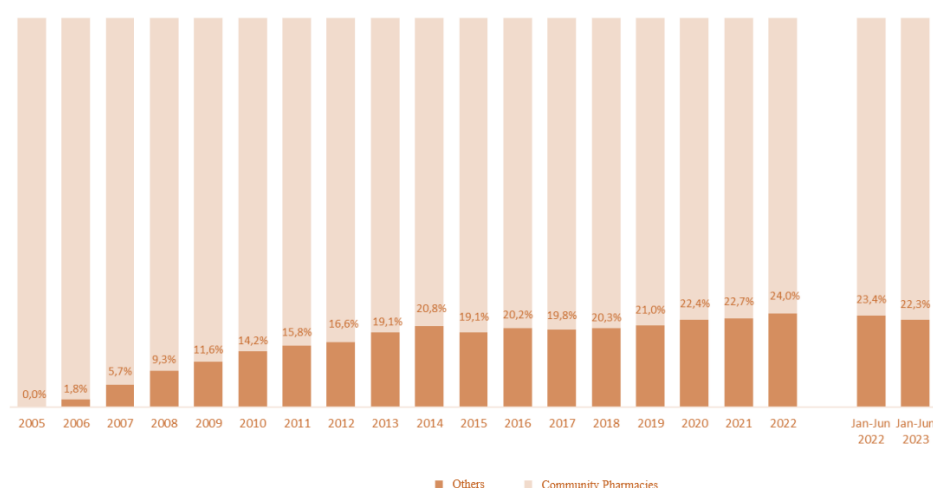
When analysing the data published by (Infarmed, 2023), we can observe that the sale of non-prescription medicines only represents 12%, in value, of the total market (non-prescription and prescription medicines). Of those 12%, 81% represent sales in community pharmacies and 19% represent sales in over-the-counter drugstores, meaning that there is still a clear preference for the community pharmacy channel.

Table 1 - Framework of non-prescription medicinal products in the medicinal products market (Source: Infarmed, 2023)

Non-prescription medicines	Total	Volume	Value PVP (€)	Volume	Value
			22,579,115	203,765,410	16%
	Pharmacies	17,540,055	165,400,971	78%	81%
	Outside Pharmacies	5,039,060	38,364,439	22%	19%

Total Market (non-prescription and prescription medicines)	141,457,189	1,668,456,093
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In addition, the share of over-the-counter drugstores in the total non-prescription medicines market decreased by 1.1 percentage points in the first semester of 2023, when compared with the first semester of 2022.



Graphic 2 - Evolution of the share of over-the-counter vs. community pharmacies - Volume (Source: Infarmed, 2023)

3.3.3. Total Market

In July 2023, the pharmaceutical market recorded a change of +7.2% in Sell Out in value and +1.5% in units, when compared to the same month of the previous year (Alves, 2023).

There is a change compared to the month of June'23 of +6.9% and of +6.8% in value and volume, respectively. In the last 12 months the market, in value, has been superior when compared to the same period of the previous year, except for the months of December and January. In volume, for the first time since December 2022, there was a higher value

than the same month of the homologous period. Analysing the accumulated in the last 12 months (MAT July'23), the market presents a change in value of +148.1 M€ (+3.4%) when compared to the same period last year, and in volume of -9.6 M units (-2.5%) (Alves, 2023).

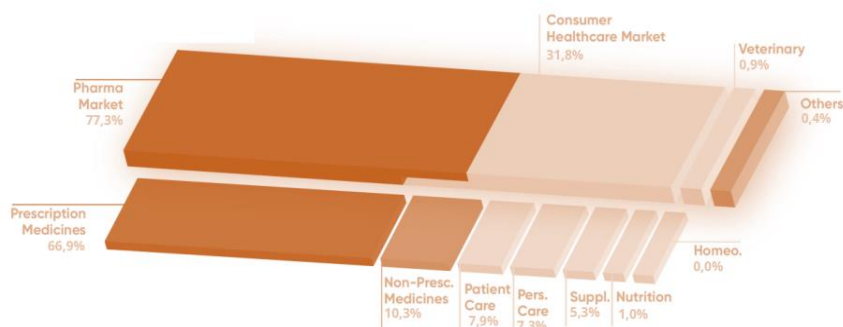


Figure 1 - Dynamics of the Pharmacy channel - Weight by segment and subsegments (value) / Source: Health Market Research

In the Pharma segment, which includes all medicinal products with marketing authorization (MA) valid in Portugal and that can be dispensed in community pharmacies, there was a +6.8% change in Sell Out in value, corresponding to an increase of +19.6M€. In volume, the change was +3.2%, representing +0.78M units.

The Consumer Healthcare segment, composed by all personal care and wellness products, presented in value, a change of +8.5% corresponding to +9.9 M€ and in volume a change of -2.6%, representing -0.26 M units.

The Patient Care sub-segment, which includes products for the care of the user such as medical devices intended for multiple indications and various accessories, showed a decrease in volume (-15.3%), compared to the same period last year. This behaviour is mainly due to the decrease in sales associated with rapid antigen tests used to detect the SARS-CoV-2 virus.

Overall, the market behaviour in YTD July'23 shows a trend of positive change in value and negative change in volume, with a change of +2.4% and -4.4%, respectively. This is mainly due to the inflation, impacting the Portuguese economy.

3.4. Consumer Behaviour Trends

Consumer behaviour consists of analysing when, why, how, and where consumers decide whether to buy a product or not, considering consumers' emotional, cognitive, and behavioural responses. By analysing this, it is possible to understand the factors that influence consumers' purchasing decisions. From a marketer's point of view, this is extremely important as it enables them to develop new products and strategies that help a brand position itself more coherently, considering the needs of its target audience (Naim, 2023).

Overall, consumer behaviour is very dynamic and heavily influenced by global events and technological advancements. Despite its complex nature, observing current trends through data analysis can help define effective business strategies, ensuring companies remain relevant to their target audience.

According to the authors (Kohli, 2023) and (Dorn, 2023), the main trends in consumer behaviour are:

- **Increase in Spending:** Despite the global economic uncertainty, experts expect spending to continue to increase. Consumers are cutting on products that can be considered luxuries to ensure they have funds for necessities.
- **Quality over Quantity:** Consumers are more thoughtful in their decision-making, being more conscious of what, how and where they buy. Although they are spending more, they expect an increase in quality and are doing more research before the purchase. This is why it is so important to meet customers where they are in the buying process. A strong and informative digital presence to help bring awareness to your business and show shoppers how you can help meet their needs.
- **Sustainability:** More and more consumers are concerned about the environmental impact of their consumption choices, opting for products and brands with ethical and sustainable values.

- **Convenience from Home:** Even after COVID-19, consumers continue to spend a lot of time at home as many have the possibility to work remotely. Businesses need to adapt and ensure that they offer efficient delivery options that bring their products to consumers' residences.
- **Consumers are using more digital resources:** Although the physical channel continues to be the preferred purchase channel, e-commerce is continually increasing, with more consumers choosing to make their purchases online.

It is crucial that companies stay up-to-date and agile in order to meet consumers' needs which are constantly evolving.

3.5. Ecommerce use in Portugal

The arrival of the pandemic has accelerated the use of the online channel by the Portuguese to purchase products, with seven out of ten consumers making several purchases per month in this way. According to a study performed by in Store-Media, there is an increase in the number of people over 55 years (Baby Boomer generation) using online stores. Before the pandemic, only 29% shopped online several times a month. Today, it is almost 70%. In general, men consume more online than women (Marketeer, 2022).

