Retail Clinics in Portugal: Go/No-go?

A comprehensive research from consumers' perspective

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Abstract

These days, the healthcare sector is continuously changing. Therefore, new concepts were born such as retail clinics, which appears due to retailers' decision of expanding their strategy into this industry. These are new models of primary care delivery and preventive healthcare, aiming to offer a convenient, fast but committed to quality, and competitive service to everyone. Even though Portugal was advised by OECD to reduce costs in healthcare by shifting care out of hospitals, little has changed yet. Thus, given the success of retail clinics abroad and the lack of published Portuguese research on the topic, this dissertation aims to assess the viability of implementing this concept in Portugal, by investigating its consumer acceptance. To achieve that, it was conducted a cross-sectional descriptive-exploratory research using in-depth interviews and an online questionnaire.

The results show that there is an overwhelming consumer acceptance. Moreover, the target consumers of retail clinics in Portugal are characterized by non-conservative people from 18 until 44 years old, who tailor their opinions based on facts, on the efficiency and convenience of the services offered rather than on reputation. These consumers are already accustomed to using private healthcare services, however, some also attend public institutions.

Finally, there is demand for retail clinics in Portugal. Though, it is recommended to start small by gradually presenting retail clinics incorporated in pharmacies with just primary care services and with the clinical analyses due to the risk of implementing a new concept.

Keywords: Concept Testing, Consumer Acceptance, Portugal, Primary Care, Retail Clinics

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Resumo

Atualmente, o setor da saúde está em constante mudança. Assim, apareceram novos conceitos, como o de clínicas de retalho que surgem da necessidade de expansão da estratégia de negócio dos retalhistas. Estas clínicas caracterizam-se como novos modelos de atendimento primário e cuidados de saúde preventivos, que têm por objetivo oferecer um serviço conveniente, rápido, mas de qualidade e competitivo para todos. Apesar de Portugal ter sido aconselhado pela OCDE a reduzir os custos nos cuidados de saúde, deslocando os cuidados para fora dos hospitais, ainda não se viram grandes alterações. Devido ao sucesso destas clínicas no estrangeiro, assim como, à falta de literatura Portuguesa sobre o tema, esta dissertação visa avaliar a viabilidade da implementação deste conceito em Portugal, investigando a aceitação do consumidor. Para tal, realizou-se um estudo descritivo-exploratório através do uso de entrevistas e questionários *on-line*.

Os resultados demonstram uma esmagadora aceitação do consumidor. Relativamente aos consumidores-alvo das clínicas de retalho em Portugal, caracterizam-se por pessoas não conservadoras entre os 18 e os 44 anos que adaptam as suas opiniões com base em factos, na eficiência e conveniência dos serviços oferecidos e não na reputação. Por norma, estes consumidores utilizam o setor privado de saúde, mas alguns também o setor público.

Para concluir, é importante referir que as clínicas de retalho têm procura em Portugal. No entanto recomenda-se que, primeiramente, estas clínicas sejam incorporadas gradualmente em farmácias, dispondo apenas de cuidados primários e análises clínicas, devido ao risco de implementação de um conceito novo.

Palavras-Chave: Aceitação do Consumidor, Clínicas de Retalho, Cuidados Primários, Portugal, Testes Conceptuais.

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Chapter I – Introduction

The Introduction chapter presents the topic and aim of the dissertation thesis. Firstly, it scrutinizes the background trends of the healthcare sector and its innovations. Then, it analyses the relevance of the problem statement that led to the purpose of the study, which will be presented subsequently along with the research questions. Finally, it describes the research methods applied and the outline of the dissertation.

1.1 Background

Nowadays, the healthcare sector is constantly changing all over the world (Deloitte, 2016), especially in terms of clinical, operating and business models (Santilli & Vogenberg, 2015). Growing and aging population, innovation in treatments and technologies, the improvement in literacy and empowerment of consumers, the increase of chronic diseases along with increase of regulations and focus on care quality (versus volume) are the factors driving the most significant shifts on the sector. These, in turn, are leading to a rise in costs and on expenditures for infrastructures, innovation, and provisioning of care (Deloitte, 2016).

As such, innovation in healthcare proves to be crucial in finding the equilibrium between improving quality and complying with cost restrictions (Omachonu & Einspruch, 2010). New technologies, services, and working methodologies are factors that characterize innovation for healthcare institutions (Lansisalmi, M. Kivimaki, & Ruoranem, 2006). In other words, in this sector, innovation is applied to three categories: product (services or goods); process, which includes modernization of production or delivery models; and structure, that influences both internal and external infrastructure and, simultaneously, gives origin to new business models (Varkey, Horne, & Bennet, 2008).

According to Deloitte Development LLC (2015), lately, some retailers have been expanding their strategies to healthcare and wellness services in order to increase in-store traffic and, therefore, create an opportunity to cross-selling and up-selling, improve the experience of the consumer leading them to a better brand recognition and, ultimately, to increase revenue and market share. Combining that with technological advances, consumer knowledge and rising consumerism trends in health, retailers have become the best positioned players, both

geographically and operationally, to deliver new models of healthcare services - retail pharmacies, retail clinics, and health and wellness programs - which are considered examples of non-disruptive structural innovation (Varkey, Horne, & Bennet, 2008), because despite having many advantages, they have not ousted the traditional venues of healthcare delivery (Omachonu & Einspruch, 2010).

Through the Policy Survey results of OECD – Organization for Economic Co-operation and Development – it was possible to understand that seven different country-members have already implemented retail clinics: Australia, Belgium, Canada, Chile, the Netherlands, the United Kingdom and the United States of America. The models are in different stages of development, being the US case, the cradle of Retail Clinics, and Belgium and the Netherlands, the newbies of the implementation of this concept (Berchet & Nader, 2016).

1.2 Problem Statement and Relevance

In Portugal, non-urgent cases still have a substantial weight on Emergency Departments' visits: almost 40% of patients are screened with white, blue or green bracelets (Ministry of Health , 2016). Indeed, Portugal was recommended to do a

> "structural reform to where and how care is delivered and needed, with an emphasis on **shifting care out of hospitals into less-expensive community settings** that are generally preferred by patients. Whilst keeping these structural reforms in play, however, Portugal's next challenge will be to shift lens and simultaneously focus on clinical processes and pathways" (OECD, 2015).

Likewise, in other countries, Retail Clinics seems to be an option to minimize the problems mentioned above. However, the concept is not already developed in Portugal, and there is few published Literature on this topic, until the moment.

Bearing this in mind, the following research aims to evaluate the viability of Retail Clinics' implementation in Portugal: analyse the extent of its acceptance by the Portuguese consumer. To reach this goal, three research questions will be addressed during this thesis:

Research Question 1: Are the Portuguese consumers of healthcare interested in the concept of Retail Clinics?

Research Question 2: Which are the most important attributes driving the Portuguese consumers' interest in Retail Clinics?

Research Question 3: What is the potential target consumer of Retail Clinics in Portugal?

1.3 Research Method

According to Dolan (1992), when testing for a new idea on the market, it should be used both qualitative and quantitative data. Therefore, it was gathered through in-depth interviews and online surveys, respectively.

The research approach used throughout this dissertation is considered a cross-sectional descriptive-exploratory. While it was needed to conduct an exploratory research to comprehend the environment by doing in-depth interviews, a descriptive research was also developed to test consumers' interest on the concept through a questionnaire.

1.4 Dissertation Outline

Regarding the outline of the dissertation, the second chapter is focused on a literature review, which is divided into three major parts: the concept of Retail Clinic, the analysis of the US and UK cases, and, finally, the overview of the Healthcare sector in Portugal. The third chapter carefully defines the research methods used, the research instruments as well as the explanation of the measurement scales used in the survey. Next, section four presents and discusses both a preliminary analysis of the data and the results obtained from hypothesis testing. Finally, the fifth chapter is about expatiating on the most important conclusions of the research, as well as the drawbacks and recommendations for future research.

Chapter II - Literature Review

During the second chapter, the author presents the general concept of retail clinics and common characteristics across different countries. Then, two different models of these clinics are described: the US model and the UK model. Afterwards, it is important to review on the current healthcare sector in Portugal. Finally, the research hypotheses that arose from the literature are referred and justified, in order to answer the research questions.

2.1 The Conceptualization of Retail Clinics

The retail clinics can also be called as retail health clinics or convenient care clinics or even in-store clinics. They represent a new model of delivering simple acute and preventive healthcare (Weinick , Pollack, Fisher, Gillen, & Mehrotra, 2010), in which Convenience, Time Saving, and Affordable Prices are the three main strategic pillars (C.S. Mott Children's Hospital, 2007).

Typically, this type of clinics is located within retail stores, such as pharmacies, department stores, shopping malls, and other unusual places such as airports (Ahmed & Fincham, 2010) or metro stations (Berchet & Nader, 2016). They offer a service opened seven days per week with extended operating hours, in which the clients can just walk-in without an appointment (Alexander, Currie, & Schnell, 2017). In what concerns staff, there are some differences from country to country, however, originally, what all of them have in common is the minimal involvement of doctors during the process (Win, 2017). Another distinctive characteristic is the total transparency regarding the type of services they can or cannot offer and the respective fixed prices (published online) (RAND Corporation, 2016).

Strategically speaking, both the business and operational models are “well-thought-out”, which are dependent on the narrowed scope of services offered (Bohmer , 2007).

In terms of business model, the main goals are: to minimize overhead costs (staff, real estate, and financial costs tend to be low), through shared costs with the store; to decrease the need for physician involvement; and to create synergies with pharmacies would be beneficial both

for patients who can fill the prescription at the same place, and for the store by increasing the foot-traffic (Bohmer , 2007).

About the operational model, it is inspired on the McDonald's hamburger chain (Bohmer , 2007), where customer pick what they want from a menu list (Rohrer, Angstman, & Burtel, 2009). In retail clinics, the services are incredibly standardized aiming to minimize the need for physician's evaluation, because the screening for some services is made using a binary test or by applying a rigid protocol-based decision rule. Nonetheless, for some services like immunizations, there is no need for a diagnosis chain (Bohmer , 2007; Aagaard, Nadler, Adler, Maselli, & Gonzales, 2006). Another characteristic is that all the ailments can be screened and treated quickly, and the treatments offered involve almost no follow-up, and decisions can be guided by highly specified protocols (Bohmer , 2007).

Besides, according to Bohmer (2007), it is important to mention that, both models are anchored on the assumption that patients can make an adequate diagnosis of their conditions, depending on retail clinics just to check and receive proper treatment. Therefore, they are susceptible to misclassification.

