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The impact of Trust and Self-Efficacy on Medication Adherence

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Master in Management of Services and Technology

Supervisor:

Prof. João Carlos Rosmaninho de Menezes, Prof. Associado,

ISCTE Business School

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BUSINESS
SCHOOL

Department of Marketing, Operations and General Management

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To all of you,

Thank you!

Resumo

A prática farmacêutica tem estado mais orientada no cliente do que no produto, desencadeando um maior interesse pela relação entre o paciente e o farmacêutico.

Portanto, tornou-se necessário compreender como a confiança, autoeficácia e adesão à medicação se relacionam nas interações entre o paciente e o farmacêutico, adotando uma perspetiva de análise social (Teoria Social Cognitiva). Assim sendo, este estudo tenciona reforçar os conhecimentos sobre como a confiança e a autoeficácia influência a adesão à medicação dos pacientes.

Adotou-se uma pesquisa exploratória e qualitativa para entender a perspetivas dos farmacêuticos e das pessoas neste contexto. Foi feita uma distribuição pela população de questionários com questões abertas e algumas entrevistas estruturadas.

Concluiu-se que o comportamento de adesão aos medicamentos dos pacientes é afetado pela confiança que depositam no farmacêutico (quando os medicamentos não são prescritos e quando os farmacêuticos detetam erros na prescrição), mas também pela autoeficácia e expectativa de resultado dos pacientes, sendo que estes são influenciados pela confiança no farmacêutico.

Os farmacêuticos ainda têm um longo caminho a percorrer para influenciar totalmente o comportamento dos pacientes. Intervenções destinadas a aumentar o senso de autoeficácia dos pacientes para a adesão à medicação, bem como a confiança dos pacientes nos farmacêuticos, podem ser eficazes para detetar barreiras e resolver problemas no âmbito da adesão à medicação.

Palavras-chave: Confiança, Autoeficácia, Adesão à medicação, Relação paciente-farmacêutico

Abstract

Pharmacy practice has shifted from one that is product- oriented towards one that is more patient-oriented, leading to an increased interest in pharmacist-patient interaction.

In this way, it became necessary to understand the relationship between trust, self- efficacy and adherence to medication in a long-term patient-pharmacist relationship by adopting a social perspective. Thus, this study aim to provide more understandings about how trust and self-efficacy influence patients' medication adherence behavior.

Moreover, an exploratory and qualitative research will be approached to understand pharmacists and people's view/opinion about patient/ pharmacists trusting-relationship and how people's behavior is influenced when a trusting patient/pharmacists relationship exists. In this sense, a population approach was carried out by distributing questionnaires with open questions and by some structured interviews.

It has been concluded that, patients' medication adherence behavior is affected by the trust they place in a pharmacist, in cases of non-prescribed drugs and in the event of any irregularity in prescribed ones. Plus, patients' self-efficacy beliefs and outcome expectancy also influence their medication adherence behavior and patients' self-efficacy beliefs and outcome expectancy are influenced by their trust in a pharmacist.

Pharmacists still have a way to go before they fully influence patients' behaviors. Interventions designed to enhance patients' sense of self-efficacy for medication adherence, as well as patients' trust in pharmacists, may be effective to detect adherence barriers and to settle non- adherence's issues.

Keywords: Trust, Self-efficacy, Medication adherence, Patient-pharmacist relationship

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CHAPTER 1

Introduction

Health care stakeholders are increasingly interested in the topic of patient medication adherence as the burden of chronic disease continues to escalate (Huston, 2015). Indeed, nowadays, we are facing a worldwide pandemic (Covid 19) in which people's health has been affected and the demand for community pharmacies' assistance has increased. Several authors showed that medication adherence is a critical factor for success for both the health of the costumer and the financial outcomes of the firm, especially in this days, where there is no vaccine or a specific treatment and customers' adherence to the use of masks has been the subject of recurrent debate.

Nowadays, a lot has been said in the media about the health industry and health care providers, namely pharmacists, doctors, nurses. So, people's behavior goes against by what they feel, hear and see, reflecting adherence / non-adherence to medicines, treatments or even the use of the mask.

In this sense, it is important to understand how people's behavior is influenced by the external environment and their cognitions.

Several studies states that patients' self-efficacy and trust in health care providers plays an important role in driving customer adherence behavior, in the health care context, because trust is a valuable factor that enables the creation of interpersonal and institutional relationships (Zheng, Huib, & Yanga, 2017) and self-efficacy is *"people's beliefs about their capabilities to exercise control over events that affect their lives"* (Bandura, 1989).