According to the CTT e-commerce report (CTT, 2023), it is estimated that around 5 million Portuguese adults have made online purchases in 2021 and that the total B2C e-commerce market in Portugal had reached 10 billion euros in the same year, showing a growth of 36.2% when compared to 2020. In the same study, it is possible to observe that in the universe of online buyers in Portugal, there is a strong incidence in the age groups between 18 and 44 years. However, most new members are in the older age groups, enhancing this way the importance of understanding how to attract and retain even more the most senior customers.

When analysing the predominant reasons for consumers preferring the online channel, it is clear that the convenience of purchase is the main one. Of the consumers that bought online in 2021, 68.2% value a lot the ease of purchase and 61,4% value the possibility of

buying at any time. In addition, the existence of promotions and lower prices on online platforms is also highly valued by consumers (CTT, 2023).

Regarding the most purchased categories in 2021, the Clothing and Footwear represents 73% of consumers, having increased 4.9% when compared to the previous year. The categories of Electronic and Computer Equipment, Books and Films and Hygiene and Cosmetics follow as the most sought after.

Looking into the online pharmacy segment, it is projected to reach a revenue of US\$31.64bn in 2023, worldwide (Statista, 2023). In addition, it is expected to show an annual growth rate of 13.40%, resulting in a projected market volume of US\$52.33bn by 2027.

In order to remain competitive, community pharmacies in Portugal, need to innovate and invest in communication to attract new consumers and retain current ones. In addition to a good selection of products that meet the demands of today's consumers, pharmacies have to provide the possibility of acquiring products and a greater number of differentiating complementary services through the multiple channels (Lima, 2022).

3.6. Challenges to be achieved by Community Pharmacies

The COVID-19 pandemic brought numerous challenges to community pharmacies, requiring them to quickly adapt and innovate to ensure customers' needs are delivered. Of all the challenges, the main ones are:

- **Transition to a Digital World:** For community pharmacies to remain competitive in a technology-driven landscape, they need to ensure that they are up to date. As the healthcare sector is undergoing a digital transformation, numerous community pharmacies are still figuring out how to implement these new technologies efficiently.
- **Development and Retention of Customers:** The process of embracing digital solutions to foster business growth is no longer optional but essential for

healthcare practitioners. Community pharmacies can leverage digital advancements by exploring new strategies to enhance business growth.

Overall, most community pharmacies are still having reservations about whether there is actually demand for digital solutions and if there is a need for implementing an omnichannel strategy. As there is still little information regarding this topic, it was necessary to conduct market research with the goal of collecting more data on the subject to understand whether community pharmacies should invest in an online channel and what is the future role of community pharmacies, considering all the digital innovations emerging in the market.

4. Market Research

4.1. Methodology

The methodological techniques used in this study were quantitative and qualitative, where primary data collection took place. Questionnaires were carried out with final consumers and pharmacists to collect quantitative data, and interviews were conducted with representatives of the Associação Nacional de Farmácias (ANF), Glint and Alliance Healthcare Portugal to collect qualitative data.

4.2. Survey

Regarding the primary data, two surveys were carried out, one for the final consumer and the other for pharmacists. The main objective of collecting these quantitative data was to understand the consumer's purchase preferences and willingness to buy online and to have a clearer information of what pharmacist's consider to be future of the pharmacies.

The surveys were designed in a way to have clear answers and concrete conclusions. It was also strategically thought so that all the necessary questions were answered to obtain the relevant information and better understand customers and pharmacists' acceptance of an online channel.

As a platform, we used Qualtrics to launch the final consumer survey with 22 questions and the pharmacists survey with 18 questions. The first questionnaire aims to understand the consumer's purchase preferences and needs, as well as to know the consumer at a behavioural, demographic, and geographic level. The second questionnaire aims to understand how pharmacists believe to be the future of community pharmacies and what are the main barriers and impacts of implementing an online channel.

The means used to share these questionnaires were through Facebook and WhatsApp as it was considered the most effective way to reach the greatest number of people.

4.3. Interview

To complement the analysis, we considered that it would be interesting to have qualitative inputs from relevant players of the market: ANF, Glintt and Alliance Healthcare. A total of 3 interviews were conducted with the main objective of understanding what they consider to be the future of community pharmacies, what are the current challenges that the sector is facing and what might be the differentiating factors of community pharmacies to succeed in the long term.

4.4. Results

4.4.1. Consumer Survey Results

A total of 220 answers were obtained, of which 50 were incomplete and therefore not considered for analysis (n=170).

4.4.1.1. Consumers Characteristics

Of the 170 considered for analysis, the majority are female (n=102, 60%) and the others are male (n=68, 40%). Most of the answers are from consumers with ages ranging from 56 to 65 years (n=55, 32%) and from 46 to 55 years (n= 40, 24%).

The majority of the consumers lives in an urban area (n=142, 84%) and in the centre of Portugal (n=147, 86%).

Table 2 - Crosstab: area of residence and zone of residence

Residence Area		Rural Area	Urban Area	Total
Residence Zone	Centre	25	122	147
	South	0	15	15
	North	3	5	8
Total		28	142	170

Regarding the level of education, most has a bachelor's degree (n=73, 43%) and a master's degree (n=49, 29%). The majority is currently employed (n=143, 83%), with annual wages ranging from 10.000€ to 29.999€ (n=65, 38%) and from 30.000€ to 49.999€ (n=58, 34%).

Table 3 - Cross-table: professional status and gross annual income

Gross Annual Income		< 10k €	10k €-29.9k €	30k €-49.9k €	50k €-70k €	> 70k €	Total
Professional Situation	Unemployed	1	1	0	0	0	2
	Student	4	0	0	0	0	4
	Other	1	1	2	0	3	7
	Work Student	2	3	1	1	0	7
	Retired	1	3	1	3	1	9
	Employed	8	57	54	16	6	141
Total		17	65	58	20	10	170

4.4.1.2. Online Purchasing Characteristics

Most of the consumers have already purchased online (n=164, 96%). Of the 164, 85% (n=139) said that already purchased online in the fashion category, 50% (n=82), in the bookstore category, 48% (n=79) in the supermarket category, 38% (n=63) in the perfumery category and only 16% (n=27) already purchased online in the pharmacy category.

When asked to rate from 0 to 10, which characteristics they value most in the online buying process, the vast majority opted for the security of the operation (avg.=8.36), price (avg.=8.12) and ease of use (avg.=8.10).

By analysing the different categories of products that can be bought in a pharmacy (vitamin supplements, oral and hair hygiene, dermo cosmetics, among others), we can observe that most consumers indicate that, in general, prefer to buy in the physical channel. Although the physical channel is the preferred one for all categories, it is interesting to observe that 21% of consumers prefers to buy online dermo cosmetic products.

Table 4 - Purchase Channel Preference based on product category

Category	Physical Channel		Online Channel		Total
	#	%	#	%	
Vitamin Supplements	139	82%	31	18%	170
Oral Hygiene	147	86%	23	14%	170
Hair Hygiene	139	82%	31	18%	170
Dermo cosmetics	135	79%	35	21%	170

Non-prescription Medicines	154	91%	16	9%	170
Baby Products	145	85%	25	15%	170
Nutrition	139	82%	31	18%	170
Orthopedics	158	93%	12	7%	170
Veterinary	149	88%	21	12%	170

The majority of consumers never made online purchases on a pharmacy website (n=130, 76%). Of the 130 consumers who have never made an online purchase on a pharmacy website, 77% (n=100) indicate that they would be willing to give it a try. Of the 77% who would be willing to experiment, 38% (n=65) believe they would feel comfortable shopping online, 6% (n=11) would feel indifferent, 6% (n=10) would feel sceptical, 5% (n=9) would feel enthusiastic, and 3% (n=5) would feel suspicious. Off the 23% (n=30) that would not be willing to purchase online in a pharmacy website, 70% (n=21) consider that pharmacies lay on a traditional concept, with sales focused on the pharmacist-customer relationship, 27% (n=8) distrust the online buying process and 3% (n=1) considerer both options to be the reason of not buying in an online pharmacy.