Since the beginning, there have been several discussions about Retail Clinics (Bohmer , 2007) and, therefore, some concerns were raised from certain physician groups (Thygeson, Vorst, Maciosek, & Solberg, 2008) about quality of care (Starz, 2006; Steenhuysen, 2007; American Academy of Family Physicians, 2007; American Academy of Pedriatrics, 2014; Bohmer , 2007) and potential incentive to over-prescription (Reinberg, 2007), unpredicted problems that would increase health costs (accuracy of diagnosis) (Mehrotra, et al., 2009) , and lack of continuity and coordination of care (American Academy of Pedriatrics, 2014; Bodenheimer, 2008).

As such, many researchers have addressed these concerns. Regarding quality of care, it seems to not have a difference between the quality of care delivered by nurse practitioners and doctors for minor ailments, being patient satisfaction and health outcomes, some of the proxies used for this variable (Mehrotra, et al., 2009; Horrocks, Anderson, & Salisbury, 2002; Mundinger, et al., 2000; Watson, et al., 2015; Woodburn, Smith, & Nelson, 2007). According Mehrotra, et al. (2009), there is no evidence for none of the other concerns above-mentioned:

the rate of antibiotics prescription is comparable to the ones in doctors' offices and emergency departments; if the patient is not well-screened, there will be more visits afterwards, which is not the case; the rates of preventive care visits in retail clinics are not particularly different from the ones in physicians' offices. In fact, for retail clinics' clients, the preventive care visits are usually done in physicians' offices. Regarding coordination of care, usually the person in charge of the patient's process, prints a visit summary from the electronic medical records or even send it to a physician, if requested by the patient (Turton, Ryan, Miller, Counts, & Nash, 2007).

2.2 Two different cases

The purpose of this section is to scrutinize two cases: the retail clinics in the United States of America and those in the United Kingdom.

The United States of American was chosen, given the fact that is the country where the concept is widely developed (Berchet & Nader, 2016). Nevertheless, since this thesis goal is to understand the viability in Portugal, it is important to understand how the retail clinics are shaped in a European country. Therefore, from the ones with retail clinics already implemented – Belgium, the Netherlands, and the United Kingdom – (Berchet & Nader, 2016), the United Kingdom was the country chosen, since is the only one from these with a National Health System (NHS), like Portugal (Nixon, 2000).

2.2.1 The US Case

The first in-store clinics were founded in 2000 in Minnesota, from an alliance between *QuickMedx* and *Cub Foods* grocery store. The motivation behind the launch of these clinics was the co-founder's frustration with the long wait and high cost to treat a simple condition of his son in an urgent care clinic (Muroff, 2009).

In 2005, these clinics were acquired by a prominent pharmacy group, *CVS Caremark Corporation*, branding them as *MinuteClinics*. This moment marked the beginning of several acquisitions led by retailers and healthcare systems (Convenient Care Association, n.d.). Indeed, the number of clinics are increasing at a steady pace: in 2009, there were more than 1100 clinics; afterwards, in 2015, there were over 2000 clinics, opened in 41 states and Washington, D.C. (National Conference of State Legislatures, 2017); the predictions suggest that there will be more than 2800 clinics, at the end of 2017 (Accenture, 2015).

In the US, retail clinics are typically located in commercial/retail settings such as *Wal-Mart* and are also opened during evenings and weekends. The professionals responsible for providing care are Nurse Practitioners and/or Physician Assistants[1] (Rudavsky, Pollack , &

[1] "Physician assistants in the United States are fully trained professionals who take on a role equivalent to that of a junior doctor for their entire career" (Hutchinson, Marks, & Pittilo, 2001). They are licensed to practice under physician

Mehrotra, 2009). They provide care for simple conditions (e.g.: colds, the flu, sore throats, ear infections, and minor skin conditions), as well as some services of health prevention and immunization (Alexander, Currie, & Schnell, 2017). Regarding the price, there are several researchers that are aligned: going to a retail clinic is usually a third or a quarter cheaper, when compared to a visit to doctors' office for treating the same condition (Thygeson, Vorst, Maciosek, & Solberg, 2008; Mehrotra, et al., 2009; Tu & Cohen, 2008). It is also important to mention that, in the beginning, these clinics only accepted out-of-pocket payments, that is why the prices were always published online. However, nowadays almost every single clinic admits *Medicaid, Medicare*, and private insurance (Rudavsky, Pollack , & Mehrotra, 2009).

Until now, there are three types of models for convenience care clinics:

1. The most common model represents the total ownership and operation of the store where the clinic is located. In this case, the parent company gains all from retail clinics and from what is sold in the store. Example: the first clinics called *MinuteClinic* already mentioned above; *Take Care Clinics* which are owned by *Walgreens* (Weinick , Pollack, Fisher, Gillen, & Mehrotra, 2010).
2. Clinics are partnered with retail settings or have separate clinics in other sites. Example: *RediClinic* has a partnership, in Texas, with *HEB supermarkets* (Weinick , Pollack, Fisher, Gillen, & Mehrotra, 2010).
3. Despite being the model with less adherence yet, it is growing significantly. The hospitals, physician groups or healthcare systems are the ones that retain the retail clinics. Example: *Geisinger* and *Mayo* clinics. They are increasing in number because patients see these clinics with even more credibility (Weinick , Pollack, Fisher, Gillen, & Mehrotra, 2010).

Both Tu & Cohen (2008) and Mehrotra et al. (2008) researches are aligned regarding retail clinics' usage: the users are usually younger than in Physician Primary Care (PCP) visits, but the profile of visitors in retail clinics and emergency departments are alike. The families with children, younger adults (18-44 years old), and minority families are the most likely to use

supervision. They are also able to "conduct physical exams, diagnose and treat illnesses, order and interpret tests, counsel patients about preventive health care, provide immunizations, and write prescriptions". (Convenient Care Association, n.d).

these venues. From those who use retail clinics, almost 60% said that they do not have any PCP (Mehrotra, Wang, Lave, Adams, & McGlynn, 2008), and therefore, just 40% of visits have substitute character (approximately 93 percent substitutes the visit of physician offices and 7% the emergency departments) (Ashwood, et al., 2016).

According to Weinick, Burns & Mehrotra (2010), 13,7–27,1% of emergency department visits around the US could be addressed at some alternative sites. The potential savings for the national healthcare systems represent 0,2% of national expenditure. Nevertheless, Thygeson et al. (2008) predicted savings of 0,3% of national expenditure.

Despite being little savings, retail clinics are already shaping mentalities and being impactful for the whole health system: some PCPs, with the arrival of retail clinics in the market, have been starting to extend hours of services, to publicize fees for minor ailments on the websites, and to schedule same-day care (Bachman, 2006).

2.2.2 The UK Case

In the United Kingdom, the National Health System provides numerous services, such as urgent and emergency care, pharmacy services, General Practitioners (GPs)[2] services, dental services, hospital services, or pathology services (NHS Choices, 2015). In terms of urgent and emergency care, there are several services available for life-threatening situations (NHS 111, 999 services, A&E departments/emergency departments, among others) as well as for minor ailments (minor injuries units, urgent care centres, walk-in centres, pharmacy services, among others) (NHS Choices, 2015).

In the year of 2000, 40 walk-in centres were launched by the United Kingdom government (Cylus, et al., 2015) and, since April 2013, they have been managed by Clinical Commissioning Groups (CCGs)[3] (NHS Clinical Commissioners, n.d.). The three underlying

[2] "General practitioners have an important role in looking after patients in their homes and within the communities where they live. (…) GPs are often the first point of contact for anyone with a physical or mental health problem and patients can be at their most anxious. (…) Common procedures/interventions: performing clinical examinations to patients to assess, diagnose and monitor a patient's condition; carrying out tests within the surgery such as urine sample testing to assist with diagnosis; interpreting findings from investigations such as blood tests to help reach a diagnosis; using basic life support skills and emergency procedures such as defibrillation where necessary" (NHS England, n.d.)

[3] "CCGs are: membership bodies, with local GP practices as members; Led by an elected governing body made up of GPs, other clinicians including a nurse and a secondary care consultant, and lay members; Responsible for approximately 2/3 of the total NHS England budget; or £73.6 billion in 2017/18; Responsible for commissioning healthcare including mental

intentions for the implementation of these centres were: to enhance primary care delivery, because people considered it hard to get a quick response from GPs; to reform the NHS to better fit people's lives; and, to serve the purpose of delivering different ways for primary care, especially, because nowadays patients are willing to have control over their decisions (Monitor, 2014). In any case, some stakeholders understood this policy as a way of motivating patients to leave emergency care for minor ailments (Cylus, et al., 2015)

Minor injuries units, urgent care centres, and walk-in centres are all commonly led by nurses, or General Practitioners, none needs an appointment, and all excel in transparency by having published which type of conditions they can or cannot treat. For example, all can treat sprains and strains, but none of them can deal with chest pain or with pregnancy problems. Even though, the NHS walk-in centres (WiCs) seems to be more convenient because they are opened every day during the whole year with extended hours – from 8 am to 8 pm or from 7 am to 10 pm –, and offer a vaster number of treatments to their patients, such as: infections and rashes, blood pressure checks, fractures and lacerations, emergency contraception and advice, stomach aches, vomiting and diarrhoea, hay fever, insect and animal bites, stitches (sutures), dressing care, minor cuts and bruises, minor burns and strains, and stop smoking support (NHS Choices, 2015).

According to Monitor (2014) – sector regulator that was incorporated in *NHS Improvement*, since April 1, 2017 –, there were 185 walk-in centres across England, in which 50 are led by nurses and 135 by general practitioners. However, in both cases, a patient is likely to be seen by a nurse and, if needed, for a GP. Even these professionals are not supposed to offer treatment for longstanding conditions or even severe situations (NHS Choices, 2015). Regarding the providers, there are from independent sector companies such as *Care UK* and *Virgin Care*, to acute and community *NHS trusts* and foundation trusts (Monitor, 2014).

Likewise, in the United States, most users are young, in the age range of 17 to 45 years old (Desborough, Forrest, & Parker, 2011). Though, they usually belong to higher socio-economic groups, are Caucasian and with education levels above average. It should also be

health services, urgent and emergency care, elective hospital services, and community care; Independent, and accountable to the Secretary of State for Health through NHS England; Responsible for the health of populations ranging from under 100,000 to 900,000, although their average population is about a quarter of a million people" (NHS Clinical Commissioners, n.d.)

noted that majority of these patients became aware of walk-in centres, mostly, through word-of-mouth (Jackson, Dixon-Woods, Hsu, & Kurinczuk, 2005).