In this context, an interest grew in developing a thesis with the theme: **The impact of trust and self-efficacy on medication adherence.**

McCullough et al. (2016) demonstrated that is essential for patient adherence that pharmacists and patients build relationships so that pharmacists are better able to educate the patients, in part. They suggested that more research is needed on how pharmacists interact with patients. Once that pharmacists' practices are evolving from product- oriented towards one that is more patient-oriented. McCullough et al. (2016) draws attention to the need for a greater awareness of pharmacists' patients knowledge to increase patients' adherence, through pharmacist-centered efforts. Huston (2015) also suggested that more work is needed about patient attitudes regarding pharmacist adherence services. Also, understandings about how to

gain and improve patients' trust as well patients' beliefs on the true efficacy of the medication adherence, needs further research.

Therefore, to meet the literature needs, this study aim to provide more understandings about how relational factors (trust) and social cognitive factors (self-efficacy) influence patient medication adherence behavior. To approach the above, we based on Albert Bandura's Social Cognitive Theory.

Plus, the following research question will be used to guide our study: **How does patient-pharmacist trust and patient self-efficacy influence patient medication adherence?**

For better clarification of the theme, the following topics will be assessed:

- The perception of customers and pharmacists about pharmacists' care services,
- The importance of trust in pharmacists,
- How trust in pharmacists is managed,
- The relation between trust in pharmacists, trust in pharmacy and trust in a specific pharmacist,
- The effects of trust in a specific pharmacist in patients' self-efficacy and outcome expectancy,
- The effects of patients' self-efficacy and outcome expectancy on medication adherence,
- The effects of trust in a specific pharmacist on medication adherence.

The literature review chapter (Chapter II) addresses the most relevant studies and theories on this theme. A short introduction was made to Albert Bandura's Social Cognitive Theory. Then, the self-efficacy concept is explained regarding its sources and processes. Next, is approached the relationship between several constructs, namely self-efficacy beliefs and patient adherence to medication, proceeded by the explanations about system trust and patient-health care provider relationship. Finally, a conceptual framework supporting hypothesis to be tested, with these constructs will be presented, in order to add a reply contribution to the call in literature on how broad-scope trust is a significant antecedent of narrow-scope trust in different contexts.

Regarding the methodology (Chapter III), an exploratory and qualitative research will be approached to understand pharmacists and people's view/opinion about patient/ pharmacists trusting-relationship and how people's behavior is influenced when a trusting

patient/pharmacists relationship exists. In this sense, a population approach was carried out by distributing questionnaires with open questions and by some structured interviews.

Findings from this study suggest that trust in pharmacists and patients' self-efficacy may influence medication adherence, so, interventions designed to enhance patients' sense of self-efficacy for medication adherence, as well as patients' trust in pharmacists, may be effective to detect adherence barriers and to settle non- adherence's issues.

Practitioners may facilitate patients' self-efficacy beliefs by addressing the concerns patients have regarding medications and encouraging them to take an active role in medical treatment. Also, pharmacists must demonstrate ongoing commitment to building relationships with patients in light of promoting patient trust in pharmacists by providing all necessary education and information related to their prescribed and non-prescribed medication, with consistent patient care services.

This academic dissertation provides empirical support for the predictive power of social cognition on health behavior in pharmacy context. Moreover, this study offers a better understanding about patient trust, how is managed by pharmacists and about patient- pharmacist relationship. Hence, this study suggests a new research model to examine three types of trust factors, trust in pharmacists as professional body; trust in pharmacy as an organization; and trust in a pharmacist as an interrelational trust between patient and a health professional. The results allow us to suggest that the model is consistent with different levels of analysis, namely macro, meso and micro, for the environment constructs (i.e. Trust) and also put forward that narrow-scope trust mediates the effect of broad-scope trust over person and behavior constructs witch is in line with "The Institutional Theory Model" (Grayson, Johnson, & Chen, 2008).

It offers a real perspective about people and pharmacists' view/opinion, that enriches our understanding of consumer behavior and contributes to strengthen pharmacists' knowledge about how patients' trust is created, what importance patients given to pharmacists and how their attitudes are influenced when they have a close relationship with a pharmacist. Therefore, this study helps pharmacists to better understand patients' beliefs, fears and trends.