While looking into the 40 (24%) consumers that already made an online purchase, 73% (n=29) affirms to feel comfortable shopping online, 10% (n=4) feels sceptical, 8% (n=3) feels indifferent, 7% (n=3) feels suspicious, and only 2% (n=1) feels enthusiastic.

When we asked the 170 respondents to order what are the main barriers in the adoption of online purchase on a pharmacy website, we can observe that the lack of professional advice from a pharmacist is considered to be the most important one (n=98, 58%), followed by impersonal purchase (n=68, 40%), lack of confidence in the process (n=72, 42%), aversion to change (n=61, 36%) and need for access to suitable equipment such as internet or a computer (n=78, 46%).

Table 5 - Crosstab: The main barriers in the adoption of online purchase on a pharmacy website in order of importance

Barriers in the adoption of online purchase on a pharmacy website	1		2		3		4		5		Total
	#	%	#	%	#	%	#	%	#	%	
Lack of professional advice	98	58%	51	30%	11	6%	7	4%	3	2%	170
Impersonal purchase	52	31%	68	40%	29	17%	13	8%	8	5%	170
Lack of confidence in the process	9	5%	32	19%	72	42%	46	27%	11	6%	170
Aversion to change	9	5%	9	5%	21	12%	61	36%	70	41%	170

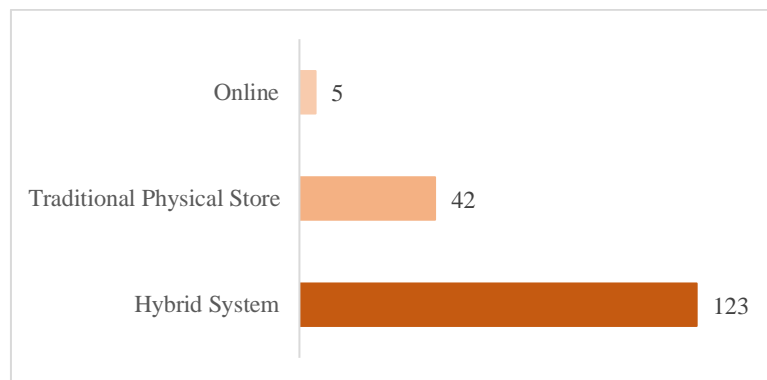
Need for access to suitable equipment	2	1%	10	6%	37	22%	43	25%	78	46%	170
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By analysing what the 170 respondents consider to be the most relevant characteristics in the adoption of online purchase on a pharmacy website, we can observe that the lack of waiting lines is considered to be the most important one (n=58, 34%), followed by faster process (n=43, 25%), ease in the process (n=47, 28%), multichannel solutions (n=43, 25%) and possibility of price comparison (n=68, 40%).

Table 6 - Crosstab: Most relevant characteristics in the adoption of online purchase on a pharmacy website in order of importance

Most relevant characteristics in the adoption of online purchase on a pharmacy website	1		2		3		4		5		Total
	#	%	#	%	#	%	#	%	#	%	
No waiting line	58	34%	39	23%	37	22%	19	11%	17	10%	170
Faster process	22	13%	43	25%	46	27%	43	25%	16	9%	170
Ease in the process	42	25%	36	21%	47	28%	33	19%	12	7%	170
Multi-channel solutions	25	15%	27	16%	18	11%	43	25%	57	34%	170
Possibility of price comparison	23	14%	25	15%	22	13%	32	19%	68	40%	170

Most consumers considers that the future of community pharmacies will be a hybrid system (n=123, 72%), combining the traditional physical store with the online channel.



Graphic 3 - What do you consider to be the future of community pharmacies?

4.4.1.3. Hypothesis analysis

With the objective of thoroughly investigate the research questions proposed on the beginning of this dissertation, several Hypothesis were formulated and tested on SPSS. The goal is to study if what consumers consider to be the future of community pharmacies differ in terms of education degree level or area of residence.

Hypothesis 1: There is an association between what consumers consider to be the future of community pharmacies and education degree level.

Null Hypothesis = There is no association between what consumers consider to be the future of community pharmacies and education degree level.

A Chi² test was performed between what consumers consider to be the future of CP and their education degree level. All expected frequencies were greater than 5, thus the assumptions for the Chi² test were met.

*Table 7 - Chi-Square Test (Degree Level*Future CP)*

Chi-Square Tests					
	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	9.880 (a)	1	0.002		
Continuity Correction (b.)	8.626	1	0.003		
Likelihood Ratio	9.183	1	0.002		
Fisher's Exact Test				0.003	0.002
Linear-by-Linear Association	9.822	1	0.002		
N of Valid Cases	170				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 10.38.

b. Computed only for a 2x2 table

The calculated p-value of 0.002 is below the defined significance level of 5%. The Chi² test is therefore significant and the null hypothesis is rejected. There is a moderate association between what consumers consider to be the future of CP and their education degree level (Cramer's V=0.241).

*Table 8 - Phi and Cramer's V (Degree Level*Future CP)*

Symmetric Measures			
		Value	Approximate Significance
Nominal by Nominal	Phi	0.241	0.002
	Cramer's V	0.241	0.002
N of Valid Cases		170	

Hypothesis 2: There is an association between what consumers consider to be the future of community pharmacies and area of residence.

Null Hypothesis = There is no association between what consumers consider to be the future of community pharmacies and area of residence.

A Chi² test was performed between what consumers consider to be the future of CP and their area of residence. All expected frequencies were greater than 5, thus the assumptions for the Chi² test were met.

The calculated p-value of 0.139 is above the defined significance level of 5%. The Chi² test is therefore not significant and the null hypothesis is not rejected.

*Table 9 - Chi-Square Test (Degree Level*Future CP)*

Chi-Square Tests					
	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	2.184 (a)	1	0.139		
Continuity Correction (b)	1.533	1	0.216		
Likelihood Ratio	2.047	1	0.153		
Fisher's Exact Test				0.154	0.11
Linear-by-Linear Association	2.171	1	0.141		
N of Valid Cases	170				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 6.92.

b. Computed only for a 2x2 table

4.4.2. Pharmacist Survey Results

A total of 104 answers were obtained, of which 41 were incomplete and therefore not considered for analysis (n=63).

4.4.2.1. Pharmacists Demographic and Geographic Characteristics

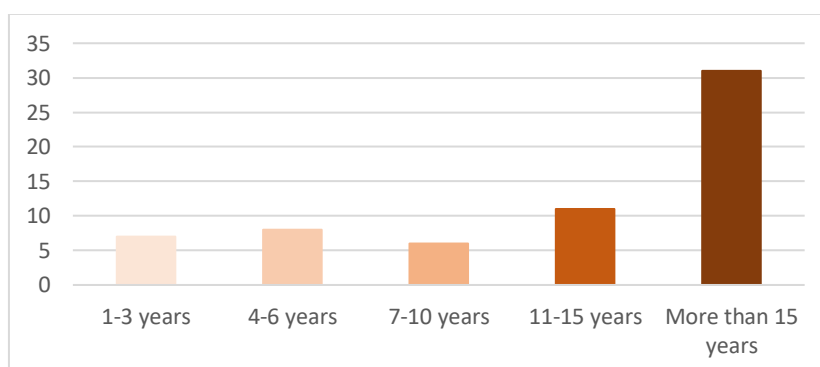
Of the 63 considered for analysis, the majority are female (n=41, 65%) and the others are male (n=22, 35%). Most of the answers are from pharmacists with ages ranging from 56 to 65 years (n=19, 35%) and from 25 to 35 years (n= 18, 29%).