Concerning outputs, some researchers have studied if, in fact, there was an improvement regarding emergency department's usage after the implementation of walk-in clinics in the United Kingdom. Whilst some suggested a not significant decrease in emergency departments' consultations per month per centre (Chalder, Sharp, Moore, & Salisbury, 2003), others supported an actual reduction of adults' attendance on emergency departments in case of minor ailments, which coincided with the implementation of walk-in clinics led by general-practitioners (Arain, Campbell, & Nicholl, 2015). Nevertheless, it is not enough evidence to confidently state that there is a real impact of walk-in centres and, therefore, it is needed to continue the research on this topic (Crawford, Cooper, Cant, & DeSouza, 2017).

Apart from walk-in centres, there are other services that can be complimentary of out-of-hours ones (Berchet & Nader, 2016). It was studied that are a clear preference of community pharmacies rather than GPs (Todd, Copeland, Husband, Kasim, & Bambra, 2015). These pharmacies provide three levels of services: basic services, that need to be complied with by every single pharmacy in the country; and advanced and enhanced services, in which it is necessary more certification, and these spaces also need to have an area of consultation rooms (Pumtong, Boardman, & Anderson, 2011), in which the pharmacists can deliver primary care – nowadays, about 85% of the pharmacies have this extended method (Berchet & Nader, 2016). The large companies and chains (for instance, *Boots the Chemist* and *Moss Pharmacy*) are the most common owners of these pharmacies (Win, 2017).

To demystify any potential concerns, the quality of care delivered in pharmacies was already analysed, and the conclusion reached was that it is as good as the one delivered by GPs, given a couple of health outcomes (Watson, et al., 2015). Moreover, it was also studied that, since the implementation of these services, the amount of general practitioners' appointments for minor illnesses has dropped, and it does not seem to be ephemeral, because patients that have already been in these venues have the intention of return, when needed (Paudyal, et al., 2013). Besides that, the government predicted potential savings of about 57 million GPs' visits per year (Eaton, 2008).

Even though the services have been showing good results, there is room for improvement. Considering the urgent care, minor injuries services and walk-in centres, NHS England is planning to standardize the offer into “Urgent Treatment Centres” which will be led by GPs (NHS England, 2017). Regarding community pharmacies, they can also be improved by feeding on other practices abroad (Win, 2017).

2.3 Overview of Healthcare Sector in Portugal

There are several European countries operating National Health Service model, which is commonly "characterized by universal coverage, tax financing and public provisioning" (Nixon, 2000). In Portugal, it was launched in 1979 by the government, to guarantee that everyone has access to healthcare, independently of the socio-economical group (SNS, 1993). Nowadays, NHS integrates the whole healthcare services: primary care services, provided by health facilities and Local health units; hospital care, which correspond to more complex and differentiated care services when compared with previous one; long-term care, which includes home care (SNS, 2016).

According to Francisco Jorge, General Director of Health in Portugal, there is a clear evidence of evolution towards parity (Associação Portuguesa de Hospitalização Privada, 2017). In 2015, there were 225 hospitals in Portugal, of which 110 were public, 111 private, and 4 of them in private-public partnership (PPP) (Instituto Nacional de Estatística, 2017). Nowadays, there are four groups that dominates the private sector, such as: *Luz Saúde* (10 hospitals, 7 private clinics, 1 PPP, and 2 senior residences), *José de Mello Saúde* (7 hospitals, 6 private clinics, and 2 PPPs), *Lusíadas Saúde* (4 hospitals, 7 clinics, and 1 PPP), and *Trofa Saúde* (9 hospitals).

Along with the expansion of private healthcare sector, according to Deloitte (2012), it is expected that health consumers demand alternative venues of care, such as retail clinics, pharmaceutical services, and nurse services to get convenient access, trustful and transparent healthcare services. In fact, in Portugal, retail clinics implementation is in its early days: *Jerónimo Martins* entered the market with its *Walk'in Clinics* and *SONAE* with *Wells Group* and *Dr. Wells*.

Thereby, this dissertation aims to contribute for the expansion in the field of retail clinics' literature, by providing the first steps of evidence in Portugal, and exploiting the consumer side considering their needs for this "gap" in the Portuguese market. As such, this study is presenting the feasibility of retail clinics implementation in Portugal.

2.4 Research Hypotheses

In the beginning, it is needed to respond to the first research question of this dissertation - *Are the Portuguese consumers of Healthcare interested in the concept of retail clinics? –* by testing the following:

H1: There are more people *Interested* or *Very Interested* in the concept of using Retail Clinics.

Moreover, another hypothesis is tested to get deeper insights into the first research question. The main objective is to understand if there is room to expand retail clinics' market. However, in accordance to Kolbert (2017), people do not change their minds when giving them facts.

H2: People who assessed their interest in using retail clinics as *Not all interested*, *Little Interested* or *Moderately Interested*, whenever they receive more information (facts) about retail clinics, they will not change opinion

In order to give a response to the second research question of the dissertation – *Which are the most important attributes driving the Portuguese consumers' interest in Retail Clinics?* – it is necessary to understand how Portuguese consumer of healthcare value some characteristics of the service, regarding unscheduled/urgent situations.

H3: People who give more importance a priori to the core values of retail clinics will be more likely to show interest in them.

> **H3a:** When the "*quick call"* is assessed as *Important* or *Very Important*, the person is more likely to be interested in using retail clinics.
>
> **H3b:** When "*proximity to home/workplace"* is assessed as *Important* or *Very Important*, the person is more likely to be interested in using retail clinics.
>
> **H3c:** When *"working hours"* is assessed as *Important* or *Very Important*, the person is more likely to be interested in using retail clinics.

H3d: When the "*diversity of services offered"* is assessed as *Important* or *Very Important*, the person is less likely to be interested in using retail clinics.

The next research hypotheses aim to respond to the third research question of this study – *What is the target consumer of Retail Clinics?* Regarding the fourth hypothesis, as it was shown during the literature review, some demographic characteristics are transversal or specific. Thus,

H4: Demographics characteristics have an impact on the willingness to use retail clinics in Portugal.

In the UK, the most frequent users are aged between 17 and 45 years old, and in the US, they are 18-44 years old. Since this dissertation's target population are adults, then it appears the first ramification of the fourth hypothesis.

H4a: Younger people, aged between 18 and 45, are more willing to use retail clinics.

Even though, there is no accordance concerning socioeconomic classes among the UK and US examples. In the first one, the users are from high socioeconomic classes which is the contrary in the United States. In the second part of the hypothesis, it will be tested if in Portugal the potential users are similar to the UK users, since they are both European countries and, therefore, have similar healthcare habits. However, the hypothesis is formulated in terms of educational levels, because there is a link between socioeconomic status and education levels (Gordon, 1969).

H4b: People with higher education levels, *Bachelor Degree* or *Master Degree* or *Ph.D.*, are more willing to use retail clinics.

To better respond the third research question, it makes sense to assess if there is difference of interest in retail clinics across three different types of health users. Considering, on the one hand, the consumers who strictly use private health institutions. And on the other hand, the consumers who strictly use public health settings or, even, those who use both systems.

H5: The healthcare consumers who use exclusively private settings are more interested in using retail clinics.

Chapter III – Methodology

This chapter summarizes the methodology used in the course of this study. It showcases the research approach and its research method, then it defines and clarifies the research instruments applied. Finally, the explanation regarding the measurement scales used are explained

3.1 Research Method

3.1.1 Research Approach

Theoretically speaking, according to Hyman and Sierra (2010) there are three main research approaches: exploratory research which purpose is to explain the research environment by seeking for insights into possible decision alternatives and relevant variables that are needed to be considered; descriptive research aims to do a snapshot of aspects of the market environment, by understanding the characteristics of relevant groups, consumer evaluation of attributes of the product versus competing products, degree of association of variables, among others; and causal research which evaluates a cause-effect relationship between two variables. Moreover, the studies can be either cross-sectional, when data is at one point in time, or longitudinal when data is gathered over time (Hyman & Sierra, 2010).

Keeping this in mind, it might be affirmed that this dissertation will be a **cross-sectional descriptive-exploratory research**. First, it will be done an exploratory research to understand the environment through in-depth interviews. Then, it will be completed a descriptive research, to perceive the potential interest of the consumers on the concept of retail clinics, by performing a survey. Finally, since the analysis of different periods of time is not crucial for this research, it can be considered a cross-sectional study.

3.1.2 Concept Testing

Empirically speaking, according to Dolan (1992), whenever there is a new idea for a product or service, it is needed to test the viability of it on the market – concept testing. Since this dissertation aims to evaluate if the new model of primary care delivery (retail clinics) would be viable in Portugal, it will be conducted the method of **concept testing**.

Thus, concept testing consists of both quantitative (surveys) and qualitative research (in-depth interviews or focus groups), to understand the response of the potential consumer to the new product or service. In this type of testing, qualitative research should be done first and, then, followed by quantitative research (Dolan, 1992). Thus, during this dissertation, it will be done firstly in-depth interviews (qualitative) and, afterward, a survey (quantitative). Being, therefore, aligned with what was defined previously in the research approach.

To perform the concept testing, it is essential to be aware of what type of communication to use. It can be either factual/nonemotionally "core idea" or with persuasive communication. Even though the last one is better to predict consumer behaviour since it is strongly influenced by communication strategies, it will be pursued a more factual communication in this dissertation by only using words, mainly because it foresees the lowest purchase/usage intent score (Dolan, 1992), which is consistent with a more conservative approach.

Finally, concerning the diagnosis of the concept, it is vital not only to understand the overall acceptance of the idea, but also the evaluation of the specific characteristics of the product or service, to evaluate better which ones, contribute or not from the usage intention (Dolan, 1992). It will be executed through the survey and tested in the fourth chapter of this dissertation.

3.2 Research Instrument

3.2.1 Population & Sampling

Malhotra (1999) described population as the total number of individuals who share a particular set of features, and therefore covering the whole universe under the purpose of answering a specific research problem. In this dissertation, the population of interest is broad, since it is the whole Portuguese adults – over 18 years old – and foreigners who are planning to live in Portugal for the next few years.

Since it is not possible to query every single person from the population, and there are time and budget constraints, the need for sampling appears. It can be either probability or non-probability sampling. Concerning to probability sampling, it usually generates results that are not contingent to selection bias and, consequently, are more statistically significant. Nonetheless, this dissertation's author has decided to pursue with non-probability sampling, because it is faster and cheaper data collection type (Saunders, Lewis, & Thornhill, 2009).

Within the existent sampling techniques, the convenience sampling has been selected because it searches for a sample, where the selection of the elements is made by the researcher (Malhotra, 1999). Portuguese consumers of healthcare and some foreigners have been chosen via social media platforms (Facebook, Instagram, and Linkedin), e-mail and face-to-face interactions.