About the structuring, this dissertation is divided into five chapter. The first one comprises the introductory contextualization of this study. The second chapter focuses mainly in the literature review, where is given comprehensive insights about the intended topic. In the third chapter the methodology is approached, where the research context and design are explained,

as well as the method for data analysis. The analysis of the results is conducted on the fourth chapter and ultimately, the fifth chapter includes conclusion, where practical implications and contribution, will be outlined, limitations defined and suggestions for future research proposed.

CHAPTER 2

Literature Review and Conceptual Framework

2.1 Social Cognitive Theory

> *The capacity to exercise control over the nature and quality of one's life is the essence of humanness. Human agency is characterized by a number of core features that operate through phenomenal and functional consciousness. These include the temporal extension of agency through intentionality and forethought, self-regulation by self-reactive influence, and self-reflectiveness about one's capabilities, quality of functioning, and the meaning and purpose of one's life pursuits. Personal agency operates within a broad network of socio structural influences. In these agentic transactions, people are producers as well as products of social systems.* (Bandura, 2001)

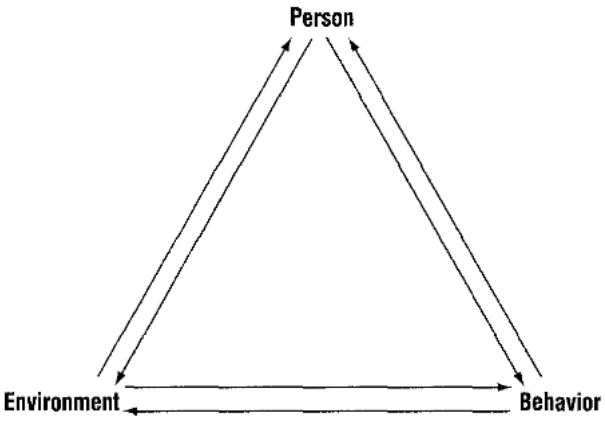

Figure 2.1. Triadic Influences in Social Cognitive Theory (Stajkov & Luthans, 1998)

Badura's Socio Cognitive Theory explains psychosocial functioning in terms of triadic reciprocal causation (Bandura, 1989). In this model, personal factors (cognitive, emotional, and other personal resources), behavioral factors and environmental factors all operate as interacting determinants that influence each other bidirectionally (Snell, White, & Dagger, 2014). Consequently, at different points in time, one determinant may exert a dominant influence over the others, allowing different stimuli to influence human.

Several studies appealed to Social Cognitive Theory in a variety of contexts and settings. It has been used to examine consumer adherence behavior in health care (Carter, Moles, White, & Chen, 2012; Snell, White, & Dagger, 2014; Rottman, Marcum, Thorpe , & Gellad, 2016; Witry, 2018). Social Cognitive Theory has also been explored to explain direct-to-consumer

advertising (DTCA), communication behavior (Young, Lipowski, & Cline, 2005) and the effects of trust in physician (Lee & Lin, 2009). Addicionally, some components of social cognitive theory have also been addressed in pharmacist–patient relationship studies (Worley-Louisa, Schommer, & Finnegan, 2003) and to illness and treatment (Zebracki & Drotar, 2004).

2.2 Self-Efficacy Concept

2.2.1 Self-Efficacy meaning

According with Bandura's Social Cognitive Theory, self-efficacy plays a central role in behavior performance, defined as *"people's beliefs about their capabilities to exercise control over events that affect their lives"* (Bandura, 1989). This means that self-efficacy beliefs have impact on how people behave, namely on how they think, feel and motivate themselves (Bandura, 1986).

2.2.2 Self-Efficacy sources

Bandura (1986) mentioned that people's self-efficacy beliefs can be developed or increased through: mastery experiences, social modeling, improving physical and emotional states and verbal persuasion.

About mastery experience, Bandura (1986) refers that through perseverant effort, people gain experience in overcoming obstacles. Thus, over time, become more able to deal with adversity and face difficulties. In this sense, people start to be convinced about their ability to succeed.

Regarding social modeling, Bandura (1986) says that:

> *Seeing people similar to oneself succeed by sustained effort raises observers' beliefs that they too possess the capabilities master comparable activities to succeed. By the same token, observing others' fail despite high effort lowers observers' judgments of their own efficacy and undermines their efforts*.

However, if the models are not comparable, people's perceived self-efficacy is not much influenced.

In Bandura's Social Cognitive Theory, verbal persuasion is another way by which self-efficacy is developed. Raising people's beliefs in their capabilities lead people to try hard enough to succeed. Consequently, they develop skills and a sense of personal efficacy.