The majority of pharmacists, work in a pharmacy located in a rural area (n=35, 56%) and in the centre of Portugal (n=37, 59%).

Table 7 - Crosstab: pharmacy area and pharmacy zone

Pharmacy Area		Rural Area	Urban Area	Total
Pharmacy Zone	Centre	21	16	37
	North	10	10	20
	South	4	2	6
Total		35	28	63

Of the 63 respondents, most works in a pharmacy for more than 15 years (n=31, 49%), which makes sense as most of surveys were sent to owners of pharmacies.



Graphic 4 - Time worked in a pharmacy

4.4.2.2. Online Transformation: Pharmacist Perceptions and Preferences

In the consumer survey, they were asked what their preferred channel of purchase (physical or online) was, considering the several product categories sold in pharmacies. In the pharmacists' survey, they were asked what they consider to be the preferred channel of purchase of consumers to understand if it answers are aligned or not.

Most pharmacists indicate that, in general, consumers prefer to buy in the physical channel, which is in line to the answers we got in the consumers' survey. However, we see that in the dermo cosmetics category, pharmacists believe that consumers prefer to buy online (n=32, 51%).

Table 10 - What Pharmacists believe to be the Purchase Channel Preference based on product category

Category	Physical Channel		Online Channel		Total
	#	%	#	%	
Vitamin Supplements	35	56%	28	44%	63
Oral Hygiene	32	51%	31	49%	63
Hair Hygiene	33	52%	30	48%	63
Dermo Cosmetics	31	49%	32	51%	63
Non-prescription Medicines	57	90%	6	10%	63
Baby Products	30	48%	33	52%	63
Nutrition	35	56%	28	44%	63
Orthopedics	57	90%	6	10%	63
Veterinary	50	79%	13	21%	63

When we asked the 63 respondents to order what they consider to be the main barriers for consumers in process of online purchase on a pharmacy website, we can observe that the lack of professional advice from a pharmacist is considered to be the most important one (n=44, 70%), followed by impersonal purchase (n=24, 38%), lack of confidence in the process (n=28, 44%), aversion to change (n=27, 43%) and need for access to suitable equipment such as internet or a computer (n=33, 52%). By comparing the answers from both surveys, we can observe that both consumers and pharmacists consider that the lack of professional advice is the main barrier in consumers' adherence to buying online on a pharmacy website.

Table 11 - What pharmacists consider to be the main barriers for consumers in the adoption of online purchase on a pharmacy website in order of importance

Barriers in the adoption of online purchase on a pharmacy website	1		2		3		4		5		Total
	#	%	#	%	#	%	#	%	#	%	
Lack of professional advice	44	70%	10	16%	4	6%	3	5%	2	3%	63
Impersonal purchase	6	10%	24	38%	20	32%	8	13%	5	8%	63
Lack of confidence in the process	4	6%	12	19%	28	44%	14	22%	5	8%	63
Aversion to change	4	6%	11	17%	3	5%	27	43%	18	29%	63
Need for access to suitable equipment	5	8%	6	10%	8	13%	11	17%	33	52%	63

Then we asked the 63 respondents to order what they consider to be the most relevant characteristics for consumers in the adoption of online purchase on a pharmacy website. We can observe that the possibility of price comparison is considered to be the most important one (n=24, 38%), followed by lack of waiting lines (n=21, 33%), faster process (n=23, 37%) and multichannel solutions and ease in the process as the last preferred ones.

Table 12 - What pharmacists consider to be most relevant for consumers in the adoption of online purchase on a pharmacy website in order of importance

Most relevant characteristics in the adoption of online purchase on a pharmacy website	1		2		3		4		5		Total
	#	%	#	%	#	%	#	%	#	%	
No waiting line	19	30%	21	33%	6	10%	11	17%	6	10%	63
Faster process	5	8%	9	14%	23	37%	12	19%	14	22%	63
Ease in the process	9	14%	15	24%	13	21%	16	25%	10	16%	63
Multi-channel solutions	6	10%	6	10%	14	22%	18	29%	19	30%	63
Possibility of price comparison	24	38%	12	19%	7	11%	6	10%	14	22%	63

When asked to rate from 0 to 10, what they consider to be the consumer profile that might be more willing to buy online on a pharmacy website, the vast majority believes that are consumers under 30 years old (avg.=8.56), with a high level of literacy (avg.=7.79) and agile (avg.=7.54).

Then by analysing what they consider to be the most relevant characteristics for their business in the consumers' adoption of online purchase on a pharmacy website, the potential sales increase (n=27, 43%) was considered the most important one, followed by efficiency in logistics process (n=19, 30%), improved customer service (n=18, 29%) and access to customer data (n=25, 40%).

Table 13 - - What pharmacists consider to be most relevant for their business in the adoption of online purchase on a pharmacy website in order of importance

Most relevant characteristics to a pharmacy in adoption of online purchase on a pharmacy website	1		2		3		4		Total
	#	%	#	%	#	%	#	%	
Efficiency in logistics processes	10	16%	19	30%	23	37%	11	17%	63
Access to consumer data	10	16%	19	30%	9	14%	25	40%	63
Improved customer service	17	27%	14	22%	18	29%	14	22%	63
Potential sales increase	27	43%	11	17%	13	21%	12	19%	63

Regarding what pharmacists consider to be the main barriers for their business in the consumers' adoption of online purchase on a pharmacy website, we can observe that the high investment needed to develop an online digital solution is considered to be the most important one (n=21, 33%), followed by difficulty in presenting competitive prices (n=16, 25%), reliability of the logistics operating system (n=22, 35%), reliability of the collected data (n=18, 29%) and low representativeness in sales volume (n=19, 30%).

Table 14 - What pharmacists consider to be the main barriers for their business in the adoption of online purchase on a pharmacy website in order of importance

Barriers in the adoption of online purchase on a pharmacy website	1		2		3		4		5		Total
	#	%	#	%	#	%	#	%	#	%	
Reliability of the logistics operating system	5	8%	14	22%	22	35%	18	29%	4	6%	63
Reliability of the collected data	3	5%	8	13%	14	22%	18	29%	20	32%	63
High Investment	21	33%	12	19%	7	11%	13	21%	10	16%	63
Low representativeness in sales volume	16	25%	13	21%	7	11%	8	13%	19	30%	63
Difficulty in presenting competitive prices	18	29%	16	25%	13	21%	6	10%	10	16%	63

When asked to rate from 0 to 10, what they consider to be the main impacts for their business if they decide to invest in the online channel, the vast majority believes that the biggest one is higher investment in logistics (mean=6.11), followed by the improvement of customer service, by being more focused and personalized (mean=5.22) and lower need for investment in human resources (mean=4.83).

Most pharmacists believes that the future of the physical pharmacy will be with higher availability of services (mean=8.51) and with higher product availability (mean=7.10). In addition, most considerer that the future of community pharmacies will be a hybrid system (n=47, 75%), combining the traditional physical store with the online channel. Off the 14 pharmacists that don't consider the future of pharmacies won't pass through having online channel available, 64% (n=9) consider that pharmacies lay on a traditional concept, with sales focused on the pharmacist-customer relationship, 36% (n=5) distrust the online buying process and also consider that pharmacies lay on a traditional concept to be the reasons of not investing in an online pharmacy.

Although 75% (n=47) of pharmacists consider the future of pharmacies to be a hybrid system, only 22% (n=14) work in a pharmacy that already has a website. Off the 78% (n=49) that still don't have an online solution, 69% (n=34) would consider investing in an e-commerce solution.