3.2.2 Semi-Structured In-depth Interviews

When the researcher adopts an exploratory approach, qualitative methods are useful given that they open the window for idea's generation, gaining a better understanding on the topic which will be helpful lately both in constructing the survey and, at the end, in inferring about the results (Saunders, Lewis, & Thornhill, 2009).

Semi-structured In-depth interviews allow the researcher to explore and "find out what is happening [and] to seek new insights" (Robson & McCartan, 2016). There are three ways of conducting it: face-to-face, telephone, and electronically (Saunders, Lewis, & Thornhill, 2009). Face-to-face interviews have been selected since it allows the interviewer to learn as

much as possible from the interviewee. However, given that the interviewer has an important role, it could lead to biased and misleading results.

The interviews were conducted to 20 Portuguese people aged between 24 and 55 years old, lasting for 10-15 minutes. During the interviews, three topics have been deeply analysed. In the beginning, it was aimed to understand the decision-making process when determining where to go in an unscheduled/urgent situation. Then, it was explained what is a retail clinic by using facts, to understand the main concerns regarding the concept, and when there is information to refute those concerns, the interviewer gave them to the interviewee in order to know if the opinion would change. Finally, it was explored how retail clinics could do a better fit with the Portuguese consumers' needs. In the Appendices chapter, it can be observed summary of the questions and the answers (Appendix 1).

3.2.3 Online Survey

In the deductive approach part, it was conducted an online survey. It was chosen for two reasons. First of all, this type of methodologies have many advantages, such as: *(i)* short response time; *(ii)* the researcher has control over the sample chosen and, at the same time, he/she does not need to be involved in the survey; *(iii)* low administrative costs and financial resource implications; *(iv)* and, finally, the results can be downloaded directly to the software for the analysis (Ilieva, Baron, & Healey, 2002). Finally, because it can be used to "generate findings that are representative of the whole population" (Saunders, Lewis, & Thornhill, 2009).

To conduct the online survey, it was chosen Qualtrics software, since it protects data and allows data exportation in a compatible way with the data analysis software – in this case, SPSS was the software selected to run a statistical analysis.

Before launching the online survey, Vanette (2015) stated that it is crucial to run tests to determine and solve potential problems. This being said, it was pretested with ten people from the target population that did not participate in the final questionnaire. In virtue of the pre-test, some questions were included, others rephrased and dropped out.

The questionnaire (Appendix 2) had the following structure:

(i) First, a block of screening questions to check if the person in question belongs or not to the target population – Portuguese people or foreigners that intend to stay in Portugal for, at least, three years;

(ii) After that, it is pretended to assess the current health situation of the person, to understand what kind of healthcare settings are used in an unscheduled/urgent case and, also, how they evaluate some characteristics of the service in the decision-making process. This will be important in responding the third and fifth hypotheses;

(iii) Then, the concept of retail clinics is introduced by relying on factual communication just with words, which aims to give enough information to perceive the interest of the person in using these services;

(iv) Subsequently, depending on the level of interest showed – first hypothesis –, a different set of questions appears:

a. if the person would be either "Interested" or "Very Interested" in using a retail clinic in Portugal, the following questions have the purpose of understanding how to improve the concept to better fit the Portuguese market;

b. if the person chooses one of the other three alternatives on the scale, the succeeding questions aim to comprehend the reason(s) behind the little interest on the concept and, depending on the reason presented, the person would be presented with some facts to counterpoint – this is to test the second hypothesis;

(v) Finally, the interviewee will give some demographic information both to understand the sample and to answer the fourth hypothesis.

3.3 Measurement Scales

The Likert scale consists of a symmetrical scale of positive and negative responses which permits researchers to study and measure data that can be hard to quantify (Jamieson, 2004). When compared with binary answers, these scales give "more granular feedback" and are considered one of the most consistent and reliable ways of measuring data (SurveyMonkey, n.d.). Hence, both scales used in this research questionnaire use this rating system.

It is also important to mention that there are both unipolar and bipolar response options: on the one hand, unipolar "are those in which the response can range solely in the relative degree of magnitude of the given statement or phenomenon", in other words, "any item that ranges from nothing to something represents a type of unipolar assessment"; on the other hand, bipolar ones "can vary in meaning on either end of the scale". Despite existing a clear better choice, for all the questions was chosen a unipolar scale, because it gives a more refined response options (Church & Waclawski, 2007)

At the beginning of the questionnaire, it aims to understand healthcare habits of the Portuguese consumers regarding the health systems, via five-point unipolar frequency scale, ranging between "Never" and "Always", which is one of the most commonly used Likert scales, according to Vagias (2006).

Then, to get accurate responses to answer the second research question, it is used a five-point unipolar importance scale, ranging from "Not at all Important" to "Very Important".

After the presentation of the concept, it is asked the interest level of using retail clinics in Portugal. Thus, it is used a five-point unipolar interest level scale, ranged from "Not at all Interested" to "Very Interested". However, this scale has a particularity that consists of not existing a true neutral scale-point (Survata, n.d.).

Chapter IV – Results' Analysis

In the fourth chapter, the analysis of the results is divided into two sections. First, it is presented general characteristics of the sample as well as details regarding its collection. Then, the hypotheses testing is conducted, by performing specific tests on SPSS software.

4.1 Preliminary Analysis

4.1.1 Data Collection

For fifteen days – from 6th until 20th November 2017 – it was collected responses to the questionnaire of this dissertation through social media platforms (Facebook, Instagram, and LinkedIn), e-mail, and in person – to get responses from people who cannot use computers and, consequently, Internet.

Regarding the number of participants, 489 people started to fill out the survey. However, just 424 were the ones who finalized the survey. According to Reips (2002), online surveys usually have high dropout rates, mostly, given that the participants do not feel committed to answering the whole survey and, at the same time, it is effortless to interrupt it. In this case, the dropout rate is 13,3% and, consequently, the completion rate is 86,7% which means that both the distribution and length of the survey is acceptable.

However, the valid-responses were only 407. From the 424, 14 of the respondents were not Portuguese and did not intend to live in Portugal in the next few years, and three of them were under 18 years old. Since they do not belong to this study's target, they were removed from the sample with the objective of not influencing any variable.

4.1.2 Sample Characterization

4.1.2.1 Demographics Characterization

In the final sample of 407 participants, 62,9% are women, and 37,1% are men (Fig.1), in which 98,1% are Portuguese, and 1,9% are foreigners who intend to live in Portugal for the next few years.

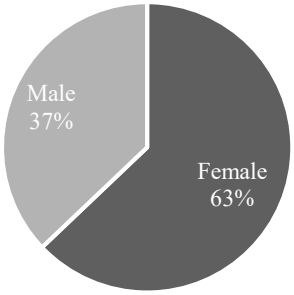

Figure 1 *- Gender Distribution*

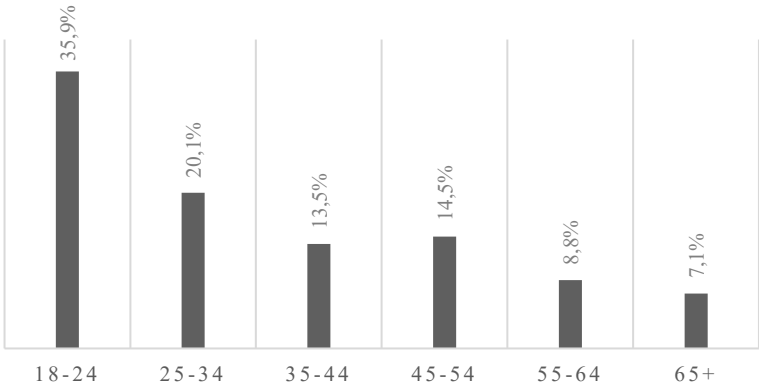

Figure 2 *– Age Distribution*

Regarding their age, 56% of the respondents are adults under 34 years old, being the dominant age range between 18 and 24 (35,9%) followed by 25-34 (20,1%) (Fig.2). However, the sample is diverse in terms of age, having observations from 18 until 91 years old. The age's mean is 37, which is not far from the real mean in Portugal, according to the last census, which corresponds to 44 years old (Instituto Nacional de Estatística, 2012).

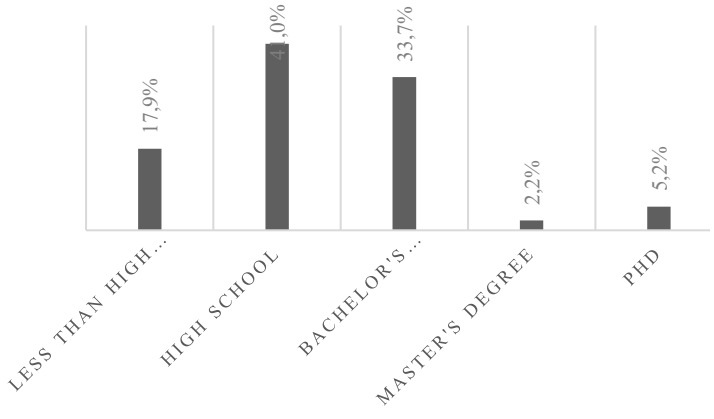

Figure 3 *- Educational Level Distribution*

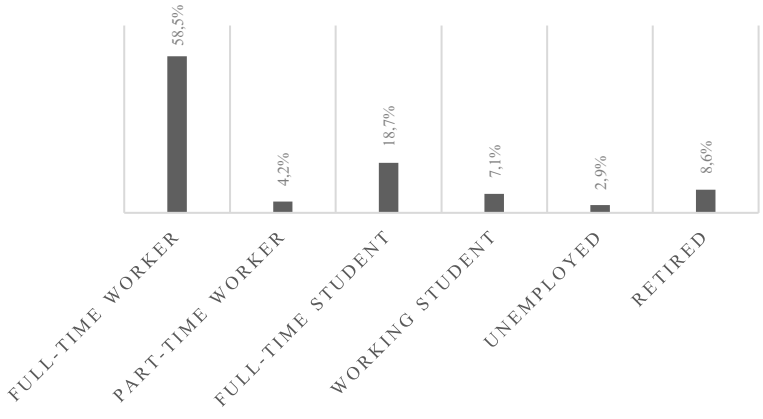

Figure 4 *- Employment Status Distribution*

Concerning education levels, the clear majority (74,7%) has a High School Diploma or a Bachelor's Degree. Despite existing more people in the sample with lower education levels (58,9%) (Fig.3), there are 26% of the sample still studying – full-time students or working student (Fig.4.).

4.1.2.2 Characterization of Health parameters

Considering the health systems, 47,2% of the sample has private health insurance, especially, given by the employer – e.g.: *Advance Care*, *Multicare*, and *Cigna*. Additionally, 29,2% has an insurance given to a specific professional class, for instance: *ADSE*, *ADMG*, and *SAD*. Curiously, just 37,6% of the sample seems to be aware of the fact that the national health service (SNS) is available for everyone. Thus, it could denounce a lack of knowledge in terms of national health services.

As mentioned in the literature review, the private and the public health systems in Portugal are going hand in hand which is also verified in this dissertation's sample. On the one hand, 30% of people only use private hospitals and clinics, and, on the other hand, 25,6% are exclusive users of public institutions of healthcare, which means that 44.4% are users from both. However, the preferred venues for healthcare services are undoubtedly hospitals (57,2%) regardless of being private or public (Fig.5).

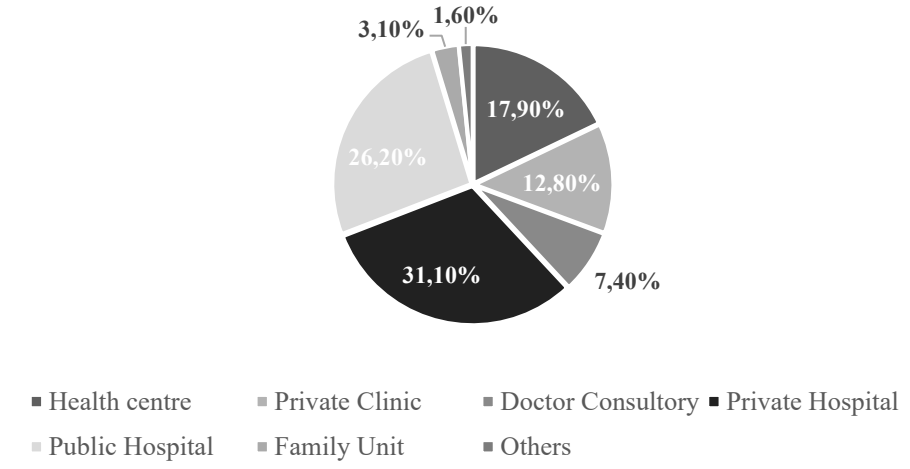

Figure 5 *- Healthcare Services Preference*

4.1.3 Data Cleaning

After analysing raw data, it is essential to go through a cleaning process to have more consistent and high-quality data.

To start the analysis, it was performed a test for univariate outliers by transforming the variables' scores into standardized z scores – it is considered an outlier all the observations with $zscore \geq 3{,}3$ or $zscore \leq -3{,}3$.

After that, a multivariate analysis was conducted aiming to expose a rare combination of variables scores. Moreover, it is possible to detect outliers by calculating Mahalanobis' Distance and, consequently, its probability. Whenever $1 - P_{Mahalanobis' Distance} < 0{,}001$, there is an outlier.

Through this line of reasoning, there were discovered 11 outliers, although, it was decided not to eliminate them from the sample for three reasons:

- First, there is no unanimity in literature about the topic of removing or not the outliers from the final sample;
- Second, given that the variables are measured in scales, conceptually, there are no outliers.
- Finally, the variable *Age* was the only one that could have outliers, since it is not measured on a scale. However, in this case, the observations that seemed to be an outlier are not because they are useful in order to have a broad and heterogenic sample.

4.2. Main results' analysis

4.2.1 Research Question 1 – Are the Portuguese consumers of healthcare interested in the concept of Retail Clinics?

In order to check the sample's interest in the concept, it is analysed the distribution of the answers regarding the eleventh question in the survey.

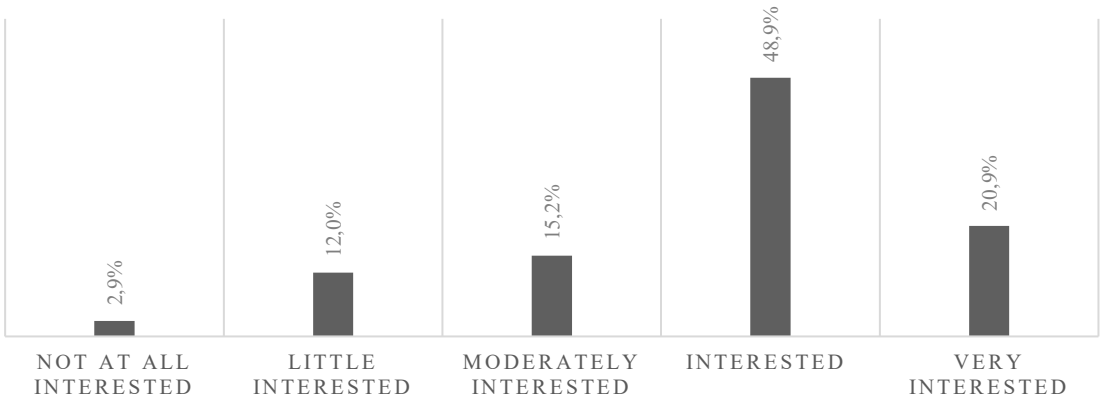

Figure 6 *- Sample's Interest in Using Retail Clinics*

Table 1 *- Descriptive Statistics (Interest_rc)*

	N	*Mean*	*Standard Error*
Interest_rc	407	3,73	1,018

According to the graph, 69,8% of the people are apparently interested in using retail clinics, where 48,9% shows to be interested and 20,9% to be very interested. This variable is skewed to the right, presenting a mean of 3,73. Therefore, the data corroborates the following hypothesis:

H1: There are more people Interested or Very Interested in the concept of using Retail Clinics. ***→ Valid***

As explained previously in the Methodology section, there is a different subset of questions for the people who do not show interest in using retail clinics. For those 71 participants who

selected “I think the offered services are extremely low” and/or “I'm afraid of being misdiagnosed” and/or “I prefer to consult a doctor rather than be treated by a nurse”, a set of facts to counterargue are presented as well as a new scale to evaluate their interest afterwards. For the purpose of testing the second hypothesis, a new variable is computed:

Equation 1 *- New Variable: Interest_rc_final*

$$\boldsymbol{Interest\_rc\_final} = if\ [max(info1, info2, info3) > Interest\_rc\_initial; max(info1, info2, info3)\ ; Interest\_rc\_initial]$$

According to the Central Limit Theorem, it is assumed that both variables follow a normal distribution becausde the sample is composed of 407 observations ($n > 100$).Through this line of reasoning, a paired sample t-test is the best option since it is used to verify whether the mean difference between paired observations is statistically significantly different from zero (Laerd Statistics, 2015) .

Table 2 *- Paired Sample t-test: Interest final - Interest*

	Mean	*Stand. error*	*95% CI of the difference*		*t*	*df*	*Sig.*
			Lower	*Upper*			
Interest_final– Interest_rc	0,079	0,327	0,047	0,111	4,847	406	**0,000**

Table 3 *- Descriptive Statistics: Interest final*

Descriptive statistics

	Mean	*Stand. Dev.*	*N*
Interest_rc	3,73	1,018	407
Interest_rc_final	3,81	0,962	407

The participants, after receiving additional information about a certain concern, seem to increase their interest on retail clinics $(3{,}81 \pm 0{,}962\ \text{km})$, a statistically significant increase of 0,079 (95% CI, 0.047 to 0.111) scale-points – $\text{t}(406) = 4{,}847, \text{p} - \text{value} = 0{,}000 < 0{,}05$, $d = 2{,}416$ (Table 2 and 3). Therefore,

H2: People who assessed their interested in using retail clinics as Not all interested, Little Interested or Moderately Interested, whenever they receive more information (facts) about retail clinics, they will not change opinion and, consequently, become more interested. → ***Not Valid***

4.2.2 Research Question 2: Which are the most important attributes driving the Portuguese consumers' interest in Retail Clinics?

H3: People who give more importance a priori to the core values of retail clinics will be more likely to show interest in them.

During the in-depth interviews, it seemed to exist some critical variables in the decision-making process for unscheduled medical situations. Thus, it is analysed those variables that are crucial for answering the third hypothesis of this dissertation.

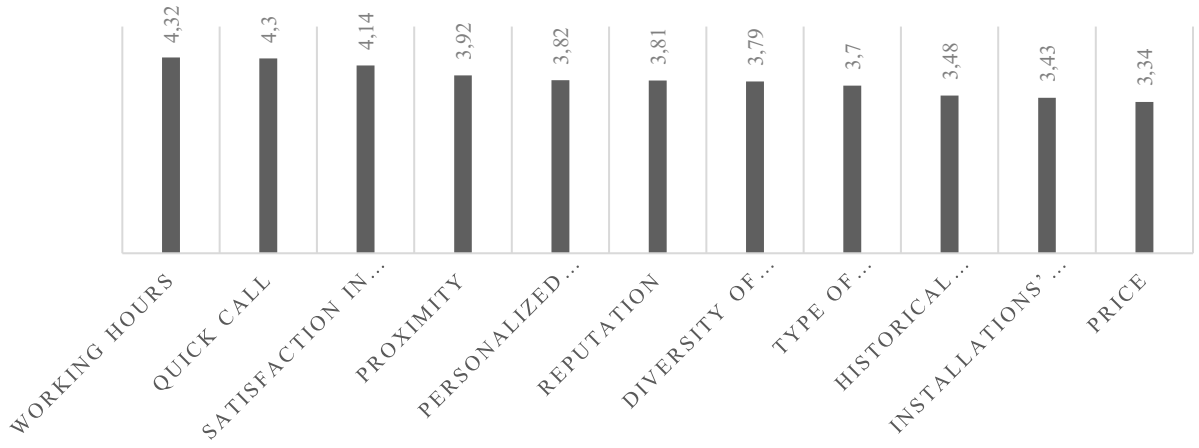

***Figure 7** - Means: Importance given to specific attributes*

Bearing in mind the three main pillars of Retail Clinics - Convenience, Time Saving, and Affordable Prices -, the importance given to *Working Hours*, *Quick Call*, *Proximity from home/workplace* and *Price* seems to be aligned with the concept. On the one hand, the respondents give more importance, on average, to the working hours of the service and if it is quick. On the other hand, in urgent situations, they seem to be less price sensitive.

Before coming forward with more analysis, it is needed to test for multicollinearity for the variables mentioned above. If its presence can be demonstrated, it will be a problem since it will increase the estimator's coefficients, making them highly sensitive to changes in the model. As a consequence, they become unstable and hard to infer.