4.4.2.3. Hypothesis analysis

With the objective of thoroughly investigate the research questions proposed on the beginning of this dissertation, several Hypothesis were formulated and tested on SPSS.

The goal is to study if what pharmacists consider to be the future of community pharmacies differ in terms of time working in the pharmacy and location of the pharmacy.

Hypothesis 3: There is an association between what pharmacists consider to be the future of community pharmacies and time working in the pharmacy.

Null Hypothesis = There is no association between what pharmacists consider to be the future of community pharmacies and time working in the pharmacy.

A Chi² test was performed between what pharmacists consider to be the future of CP and their time working in the pharmacy. All expected frequencies were greater than 5, thus the assumptions for the Chi² test were met.

Table 15 - Chi-Square Test (Time working in CP*Future CP)

Chi-Square Tests					
	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.290 (a)	1	0.59		
Continuity Correction (b)	0.056	1	0.814		
Likelihood Ratio	0.291	1	0.589		
Fisher's Exact Test				0.763	0.408
Linear-by-Linear Association	0.286	1	0.593		
N of Valid Cases	63				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 6.89.

b. Computed only for a 2x2 table

The calculated p-value of 0.59 is above the defined significance level of 5%. The Chi² test is therefore not significant and the null hypothesis is not rejected.

Hypothesis 4: There is an association between what pharmacists consider to be the future of community pharmacies and location of the pharmacy in which they work.

Null Hypothesis = There is no association between what pharmacists consider to be the future of community pharmacies and location of the pharmacy.

A Chi² test was performed between what pharmacists consider to be the future of CP and their time working in the pharmacy. All expected frequencies were greater than 5, thus the assumptions for the Chi² test were met.

Table 16 - Chi-Square Test (Location of CP*Future CP)

Chi-Square Tests					
	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.018 (a)	1	0.892		
Continuity Correction (b)	0	1	1		
Likelihood Ratio	0.018	1	0.892		
Fisher's Exact Test				1	0.569
Linear-by-Linear Association	0.018	1	0.893		
N of Valid Cases	63				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 6.22.

b. Computed only for a 2x2 table

The calculated p-value of 0.892 is above the defined significance level of 5%. The Chi² test is therefore not significant and the null hypothesis is not rejected.

4.4.3. Interview Results

4.4.3.1. Future of Community Pharmacies

Overall, all the interviewees agree that the reality of community pharmacies having an omnichannel strategy is unavoidable. Most consumers are online and community pharmacies need to keep up with this need and see how can ensure the same quality of service in both channels. However, there is still a long way to go, as it is still being understood how it is possible to succeed in the online presence, considering all the legal restrictions on the sale of prescription drugs and the fact that the contact with a healthcare professional is still highly valued by the consumers.

There must be a complementarity in the value proposition of pharmacies between physical and digital solutions. On one hand, the goal is to be online, where consumers are looking for information and for products they need, so that we can give them reliable feedback and accessibility to the type of products they are looking for online. On the other

hand, the goal is also to strengthen the relationship we have in the physical domain and eventually use digital to make subsequent follow-ups in a digital way.

Community pharmacies want to be in the health care provision area. There is still a lot that pharmacies can deliver and if they are able to implement it, they will hardly have competitors in that area, as they have characteristics that combine physical proximity with the qualification of healthcare professionals that practically no one has. By having physical and online stores, qualified personnel working in both platforms and availability of a wide range of differentiating services, it is hardly copyable.

4.4.3.2. Main Barriers and Impacts of investing in online solutions

The truth is that there are still a lot of community pharmacies that do not have an online channel available. On one hand it has to do with the fact that pharmacies are comfortable with the availability of the service they currently have and therefore do not see advantages in having an online presence. On the other hand, a few have already tried to be online and realized that they did not have the traction they intended. It is not enough to have a website, it needs to have traction, so it compensates the associated costs. However, that requires investment in the promotion of the site. Typically, people looking online are looking for price and there may be some disinterest and demotivation in being online for previous experiences. The fact that many still not have an online channel is mostly related to the tranquillity in relation to the pharmacy model that they have today, that they think it responds to the consumer needs and for that reason do not seek to be online.

The investment in an online channel can have several impacts in the way community pharmacies currently operate. If the goal is to use the digital presence in a way to provide differentiated services, it will likely increase the number of qualified people needed in the pharmacy. The interviewers believe that it would be a mistake to associate the online only with the accessibility of the product. If so, it can be interpreted as a form of disqualification of the team itself. An online solution in health should be used to humanize care and not depersonalize it.

If new advanced technologies are used to make more efficient the current manual processes where no qualification is required, there will be room for qualified pharmacists

to focus on providing more health-focused services. This way, digital transformation overall can be an opportunity for the differentiation of community pharmacies and to provide greater qualification of pharmaceutical teams.

5. Conclusions

The main objective of this dissertation was to understand what role the online channel plays in the community pharmacy sector, in Portugal. The findings from the case study provided significant insights to address the Key Research Questions previously formulated.

RQ1: From the experts' interviews, it is clear that online transformation can be an opportunity for the differentiation of community pharmacies. Consumers are using more and more the Internet and community pharmacies need to be where consumers are. With the integration of both physical and online channels and by ensuring a broad range of unique services that can only be provided by health professionals, community pharmacies will improve the customer experience and drive business outcomes.

RQ2: When asked about the future of community pharmacies, consumers consider that the future will consist in a hybrid system with both face-to-face and online interactions. Although the preferred purchase channel in this sector is still the physical one, consumers also want to have an online solution available. According to the performed analysis, there is no association between what consumers consider to be the future of community pharmacies and the place where they live. This means that the investment in an online solution makes sense for all community pharmacies regardless their location. The main barrier for consumers buying online in a pharmacy website is the lack of professional advice. Community pharmacies need to find a way to overcome this challenge and ensure that they can provide an omnichannel experience.

The interviewed experts also consider that community pharmacies must have an online presence to reach as many customers as possible and ensure that consumer needs are being attended. Overall, the online channel already plays an important role in the sector and pharmacies have to innovate to be able to keep up with consumers' needs. However, it is evident that it will not replace the physical channel, but rather complement it.

RQ3: In general, pharmacists consider that the future of community pharmacies will consist in a hybrid system. Nonetheless, most community pharmacies still do not offer an online channel. The main reasons for that choice are the high investment needed and the

difficulty of competing in price. Regardless, many consider that if such an opportunity presents itself, the investment will be worth it. Pharmacists need to understand that the differentiating factor in being online won't be price but the wide range of services that can be provided, such as the possibility to schedule an online appointment with a health professional or a vaccination in the pharmacy.

RQ4: When looking into the product categories sold in a community pharmacy, the ones that might have higher demand are the dermo cosmetics category, vitamin supplements, hair hygiene and nutrition.

RQ5: Above all, pharmacists consider that the role of community pharmacies will focus even more on a higher availability of services and a higher supply of products. In addition, there is an expectation of increasing the number of consumers, considering the adoption of an omnichannel strategy. From the experts' interview, if the new technologies available in the market replace current manual processes that do not need qualified personnel, there will be space for pharmacists to focus on providing a higher availability of services, increasing the number of health professionals.

6. Limitations and Future Work

To draw more robust conclusions, the size of the sample of the market research should be higher. For the consumers' survey, 170 answers were considered for analysis, while in the pharmacists' survey, only 63 replies were contemplated.

In addition, it would be interesting to investigate on a deeper level what kind of services are more valuable to consumers in an online channel of a community pharmacy.