Table 4 *- Collinearity Statistics*

Variables	*Tolerance*	*VIF*
Imp_Historical_Access	0,800	1,250
Imp_Person_Service	0,817	1,224
Imp_Quick_Call	0,803	1,245
Imp_Comfort	0,600	1,666
Imp_Diversity	0,664	1,505
Imp_Agreements	0,655	1,527
Imp_Working_Hours	0,818	1,222
Imp_Reputation_Inst	0,596	1,677
Imp_Satisfaction	0,804	1,243
Imp_Price	0,747	1,339
Imp_Proximity	0,831	1,203

Whenever the Tolerance and the VIF indicators are under 0,4 or above 2,5, respectively, there is a problem of Multicollinearity. Given that the Tolerance indicator is ranged between 0,600 and 0,831 and the VIF is between 1,203 and 1,677 (Table 4), then there is no Multicollinearity's problem.

As such, it is conducted a multiple linear regression which aims to understand how the importance given to these variables affects the interest in using Retail Clinics in Portugal. The reason behind the use of linear regression is the fact that both dependent (interest in using

Retail Clinics) and independent variables are considered metric, because are measured with five-point scales, which are deemed semi-continuous variables.

Equation 2 *- First Linear Regression Model*

$$\textbf{\textit{Interest on Retail Clinics}} = \beta_0 + \beta_1 Imp_{HistoricalAcess} + \beta_2 Imp_{QuickCall} + \beta_3 Imp_{Satisfaction} + \beta_4 Imp_{Proximity} + \beta_5 Imp_{WorkingHours} + \beta_6 Imp_{DiversityService} + \beta_7 Imp_{PersonalizedService} + \beta_8 Imp_{TypeAgreements} + \beta_9 Imp_{ReputationInstitution} + \beta_{10} Imp_{Price} + \beta_{11} Imp_{Comfort} + \varepsilon$$

Table 5 *- First Linear Regression Model (Summary)*

Model 1	*R*	*Adjusted R-squared*	*Standard Error*
	0,511	**0,240**	0,887

Table 6 *- First Linear Regression Model (ANOVA)*

Model 1	*Sum of Squares*	*F*	*Sig.*
Regression	0,511	12,685	**0,000**
Residual	310,903		
Total	420,727		

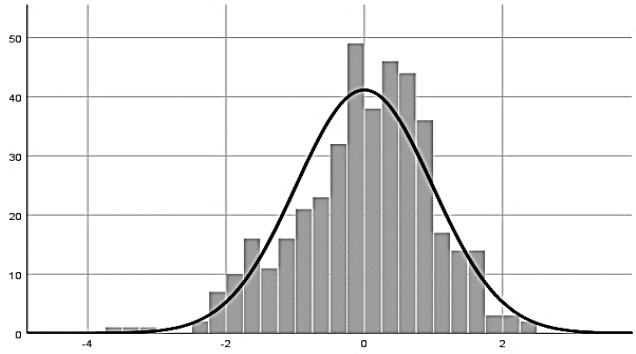

Figure 8 *- Residuals Distribution: First Linear Regression Model*

Therefore, the R-squared is 0,240, which indicates that the 11 factors (independent variables) account for 24% of the variation in the interest of using retail clinics – independent variable (Table 5). As shown in ANOVA table (Table 6), the F-test rejects that all the coefficients of the independent variables are zero, with a confidence level of 99% (p-value = 0,000 < 0,01). Therefore, it is possible to state that the presented model has explanatory power. Additionally, it is checked the distribution of the residuals which is normal (Fig.8). This is crucial to be tested, because if it would not follow a normal distribution, the results of the model could not be considered reliable.

For the analysis of the model, it is possible to adopt different methods: enter, stepwise, remove, backward, and forward.

In this case, both the enter and backward methods are performed. To begin with a general overview of the model, the enter method was selected, since it inserts all the variables in the model in one go. Hence,

Table 7 *- First Model Coefficients Significance (Method: Enter)*

Model 1	*β*	*Standard Error*	*t*	*Sig.*
Constant	0,483	0,385	1,254	0,211
Imp_Historical_Access	0,009	0,042	0,213	0,831
Imp_Person_Service	-0,031	0,055	-0,559	0,577
Imp_Quick_Call	**0,358**	**0,057**	**6,298**	**0,000**
Imp_Comfort	-0,046	0,055	-0,839	0,402
Imp_Diversity	-0,052	0,055	-0,943	0,306
Imp_Agreements	-0,017	0,045	-0,337	0,706
Imp_Working_Hours	**0,336**	**0,060**	**5,557**	**0,000**

Imp_Reputation_Inst	-0,065	0,055	-1,166	0,244
Imp_Satisfaction	**0,189**	**0,061**	**3,096**	**0,002**
Imp_Price	0,075	0,043	1,733	0,084
Imp_Proximity	-0,008	0,048	-0,168	0,867

Having tested that, the analysis continues by proceeding the backward method, in which all the variables are inserted in the model as in the enter model, however, those variables that correspond to the removal criteria are eliminated from the model.

The first variable to be removed is *Imp_Proximity*, followed by *Imp_Historical_Access*, and *Imp_Agreements.* Then, the following variables are removed one at a time: *Imp_Personalized_Service, Imp_Comfort, Imp_Diversity,* and finally*, Imp_Price*. Therefore, the last model shows the following characteristics:

Equation 3 *- Final Linear Regression Model*

$$\boldsymbol{Interest\ on\ Retail\ Clinics} = \beta_0 + \beta_1 Imp_{QuickCall} + \beta_2 Imp_{WorkingHours} + \beta_3 Imp_{Satisfaction} + \beta_4 Imp_{ReputationInstitution} + \varepsilon$$

Table 8 *- Final Linear Regression Model (Summary)*

Final Model	*R*	*Adjusted R-squared*	*Standard Error*
	0,501	**0,243**	0,886

Table 9 *- Final Linear Regression Model (ANOVA)*

Final Model	*Sum of Squares*	*F*	*Sig.*
Regression	105,514	33,641	**0,000**
Residual	315,213		
Total	420,727		

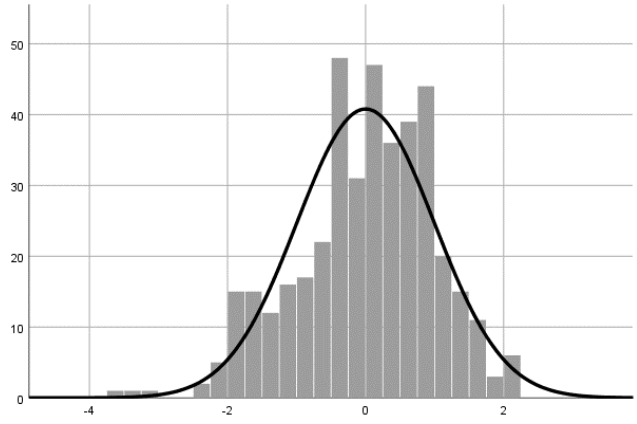

Figure 9 *- Residuals Distribution: Final Linear Regression Model*

The final model's R-squared is 0,243, which indicates that the remaining factors (independent variables) account for 24,3% of the variation in the interest in using retail clinics – independent variable (Table 8). In Table 9, the final model shows an explanatory power, and, in Figure 9, it is shown the distribution of the residuals which is normal, so the model is considered reliable as the last one. Finally, this method tears away the curtain from another relevant and significant variable (Table 10)

Table 10 *- Final Model Coefficients Significance (Method: Backwards)*

Final Model	*β*	*Standard Error*	*t*	*Sig.*
Constant	0,411	0,351	1,171	0,242
Imp_Quick_Call	0,343	0,054	6,298	0,000
Imp_Working_Hours	0,334	0,058	5,557	0,000
Imp_Reputation_Inst	**-0,093**	**0,045**	**-1,166**	**0,039**
Imp_Satisfaction	0,181	0,058	3,096	0,002

Regarding the β_1, when everything else constant (ceteris paribus), if the importance given to the quick call of the service increases in 1 scale-point, the interest of using Retail Clinics is expected to increase, on average, 0,343 scale-points. Therefore, given the positive side of the beta, it is possible to validate H1a.

H3a: When "quick call" is assessed as Important or Very Important, the person is more likely to be interested in using retail clinics → ***Valid***

Regarding the β_2, ceteris paribus, if the importance given to the working period of the service increases in 1 scale-point, the interest of using Retail Clinics is expected to increase, on average, 0,334 scale-points. Therefore, given the positive side of the beta, it is possible to validate H1c.

H3c: When "working hours" is assessed as Important or Very Important, the person is more likely to be interested in using retail clinics. → ***Valid***

Regarding the β_3, ceteris paribus, if the importance given to the reputation of the health institution increases in 1 scale-point, the interest of using Retail Clinics is expected to

decrease, on average, 0,093 scale-points. This result is interesting given the fact that was considered neither in the literature nor the Research Hypotheses as a suspicion.

Regarding the β_4, ceteris paribus, if the importance given to the last service's satisfaction increases in 1 scale-point, the interest of using Retail Clinics is expected to increase, on average, 0,181 scale-points. As the previous variable, this result was not considered.

Considering *Proximity from home/workplace* and *Diversity of services offered*, there is no statistical evidence to validate H1b and H1d, with a confidence level of 95%.

H3b: When "proximity from home/workplace" is assessed as Important or Very Important, the person is more likely to be interested in using retail clinics → ***Not Valid***

H3d: When "diversity of services offered" is assessed as Important or Very Important, the person is less likely to be interested in using retail clinics. → ***Not Valid***

4.2.3 Research Question 3 – What is the target consumer of Retail Clinics?

H4: Demographics characteristics have an impact on the willingness to use retail clinics in Portugal.

In order to check which test to use, it is necessary to understand the variables. As explained in the previous hypothesis, the dependent variable – *interest on Retail Clinics* – is a metric variable. But, on the other hand, the independent variables *Age_group* and *Educational_level* are considered non-metric because both are categorical variables. Hence, it is suspected that ANOVA test would be the best option in these cases because they are categorical variables with more than three independent groups. Nevertheless, to perform this parametric test it is needed to check for normality of the distribution and the homogeneity of variances. However, according to the Central Limit Theorem, it is assumed that the variables comply with normal distribution's assumption.

A one-way ANOVA is conducted to determine if there are differences in Interest in using Retail Clinics between the following six age groups: *18-24*, *25-34*, *35-44*, *45-54*, *55-65*, *65+*.

Table 11 *- One-Way ANOVA for Age_group*

One-Way ANOVA

	Statistic	df	Z	Sig.
Between groups	13,194	5	2,5997	**0,025**
Within groups	407,533	401		
Total	420,727	406		

Variances are homogeneous, as assessed by Levene's test of homogeneity of variances ($p - value = 0{,}517$). Regarding the results, the interest shown in retail clinics is statistically significantly different between different age groups – $F(5, 401) = 2{,}597, p - value =$

$0{,}025 < 0{,}05$ (Table 11). However, the Tukey post hoc analysis does not show the existence of statistically significant pairs of groups.