To conclude, a few solutions are emerging for the online sale of products from community pharmacies. Companies not directly linked to the health sector, are looking for partnerships with community pharmacies to sell their products online, providing their online platform and home delivery. It would be interesting to analyze in detail if these solutions are viable and, if so, how to integrate them into the online process of a community pharmacy.

7. Teaching Notes

7.1. Synopsis

This business case focus on the importance of Portuguese community pharmacies adopting an omnichannel strategy as a way of remaining competitors in the market.

In this study, students will address topics related with consumer behavior and online purchasing process while analysing market data to draw robust conclusions.

7.2. Learning Objectives

The present case study can be analysed when the objective is the discussion of whether retailers in which the physical contact plays a key role, should have an online presence and implement an omnichannel strategy. This can be studied in Marketing and Digital Innovation classes, whose object of study is to debate topics on the impact of digital transformation and importance of implementing innovative and omnichannel strategies in small and medium-sized enterprises.

7.3. Suggested Questions

1. What are the main challenges of implementing an omnichannel strategy?
2. What aspects should be considered when developing an online channel for a community pharmacy?
3. In general, do pharmacists believe that community pharmacies should invest in an online channel? What they consider to be the main impacts of doing so for their business?
4. What do consumers value most when buying online in a pharmacy website?

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9. Appendices

9.1. Appendix 1 – Complement to the Case Study

9.1.1. List of experts interviewed

Company	Name	Job Title
Associação Nacional de Farmácias (ANF)	Ema Paulino	President of ANF; Board Member of the Pharmaceutical Care Network Europe (PCNE) and member Board Member of the International Primary Respiratory Care Group (IPCRG)
Alliance Healthcare	Hugo Ramos	Upstream and Downstream Executive Director (Executive Committee Member)
Glintt	Hugo Maia	Glintt Innovation Director

9.1.2. Interview guide

1. Qual considera ser o futuro das farmácias? Acha que passará pelo investimento num site de venda online?

Caso responda à questão 1. que o futuro das farmácias passará pelo online:

2. Porque considera que o futuro das farmácias passará pelo online?
3. Como idealiza a farmácia do futuro?
4. Que barreiras acredita que possa haver no investimento num site de venda online?
5. Acredita que as farmácias conseguirão apresentar preços mais competitivos face a sites como o da Primor, que apresentam preços bastante inferiores aos praticados nas farmácias? De que forma é que as farmácias poderão dar resposta a este problema?

Caso responda à questão 1. que o futuro das farmácias não passará pelo online:

6. Porque considera que o futuro das farmácias não passará pelo online?
7. Como idealiza a farmácia do futuro?

9.1.3. Consumers' Survey Questions

Este inquérito foi desenvolvido no âmbito da unidade curricular de Seminário de Dissertação – Cases on Business Strategies, do Mestrado em Gestão com especialização em Marketing Estratégico da Católica Lisbon School of Business & Economics.

O principal objetivo deste trabalho é compreender qual o impacto do online no setor das farmácias, analisando quais as preferências dos consumidores em termos de canais de compra e de que forma idealizam o futuro das farmácias.

O inquérito tem a duração de aproximadamente 5 minutos.

Muito obrigada!

1. Já realizou compras online?

- 1.1. Sim (seguir para a pergunta 2.)
- 1.2. Não (seguir para a pergunta 4.)

2. Em que categoria já realizou compras online? (seguir para a pergunta 3.)

- 2.1. Supermercado
- 2.2. Farmácia
- 2.3. Livraria
- 2.4. Perfumaria
- 2.5. Moda
- 2.6. Outro

3. Classifique de 0 a 10 o que valoriza no processo de compra online: (seguir para a pergunta 4.)

- 3.1. Facilidade de utilização
- 3.2. Segurança da Operação
- 3.3. Proteção de Dados
- 3.4. Design da Aplicação
- 3.5. Preço

4. De forma geral, qual o seu canal de compra preferido para adquirir produtos de farmácia? (seguir para a pergunta 5.)

- 4.1. Canal Físico

- 4.2. Canal Online
- 4.3. Híbrido

**5. Selecione em que canal prefere realizar as suas compras de produtos de farmácia, tendo em conta a categoria de produtos indicada: (Físico/ Online/ Híbrido)
(seguir para a pergunta 6.)**

- 5.1. Suplementos Vitamínicos
- 5.2. Higiene Oral
- 5.3. Higiene Capilar
- 5.4. Dermocosmética
- 5.5. Medicamentos não sujeitos a receita médica (Medicamentos de venda livre)
- 5.6. Bebé & Mamã
- 5.7. Nutrição
- 5.8. Ortopedia
- 5.9. Veterinária
- 5.10. Diversos

6. Já realizou compras online num site de uma farmácia?

- 6.1. Sim ((se seleccionar esta opção, segue para a pergunta 8.)
- 6.2. Não (se seleccionar esta opção, segue para a pergunta 7.)

7. Estaria disposto a experimentar realizar compras online num site de uma farmácia?

- 7.1. Sim (se seleccionar esta opção, segue para a pergunta 9.)
- 7.2. Não (se seleccionar esta opção, segue para a pergunta 10.)

**8. Como se sente ao realizar uma compra online num site de uma farmácia:
(seguir para a pergunta 12.)**

- 8.1. Confortável
- 8.2. Entusiasmado
- 8.3. Desconfiado
- 8.4. Cético
- 8.5. Indiferente

9. Como se sentiria ao realizar uma compra online num site de uma farmácia:

(seguir para a pergunta 12.)

- 9.1. Confortável
- 9.2. Entusiasmado
- 9.3. Desconfiado
- 9.4. Cético
- 9.5. Indiferente

10. Porque não estaria disposto a experimentar realizar compras online num site de uma farmácia?

- 10.1. Conceito tradicional e de venda focada na relação farmacêutico-cliente (seguir para a pergunta 12.)
- 10.2. Desconfiança do processo de compra online (seguir para a pergunta 12.)
- 10.3. Opção 4.1. + 4.2. (seguir para a pergunta 12.)
- 10.4. Outro (seguir para a pergunta 11.)

11. Indique qual o Outro: (campo livre) (seguir para a pergunta 12.)

12. Ordene segundo a sua opinião, o que são para si as maiores barreiras na adoção da compra online num site de uma farmácia: (seguir para a pergunta 13.)

- 12.1. Compra impessoal
- 12.2. Falta de aconselhamento profissional
- 12.3. Falta de confiança no processo
- 12.4. Aversão à mudança
- 12.5. Necessidade de acesso a equipamentos adequados à compra online

13. Ordene segundo a sua opinião, o que são para si é o mais relevante na adoção da compra online num site de uma farmácia: (seguir para a pergunta 14.)

- 13.1. Oferta de soluções multicanal
- 13.2. Ausência de filas de espera
- 13.3. Facilidade no processo
- 13.4. Rapidez no processo
- 13.5. Possível comparação de preços

14. Qual considera ser o futuro das farmácias? (seguir para Dados Socio-Demográficos)

- 14.1. Loja Física Tradicional
- 14.2. Online
- 14.3. Sistema Híbrido

Dados Socio-demográficos

15. Género

- 15.1. Feminino
- 15.2. Masculino
- 15.3. Outro

16. Faixa Etária

- 16.1. Menos de 25 anos
- 16.2. 25-35 anos
- 16.3. 36-45 anos
- 16.4. 46-55 anos
- 16.5. 56-65 anos
- 16.6. Mais de 65 anos

17. Qual é a sua situação profissional?

- 17.1. Estudante
- 17.2. Trabalhador Estudante
- 17.3. Trabalhador
- 17.4. Desempregado
- 17.5. Reformado
- 17.6. Outro

18. Qual o seu rendimento anual bruto?

- 18.1. Menos de 10.000€ ano
- 18.2. 10.000€-29.999€ ano
- 18.3. 30.000€-49.999€ ano
- 18.4. 50.000€-70.000€ ano
- 18.5. Mais de 70.000€ ano

19. Quantos elementos tem o seu agregado familiar?

- 19.1. 1
- 19.2. 2
- 19.3. 3
- 19.4. 4
- 19.5. 5 ou mais

20. Onde reside?

- 20.1. Área Urbana
- 20.2. Área Rural

21. Em que zona do país vive?

- 21.1. Norte
- 21.2. Centro
- 21.3. Sul
- 21.4. Ilhas

9.1.4. Pharmacists' Survey Questions

Este inquérito foi desenvolvido no âmbito da unidade curricular de Seminário de Dissertação – *Cases on Business Strategies*, do Mestrado em Gestão com especialização em Marketing Estratégico da *Católica Lisbon School of Business & Economics*.