Despite not existing statistical significance across pairs, one last test will be performed. First, the variable *Age_group* is transformed into a dummy variable – *Young*– and, therefore, it is tested if there is a difference between *Young* (18-44 years old) or *Not Young* (45-65+ years old), in terms of interest in using Retail Clinics, through an Independent T-test.

Table 12 - *Independent t-test for Young*

	t	*df*	*Sig.*	*Mean difference*	*95% CI of the difference*	
					Lower	*Upper*
Interest_rc	3,011	405	**0,003**	0,327	0,113	0,540

Table 13 - *Descriptive Statistics for Dummy Young*

	Mean	*Stand. Dev.*	*N*
Young	3,83	1,004	283
Not Young	3,50	1,016	124

In what concerns the results, the retail clinics are more interesting for the youngest group $(3{,}83 \pm 1{,}004)$ when compared to the oldest one $(3{,}50 \pm 1{,}016)$ (Table 13), with a statistically significant difference of 0,33, $\mathrm{t}(405) = 3{,}011, \mathrm{p-value} = 0{,}003$ (Table 12). This being said,

H4a: Younger people (18 and 45) are more willing to use retail clinics → ***Valid***

Now, it is time to perform the ANOVA test for the variable *Educational_level*, to check if there are differences in the interest level among different educational levels.

Table 14 *- One-Way ANOVA for Education level*

One-Way- ANOVA

	Statistic	*df*	*Z*	*Sig.*
Between groups	8,251	4	2,010	0,092
Within-group	412,476	402		
Total	420,727			

Taking into consideration the Table 14, with a confidence level of 95%, it is possible to state that the mean rank of Interest on Retail Clinics is not statistically significant across educational levels – $F(4, 402) = 2{,}010, p - value = 0{,}092 > 0{,}05$. Consequently,

H4b: People with higher education levels (Bachelor Degree or Master Degree or Ph.D.) are more willing to use retail clinics. → ***Not Valid***

Regarding the fifth hypothesis, the same line of reasoning is applied. As in the previous hypothesis, the independent variable is categorical variable with more than two groups, so it is considered a non-metric variable, and the dependent one is metric since it is a five-point scale. Just as mentioned above, given that the sample has 407 observations, according to Central Limit Theorem, it is assumed that the variable assumes a normal distribution. Thus, a one-way ANOVA is performed to establish if there are differences in retail clinics' interest between the following three groups: *Public, Private*, and *Both*.

Given the fact that the variance equality assumption is violated, as assessed by Levene's Test of Homogeneity of Variance ($p - value = 0{,}000 < 0{,}05$), it is needed to compute a Welch's ANOVA, instead of a one-way ANOVA.

Table 15 *- Robust Tests for Equality of Means*

Robust Tests of Equality of Means

	Statistic	*df1*	*df2*	*Sig.*
Welch	12,388	2	220,948	**0,000**

Table 16 - *Descriptive Statistics*

	Mean	*Stand. Dev.*	*N*
Public	3,21	1,190	94
Private	3,89	0,928	158
Public & Private	3,86	0,898	150

Table 17 *- Games-Howell Multiple Comparisons*

(i)	*(j)*	*Mean Diff (i-j)*	*Std. Error*	*Sig.*	*95% C.I.*	
					Lower	*Upper*
Public	**Private**	-0,680	0,143	**0,000**	-1,08	-0,34
	Pub&Priv	-0,647	0,143	**0,000**	-0,99	-0,31
Private	**Public**	0,680	0,143	**0,000**	0,34	1,02
	Pub&Priv	0,032	0,104	0,948	-0,21	0,28
Pub&Priv	**Public**	0,647	0,143	**0,000**	0,31	0,99
	Private	-0,032	0,104	0,948	-0,28	0,21

Taking into consideration Table 15, the interest showed in retail clinics is statistically significantly different across these groups – $F(2, 220.948) = 12{,}388, p - value = 0{,}00 < 0{,}05$. The interest score increases from the group who uses exclusively public sector (3,21 ± 1,190) to the group who uses both public and private sectors (3,86 ± 0,898), and to the group who uses exclusively private sector (3,89 ± 0,928), in that order (Table 16).

In detail, in Table 17, Games-Howell post hoc analysis reveals, with 95% of confidence level, that there is a significant difference in the level of interest between public users and the other two segments ($p - value = 0{,}00 < 0{,}05$). However, there is no relevant difference between private users and the group who uses both sectors.

H5: The healthcare consumers who use exclusively private settings are more interested in using retail clinics → ***Not Valid***

Chapter V - Conclusions, Limitations & Future Research

The fifth and last chapter starts with the conclusions, which are related to the three research questions presented at the beginning of the dissertation. Finally, the limitations of the study are discussed along with suggestions for future research.

5.1 Conclusions

The retail clinics' concept arose from the need of expanding retailers' business areas to healthcare and wellness services (Deloitte Development LLC, 2015). These clinics are considered an innovative model for simple acute delivery and healthcare prevention (Weinick , Pollack, Fisher, Gillen, & Mehrotra, 2010) that have been successfully implemented across different countries (Berchet & Nader, 2016).

In Portugal, despite OECD's advice of taking measures to reduce costs in the healthcare sector, by transferring care from hospitals to other less costly venues, there are not many alternatives yet.

Considering the success of retail clinics abroad and the lack of published research on the topic, this dissertation aims to assess the feasibility of implementing Retail Clinics in Portugal, by investigating if there is consumer acceptance. This pioneering study pretends to fulfill part of the gap on the literature concerning retail clinics in Portugal and to give a more insightful view of the Portuguese consumers' expectations, by answering the three research questions mentioned in the first chapter of the dissertation.

The author believes that the starting point of the discussion should focus on understanding to what extent the Portuguese consumers are interested in using these clinics if available in the country, leading to the first research question.

According to the sample's results, almost 70% of the respondents are willing to, at least, experiment this service. This finding corroborates the hypothesis, which is not surprising, given the enormous success that this concept has had in other countries.

Although the majority of survey respondents is interested in retail clinics, it is also imperative to study the reasons behind the low level of interest in the remaining respondents. Indeed, for the most part, they seem to be satisfied with the existent healthcare services. This result

contradicts the conclusions from Users' satisfaction study about Portuguese healthcare system, in which about 55% state that the health system needs to be deeply adjusted, namely by increasing the supply of services (Departamento da Qualidade na Saúde, 2015). Furthermore, one may infer that the respondents have still some pre-conceived opinions when it comes to be treated only by nurses, because it was mentioned several times "I prefer to consult a doctor rather than a nurse, in these situations".

In this way, the second hypothesis aimed to check if the view of these sceptical respondents would change when confronted with facts that counterargument the chosen reason. Contrary to what was expected from Kolbert (2017), factual information seems to have a positive effect on the respondents' opinion.

To sum up the first research question, this dissertation shows a possible good chance for this concept to be successful in Portugal. Not only the majority of people seems interested, but even the ones that previously were not, seem willing to change opinion when confronted with additional information. Thus, these findings indicate to the author that a good strategy to implement such a new concept is to educate and inform the population, with the objective of preparing them for this business opportunity.

Then, the second point to be addressed is regarding the most attractive attributes of retail clinics. It was demonstrated that people who value a quick assistance and out-of-hours service the most, show more interest in using this new concept of clinics, which shows a good fit between retail clinics' core values and consumers' preferences. While the importance given to the remaining core values – proximity from home/ workplace and price-competitiveness – did not show to be relevant predicting the interest on retail clinics, other factors – the reputation of the healthcare institution and the satisfaction on the last service – seem to be paramount.

Therefore, results revealed that the high interest in the concept is explained mainly by the importance given, firstly, to a quicker service, then to extended hours and finally to the satisfaction with the service. However, people who give more importance to the reputation of the institution over the previous attributes seem to be less interested in the concept, suggesting to the author that more conservative people – those who are in later stages of the

diffusion model – do not belong to the target, at least, until retail clinics have proved their worth on the market.

Regarding the final research question, the author tried to identify the common traits of retail clinics' target in Portugal. Demographically speaking, it is clear that the younger and adult classes – from 18 until 44 years old – are more eager to use these clinics. This finding is in accordance with the target users both from the United Kingdom and the United States of America (Desborough, Forrest, & Parker, 2011; Mehrotra, Wang, Lave, Adams, & McGlynn, 2008). Moreover, contrary to these countries, in this study, it was not possible to state, explicitly, which was the target socioeconomic group.

Additionally, it is possible to exclude from the potential target, people who exclusively use the public sector. Nonetheless, there is no statistical evidence to claim that there exists a difference between those who use uniquely private healthcare entities and those who are clients of both sectors.

Hence, all things combined, the author affirms that the target consumers of retail clinics in Portugal are characterized by non-conservative people from 18 until 44 years old, who tailor their opinions based on facts, on the efficiency and convenience of the services offered rather than on reputation. In what concerns healthcare habits, these consumers are already accustomed to using private healthcare services, although some also attend public institutions. This leads to the author's belief that the target consumer of retail clinics is not, typically, a loyal patient of one and only one healthcare entity.

Moreover, to better fit the Portuguese reality, it was asked to the interested party its opinion about some specifications of the service offered. An overwhelming majority suggested that they would prefer to access to this type of care both in pharmacies and in the residential area, mirroring features from the English model. Curiously, in March 2017, it was signed a cooperative memorandum between the Order of Nurses and the National Association of Pharmacies, agreeing on having nurses offering care in pharmacies, which makes plausible this suggestion. Furthermore, it makes sense that people prefer such venue, given that the existence of clinics in shopping areas is relatively new, in Portugal.

Regarding services offered, almost 40% of the sample would like to have more supply. Besides the primary care, to increase the interest in these clinics, it is advised that they enlarge their service range, namely by providing medical examinations and clinical analyses. There is also a large part that is interested in dental and nutrition appointments.

Ergo, according to the sample results, the author believes that there is demand for retail clinics in Portugal. Nonetheless, in its first phase, it is recommended to start small by gradually presenting retail clinics incorporated in pharmacies with just primary care services, immunizations and with the clinical analyses due to the risk of implementing a new concept. Then, if successfully accepted by the population, consider enlarging the supply of services again, just as it was done in the United Kingdom and the United States.

Finally, taking into account both the target and the results, it is considered highly valuable to these clinics to invest in a mobile application for the clients to have access to the list of treatments offered, depending on the clinic selected. It would also be advantageous for the patients to, for instance, receive information on the waiting times as well as to previously notify that will need assistance.