O principal objetivo deste trabalho é compreender qual a visão dos farmacêuticos relativamente ao investimento no online e de que forma idealizam o futuro das farmácias.

O inquérito tem a duração de aproximadamente 6 minutos.

Muito obrigada!

1. Qual considera ser o futuro das farmácias?

- 1.1. Loja Física Tradicional (seguir para a pergunta 2.)
- 1.2. Online (seguir para a pergunta 4.)
- 1.3. Sistema Híbrido (seguir para a pergunta 4.)

2. Porque considera que o futuro das farmácias não passa pelo online?

- 2.1. Conceito tradicional e de venda focada na relação farmacêutico-cliente (seguir para a pergunta 6.)
- 2.2. Desconfiança do processo de compra online (seguir para a pergunta 6.)
- 2.3. Opção 4.1. + 4.2. (seguir para a pergunta 6.)
- 2.4. Outro (seguir para a pergunta 3.)

3. Indique qual o Outro: (campo livre) (seguir para a pergunta 5.)

4. A farmácia onde trabalha, disponibiliza o canal de compra online?

- 4.1. Sim (seguir para a pergunta 6.)
- 4.2. Não (seguir para a pergunta 5.)

5. Consideraria investir na venda online? (seguir para a pergunta 6.)

- 5.1. Sim
- 5.2. Não

6. Selecione em que canal acredita que os consumidores preferem realizar as suas compras, tendo em conta a categoria de produtos indicada: (Físico/ Online/ Híbrido) (seguir para a pergunta 7.)

- 6.1. Suplementos Vitamínicos
- 6.2. Higiene Oral
- 6.3. Higiene Capilar
- 6.4. Dermocosmética
- 6.5. Medicamentos não sujeitos a receita médica (Medicamentos de venda livre)
- 6.6. Bebê & Mamã pluericultura
- 6.7. Nutrição
- 6.8. Ortopedia
- 6.9. Veterinária
- 6.10. Diversos

7. Ordene segundo a sua opinião, o que considera serem as maiores barreiras para o consumidor na adoção da compra online num site de uma farmácia: (seguir para a pergunta 8.)

- 7.1.Compra impessoal
- 7.2.Falta de aconselhamento profissional
- 7.3.Falta de confiança no processo
- 7.4.Aversão à mudança
- 7.5.Necessidade de acesso/ manuseamento a/de equipamentos adequados à compra online

8. Ordene segundo a sua opinião, o que considera serem as preferências do consumidor na adoção da compra online num site de uma farmácia: (seguir para a pergunta 9.)

- 8.1.Oferta de soluções multicanal
- 8.2.Ausência de filas de espera
- 8.3.Facilidade no processo
- 8.4.Rapidez no processo
- 8.5.Possível comparação de preços

9. Como caracteriza o tipo de consumidor que poderá apresentar mais barreiras na adoção da compra online num site de uma farmácia?

- 9.1.Inculto
- 9.2.Idoso
- 9.3.Instruído
- 9.4.Jovem
- 9.5.Ágil

10. Como caracteriza o tipo de consumidor que poderá tender a comprar mais online num site de uma farmácia?

- 10.1. Inculto
- 10.2. Idoso
- 10.3. Instruído
- 10.4. Jovem
- 10.5. Ágil

11. Ordene segundo o que considera mais relevante para o seu negócio na adoção da compra online num site de uma farmácia: (seguir para a pergunta 10.)

- 11.1. Eficiência nos processos logísticos

- 11.2. Acesso a dados de consumidor (data)
- 11.3. Melhoria de serviço ao consumidor
- 11.4. Potencial aumento de vendas

12. Ordene segundo o que considera mais relevante para o seu negócio na adoção da compra online num site de uma farmácia: (seguir para a pergunta 11.)

- 12.1. Fiabilidade do sistema operativo logístico
- 12.2. Fiabilidade dos dados recolhidos
- 12.3. Investimento avultado
- 12.4. Pouca representatividade no volume de vendas
- 12.5. Dificuldade em apresentar preços competitivos

13. Classifique de 0 a 10 o que considera que irá impactar mais o seu negócio ao investir no online? (seguir para a pergunta Dados Socio-demográficos.)

- 13.1. Menor necessidade de investimento em recursos humanos
- 13.2. Maior disponibilidade para melhoria do serviço ao cliente em loja
- 13.3. Criação de espaço dedicado para preparação de encomendas
- 13.4. Montagem da operação logística

14. Classifique de 0 a 10 como idealiza o futuro da farmácia física?

- 14.1. Mais farmacêuticos
- 14.2. Menos farmacêuticos
- 14.3. Mais consumidores
- 14.4. Menos consumidores
- 14.5. Área de venda maior
- 14.6. Área de venda menor
- 14.7. Mais categoria de produtos
- 14.8. Menos categorias de produtos
- 14.9. Médico ou enfermeiro na farmácia
- 14.10. Mais serviços disponíveis
- 14.11. Menos serviços disponíveis

Dados Socio-demográficos

15. Género

- 15.1. Feminino
- 15.2. Masculino
- 15.3. Outro

16. Faixa Etária

- 16.1. Menos de 25 anos
- 16.2. 25-35 anos
- 16.3. 36-45 anos
- 16.4. 46-55 anos
- 16.5. 56-65 anos
- 16.6. Mais de 65 anos

17. Há quanto tempo trabalha numa farmácia?

- 17.1. Menos de 1 ano
- 17.2. 1-3 anos
- 17.3. 4-6 anos
- 17.4. 7-10 anos
- 17.5. 11-15 anos
- 17.6. Mais de 15 anos

18. Onde se situa o seu local de trabalho?

- 18.1. Área Urbana
- 18.2. Área Rural

19. Em que zona se situa o seu local de trabalho?

- 19.1. Norte
- 19.2. Centro
- 19.3. Sul
- 19.4. Ilhas

9.1.5. SPSS Results

Degree Level * Future of CP

Crosstab

			Future of CP		Total
			Physical	Hybrid or Online	
Degree Level	No University Degree	Count	18	24	42
		% within Degree Level	42.9%	57.1%	100.0%
		% within Future of CP	42.9%	18.8%	24.7%
	With University Degree	Count	24	104	128
		% within Degree Level	18.8%	81.3%	100.0%
		% within Future of CP	57.1%	81.3%	75.3%
Total	Count	42	128	170	
	% within Degree Level	24.7%	75.3%	100.0%	
	% within Future of CP	100.0%	100.0%	100.0%	

Chi-Square Tests

	Value	df	Asymptotic Significance (2- sided)	Exact Sig. (2- sided)	Exact Sig. (1- sided)
Pearson Chi-Square	9.880 ^a	1	.002		
Continuity Correction ^b	8.626	1	.003		
Likelihood Ratio	9.183	1	.002		
Fisher's Exact Test				.003	.002
Linear-by-Linear Association	9.822	1	.002		
N of Valid Cases	170				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 10.38.

b. Computed only for a 2x2 table

Symmetric Measures

		Value	Approximate Significance
Nominal by Nominal	Phi	.241	.002
	Cramer's V	.241	.002
N of Valid Cases		170	

Area of Residence * Future of CP

Crosstab

			Future of CP		Total
			Physical	Hybrid or Online	
Area of Residence	rural area	Count	10	18	28
		% within Area of Residence	35.7%	64.3%	100.0%
		% within Future of CP	23.8%	14.1%	16.5%
	urban area	Count	32	110	142
		% within Area of Residence	22.5%	77.5%	100.0%

	% within Future of CP	76.2%	85.9%	83.5%
Total	Count	42	128	170
	% within Area of Residence	24.7%	75.3%	100.0%
	% within Future of CP	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymptotic Significance (2- sided)	Exact Sig. (2- sided)	Exact Sig. (1- sided)
Pearson Chi-Square	2.184 ^a	1	.139		
Continuity Correction ^b	1.533	1	.216		
Likelihood Ratio	2.047	1	.153		
Fisher's Exact Test				.154	.110
Linear-by-Linear Association	2.171	1	.141		
N of Valid Cases	170				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 6.92.

b. Computed only for a 2x2 table

Symmetric Measures

		Value	Approximate Significance
Nominal by Nominal	Phi	.113	.139
	Cramer's V	.113	.139
N of Valid Cases		170	

How long do you work in a pharmacy? * future pharmacy

Crosstab

		future pharmacy		or	Total
		Physical	Hybrid Online		
How long do you work in <= 15 years a pharmacy?	Count	8	24		32
	% within How long do you work in a pharmacy?	25.0%	75.0%		100.0%
	% within future pharmacy	57.1%	49.0%		50.8%
	More than 15 years	Count	6	25	
	% within How long do you work in a pharmacy?	19.4%	80.6%		100.0%
	% within future pharmacy	42.9%	51.0%		49.2%
Total	Count	14	49		63
	% within How long do you work in a pharmacy?	22.2%	77.8%		100.0%
	% within future pharmacy	100.0%	100.0%		100.0%

Chi-Square Tests

	Value	df	Asymptotic Significance (2- sided)	Exact Sig. (2- sided)	Exact Sig. (1- sided)
Pearson Chi-Square	.290 ^a	1	.590		
Continuity Correction ^b	.056	1	.814		
Likelihood Ratio	.291	1	.589		
Fisher's Exact Test				.763	.408
Linear-by-Linear Association	.286	1	.593		
N of Valid Cases	63				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 6.89.

b. Computed only for a 2x2 table

Symmetric Measures

		Value	Approximate Significance
Nominal by Nominal	Phi	.068	.590
	Cramer's V	.068	.590
N of Valid Cases		63	

Location of the pharmacy * future pharmacy

Crosstab

				future pharmacy		Total
				Physical	Hybrid or Online	
Location of the pharmacy	0	Count	8	27	35	
		% within Location of the pharmacy	22.9%	77.1%	100.0%	
		% within future pharmacy	57.1%	55.1%	55.6%	
	1	Count	6	22	28	
		% within Location of the pharmacy	21.4%	78.6%	100.0%	
		% within future pharmacy	42.9%	44.9%	44.4%	
Total	Count	14	49	63		
	% within Location of the pharmacy	22.2%	77.8%	100.0%		
	% within future pharmacy	100.0%	100.0%	100.0%		

Chi-Square Tests

	Value	df	Asymptotic Significance (2- sided)	Exact Sig. (2- sided)	Exact Sig. (1- sided)
Pearson Chi-Square	.018 ^a	1	.892		
Continuity Correction ^b	.000	1	1.000		
Likelihood Ratio	.018	1	.892		
Fisher's Exact Test				1.000	.569
Linear-by-Linear Association	.018	1	.893		
N of Valid Cases	63				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 6.22.

b. Computed only for a 2x2 table

Symmetric Measures

		Value	Approximate Significance
Nominal by Nominal	Phi	.017	.892
	Cramer's V	.017	.892
N of Valid Cases		63	

9.2. Appendix 2 – Teaching Notes Resolution

Question 1: What are the main challenges of implementing an omnichannel strategy?

Relevant Theory:

- Verhoef, P. C., Kannan, P. K., & Inman, J. J. (2015). From multi-channel retailing to omnichannel retailing: Introduction to the special issue on multi-channel retailing. *Journal of Retailing*, 93(2), 174-181.
- Bell, D. R., Gallino, S., & Moreno, A. (2018). How to win in an omnichannel world. *MIT Sloan Management Review*, 60(1), 45-53.

Answer:

The main challenges are:

- Ensure a proper channel integration to offer a consistent and seamless experience to consumers, across channels.
- Constant analysis of consumer data to understand consumer behaviour ensure consumers' needs are being delivered.
- Ensure proper training for staff.
- High investment.

Question 2: What aspects should be considered when developing an online channel for a community pharmacy?

Relevant Theory:

- Yang, H., Luo, Y., Qiu, Y., Zou, J., Masukujjaman, M., & Ibrahim, A. M. (2023). Modeling the Enablers of Consumers' E-Shopping Behavior: A Multi-Analytic Approach. *Sustainability*, 1-28.
- Results of Consumer Survey

Answer:

The main aspects to be considered are:

- User-friendly platforms.
- Fast delivery.
- Refine Payment Gateways.
- Ensure high quality of the products and that online descriptions are true.
- Security of the operation.
- Price.
- Availability of healthcare services.
- Possibility to have professional advice remotely.

Question 3: In general, do pharmacists believe that community pharmacies should invest in an online channel? What they consider to be the main impacts of doing so for their business?

Answer:

From the conducted market research, we observe that most pharmacists believes that the future of community pharmacies will be a hybrid system (n=47, 75%), combining the traditional physical store with the online channel. Off the 14 pharmacists that don't consider the future of pharmacies won't pass through having online channel available, 64% (n=9) consider that pharmacies lay on a traditional concept, with sales focused on the pharmacist-customer relationship, 36% (n=5) distrust the online buying process and also consider that pharmacies lay on a traditional concept to be the reasons of not investing in an online pharmacy.

Although 75% (n=47) of pharmacists consider the future of pharmacies to be a hybrid system, only 22% (n=14) work in a pharmacy that already has a website. Of the 78% (n=49) that still don't have an online solution, 69% (n=34) would consider investing in an e-commerce solution.

Regarding what pharmacists consider to be the main barriers for their business in the consumers' adoption of online purchase on a pharmacy website, we can observe that the high investment needed to develop an online digital solution is considered to be the most important one (n=21, 33%), followed by difficulty in presenting competitive prices (n=16, 25%), reliability of the logistics operating system (n=22, 35%), reliability of the collected data (n=18, 29%) and low representativeness in sales volume (n=19, 30%).

When asked to rate from 0 to 10, what they consider to be the main impacts for their business if they decide to invest in the online channel, the vast majority believes that the biggest one is higher investment in logistics (mean=6.11), followed by the improvement of customer service, by being more focused and personalized (mean=5.22) and lower need for investment in human resources (mean=4.83).

Question 3: What do consumers value most when buying online in a pharmacy website?

Answer:

From the conducted market research, we observe that the most relevant characteristics in the adoption of online purchase on a pharmacy website, for consumers, is the lack of waiting lines (n=58, 34%), followed by faster process (n=43, 25%), ease in the process (n=47, 28%), multichannel solutions (n=43, 25%) and possibility of price comparison (n=68, 40%).