5.2 Limitations and Future Research

Even though this thesis provides significant academic insights on retail clinics in Portugal, there are some limitations, and consequently, interpretations and inferences should be carefully taken into consideration.

First of all, given the sample used, which was a non-probabilistic one due to time and budget constraints of the study, it leads to both a non-random and a non-representative sample. Thus, it is not possible to state that the results and interpretations took above reflect the population's opinion about retail clinics.

Then, it is essential to mention the challenges related to the fact that the distribution of the questionnaire was mostly done through social media platforms. In fact, by answering the survey online, it becomes hard to evaluate under what conditions the participants were, which can bias their real answers**.** Furthermore, this study does not contain attention tests to minimize this problem.

In terms of sampling issues, this is not as diverse as it should: there are more females than males; the majority of the respondents is living in Lisbon metropolitan area; there is no relevant expression of the immigrants in the sample**;** there is a low variation in terms of age's distribution, namely, 36% is composed by individuals from 18 until 25 years old, which not corresponds to the major Portuguese age class - 25 to 64 years old (Instituto Nacional de Estatística, 2012)**.**

In addition to the major limitations, it is also relevant to refer that the survey was not built based on already tested literature constructs. Conversely, it was mainly made from the in-depth interviews' responses, which can engender a potential selection bias.

In future studies, it is advised to reproduce this research at a national level with a random and representative sample of the Portuguese population. Only by doing this, it is possible to be completely confident in the interest of the Portuguese consumers in Retail Clinics.

Additionally, it is crucial to understand which price the consumers are willing to pay when using this service. Moreover, the study of the pricing method should also be addressed. Consequently, exploring if it is better to pay for the treatment needed or, like the current model applied in Portuguese hospitals, where the users pay a fixed fee in the emergency room.

Finally, a question remains after this research regarding the viability of retail clinics' implementation regarding costs, which also can be tackled in future studies.

Chapter VI – References

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Chapter VII – Appendices

Appendix 1 – Semi-Structured In-depth Interviews

Q1: When you are facing an urgent medical situation, what do you have into consideration?

There are three characteristics that seem to be crucial in the decision-making process when facing an urgent medical situation. First, it was unanimous that the respondents give tremendous importance to a **quick service**, not only when calling to the screening room but also to the doctor. Then, it seems to be also critical the availability of the service in terms of **working hours**. Finally, the quality of service regarding **service customization** was the second most mentioned, because the respondents appreciate the feeling of not being treated like everyone else.

However, there were other characteristics that were mentioned. The young adults referred, for example, the installations' comfort, the existence of parking areas nearby the health venue, and the preference for units where they were well treated before. When it comes to the remaining adults, they seem to give more importance to the diversity of the services offered because "you never know if you need more specialties or treatments, as well as, they mention the reputation of the institution and their doctors as an important factor. Some of these also mentioned that usually prefer to visit a hospital where they have known people.

After this question, it was presented the concept of retail clinics.

Q2: Would you be interested in using these clinics?

For this question, twelve respondents showed to be interested in using it. Not curiously, eight were young adults and four were composed by older adults. From the sceptical side, two were younger, and six were older.

From those who seem to not be interested, the reasons presented are similar among different ages. It is unquestionable that the major concern is about receiving care from nurses because in their perspective the nurses do not have competencies to treat a patient without the supervision of a doctor. However, there are other concerns that appeared from the interview: the sceptical respondents mentioned to be afraid of being misdiagnosed given the fact these

clinics seem not to be well equipped, as well as also referred that they will not substitute care, because of the reduced offer in terms of service.

The youngest sceptical respondents, when presented with some facts to counterargument their initial concerns, the way they evaluate the concept changed a little. The same did not happen with the remaining respondents, apart from two older adults.

Q3: If you could suggest anything to improve this concept of clinics, what would it be?

In fact, almost half of the interviewees were not able to give any suggestion. However, some pointed out the importance of choosing good locations for these clinics (e.g.: pharmacies and drugstores) as well as the importance of educating the population for this new concept. There were also three that mentioned that would be beneficial to offer a mobile application where it would be possible for the patient to check which treatments the clinics have.

Appendix 2 – Online Survey

Q1: Introduction

First of all, I would like to thank you for participating in my questionnaire. My name is Bárbara Cardoso and I am currently developing my master's thesis at the Catholic Lisbon School of Business and Economics on the feasibility of implementing retail clinics in Portugal. This questionnaire will take approximately 5 minutes to complete.

It is important to note that your collaboration is totally anonymous, confidential and extremely important.

If you have any questions, please do not hesitate to contact me at: barbara.carmocardoso@gmail.com

Q2: Are you Portuguese?

Yes – No

If No

Q3: Do you intend to live in Portugal for the next three years?

Yes – No

Q4: What is your health system? Choose all the options that apply.

ADSE

SAMS

Private Health insurance

National Health service

Other

Q5: Given your previous response, how often do you use each?

	Never	*Rarely*	*Sometimes*	*Often*	*Always*
ADSE					
SAMS					
P.H.I					
NHS					
Other					

Q6: When you need healthcare, in unscheduled/urgent situations, what type of health units do you use? Choose the two options that apply the most.

Health Center

Private Clinic (More than one specialty)

Doctor's office (1 specialty)

Private hospital

Public hospital

Family health unit

Other

Q7: Please rate the importance of the following characteristics when you are deciding which health facility to use, **in unscheduled / urgent situations**.

	Not at all Important	*Slightly Important*	*Moderately Important*	*Important*	*Very Important*
Historical access					
Personalized service					
Quick call					
Comfort of the installations					
Health agreements					
Diversity of services					
Proximity from home/workplace					
Working hours					
Reputation					
Satisfaction of last service					
Price					

Q8: Is there any other characteristic that you consider important / very important when you are deciding which health unit to use, **in an unscheduled / urgent situation**?

Yes – No

Q9: Have you ever heard about retail clinics?

Yes – No

Q10: Retail clinics are a new type of delivery model for **primary healthcare**.
They offer services for the following situations:

- Flu, fever, ear infections, sore throats and aphonia.
- Stomach pains, vomiting and diarrhea.
- Minor burns, fractures and sutures.
- Cuts and lacerations.
- Dressings care.
- Blood pressure tests
- Emergency contraception and advice, among others.

Characteristics:

- Located in **pharmacies**, **shopping areas** and **shopping centers**.
- Open **7 days a week**, in **extended hours**.
- **No appointment** is required.
- **Waiting times** are **reduced**.
- Essentially operated by **nurses**.
- **Transparency** regarding the price and type of care they can and cannot provide.

This concept has already been implemented in seven countries worldwide, including the United States, the United Kingdom, Belgium and the Netherlands.

Q11: How interested you would be in using retail clinics (retail clinics) in Portugal?

	Not at all Interested	*Little interested*	*Neither interested nor disinterested*	*Interested*	*Very Interested*
Interest_rc					

Display this question:
If How interested would you be in using retail clinics in Portugal? – Not at all interested is Selected
If How interested would you be in using retail clinics in Portugal? – Little interested is Selected
If How interested would you be in using retail clinics in Portugal? – Neither interested nor disinterested is Selected

Q12: Why? Choose the options that apply.

"I am satisfied with the existing health services"

"I think the supply of services is extremely low"

"I am afraid of being misdiagnosed"

"I do not feel comfortable receiving this kind of care in a commercial area or shopping centre"

"I do not feel comfortable receiving this kind of care in a pharmacy or parapharmacy"

"I prefer to consult a doctor than to be treated by a nurse"

Other:_____

Display this question:
If Why? – I think the supply of services is extremely low is Selected

Q13: If *retail clinics* offered **specialty appointments, nutrition appointments** or **clinical analyses**, how interested would you be?

	Not at all Interested	*Little interested*	*Neither interested nor disinterested*	*Interested*	*Very Interested*
Interest_rc					

Display this question:
If Why? – I am afraid of being misdiagnosed is Selected

Q14: Knowing that health professionals use internationally approved **diagnostic and therapeutic protocols**, how interested would you be?

	Not at all Interested	*Little interested*	*Neither interested nor disinterested*	*Interested*	*Very Interested*
Interest_rc					

Display this question:
If Why? – I prefer to consult a doctor than to be treated by a nurse is Selected

Q15: There are several international researches that prove that, in primary health care, the **quality of service provided by a physician or nurse is similar**. Once you know this, how interested would you be?

	Not at all Interested	*Little interested*	*Neither interested nor disinterested*	*Interested*	*Very Interested*
Interest_rc					

Display this question:
If How interested would you be in using retail clinics in Portugal? – Interested is Selected
If How interested would you be in using retail clinics in Portugal? – Very interested is Selected

Q16: Regarding the **location**, where would you rather have access to a *retail clinic*? Choose all the options that apply.

Shopping centre

Drugstore

Parapharmacy

Shopping area

Residential area

Other:_____

Display this question:
If How interested would you be in using retail clinics in Portugal? – Interested is Selected
If How interested would you be in using retail clinics in Portugal? – Very interested is Selected

Q17: Regarding the **services provided**, would you rather have more offer?

Yes – No

Display this question:
If Regarding the services provided, would you rather have more offer? – Yes is Selected

Q18: Since you would rather have more offer, what **kind of services** would you like a retail clinic to have? Choose all the options that apply.

Nutrition appointments

Dentist appointments

Aesthetic medicine appointments

Specialty appointments

Medical examinations

Clinical analyses

Others:_____

Display this question:
If How interested would you be in using retail clinics in Portugal? – Interested is Selected
If How interested would you be in using retail clinics in Portugal? – Very interested is Selected
If If retail clinics offered (…), how interested would you be? – Interested is Selected
If If retail clinics offered(…) , how interested would you be? – Very Interested is Selected
If Knowing that health professionals use (…), how interested would you be? – Interested is Selected
If Knowing that health professionals use (…), how interested would you be? – Very interested is Selected
If There are several international researches (…), how interested would you be? – Interested is Selected
If There are several international researches (…), how interested would you be? – Very nterested is Selected

Q19: Would it be beneficial for *retail clinics to* have a **mobile application** where you could access the list of treatments offered and waiting times?

Yes – No

Demographic questions:

Q20: Gender:

Female – Male

Q21: Age ____

Q22: Marital Status:

Single

Married

Divorced

Widowed

Q23: What is your educational level?

High school degree

Bachelor's degree

Master's degree

Ph.D.'s degree

Other:_____

Q24: Employment status:

Employed full-time

Employed part-time

Full-time student

Working student

Unemployed

Retired

Q25: Do you have children?

Yes – No

Q26: Number of members on your household:_____

Q27: Household income

(gross monthly income in euros)

Under 2500€

2500€ - 5000€

5000€-7500€

More than 7500€

I do not know