People also rely on their emotional states to judge their capabilities. Bandura, (1986) refers that *"positive mood enhances perceived self-efficacy, despondent mood diminishes it".* In order to create and improve self-efficacy beliefs, people should manage their stress reactions and negative emotions, because such emotional reactions can affect action by altering their behavior (Bandura, 1989).

2.2.3 Self-Efficacy processes

Self-efficacy beliefs affect human functioning though cognitive, motivational, affective and selection processes (Bandura, 1989).

People do not respond automatically and mechanically to external stimuli. They do not have only reactive actions. Through cognitive processes, which are emergent brain activities that exert determinative influence (Bandura, 2001), humans have the capability to process information for *"selecting, constructing, regulating, and evaluating courses of action"* (Bandura, 1986; 1989; 2001).

The way human beings think, experience and feel, enable people to predict events and manage their actions. Motivation is needed to stimuli person's behavior and to provide direction, coherence, and meaning to one's life (Bandura, 2001). When someone is motivated and belief in their capabilities, they are more likely to set challenging personal goals and to define action plans for their achievement, with firmer commitment. Plus, Bandura, (1986;1989) argues that "*who have a high sense of efficacy, visualize success scenarios that provide positive guides and supports for performance. Those who doubt their efficacy, visualize failure scenarios and dwell on the many things that can go wrong".*

People's affective state is also influenced by their perceived self-efficacy. Those who believe they can exercise control over threats and difficult situations, do not allow disturbing thought to appear. Contrary, those who believe they cannot manage and deal with threats experience, develop high level of anxiety and stress. In 1986, *Self-efficacy,* Bandura explains that "*perceived self-efficacy to control thought processes is a key factor in regulating thought produced stress and depression*". People's health functioning also is affected when they cannot

control their level of stress and anxiety. According with Bandura (1986;1989) when it happens, people's immune function *"increases susceptibility to infection, contributes to the development of physical disorders and accelerates the progression of disease".* However, when perceived self-efficacy are strong, it can serve to promote health if people exert behavioral influence over their vitality and quality of health (Bandura, 1989).

Humans does not live isolated from the world; they are partly the product of their environment. Bandura (1986;1989) mentioned that *"beliefs of personal efficacy can shape the course lives take by influencing they types of activities and environments people choose"*. When people have strong perceived self-efficacy, they subject themselves to challenging activities and select situations they judge themselves capable of handling. Otherwise, they avoid them. In this sense, people develop and increase competencies, interests, and social networks, by the choices they make. Therefore, this ends up determining their live courses (Bandura, 1986;1989).

2.3 Self-efficacy and patient adherence to medication

As mentioned previously, self-efficacy plays a central role in behavior performance and has also been used to predict behavior in various health related situations, such as patient adherence to medication/treatment.

Adherence is defined as a person's behavior of taking medication, following a diet or executing life style changes, according with the health care provider's recommendations (Snell et al., 2013; Berglund et al., 2013) and is a critical factor for success for both the health of the costumer and for most health care services.

The production of health requires coproduction between patient and provider and co-operation among health system agents (Gilson, 2003; Snell et al., 2013; Beirão , Patrício , & Fisk , 2017). Plus, collaboration and communication are essential factors in health care. Througt a collaborative actitude between the health care professionals and patients and throught an efficient communication, inter-personal relationships are improved, which facilitate information sharing (Beirão et al., 2017) and customer adherence to health care provider's instructions (Snell et al., 2014). In 2014, *A socio-cognitive approach to customer adherence in health care,* Snell, White and Dagger's qualitative study confirmed that customer perceptions of service quality received during service interactions determine customer's understanding

about what is required of them in service production, which increases efficacious beliefs which in turn, increases the customer's ability to adhere to the weight-loss program.

There are several studies that states that self-efficacy plays an important role in driving customer adherence behavior.

A study performed by Kobaua and DiIorio (2003), described self-efficacy beliefs and outcome expectancies toward medication, seizure and lifestyle management behaviors among adults with epilepsy. Most of the participants reported hight self-efficacy for medication management behaviors than for healthful lifestyle behaviors, wich means that individuals are more likely to adhere to medical treatment that having a healthful lifestyle for the prevention and treatment of epilepsy.

Wolf, et al. (2007) examined the relationship between patient literacy level and self-reported HIV medication adherence, while estimating the mediating roles of treatment knowledge and self-efficacy on this relationship. They conclude that low literacy is related to improper HIV medication regimens, but, when analyzing the self-efficacy mediating role, authors found that medication self-efficacy enables low literacy patients for taking their medications as prescribed. However, in 2018, *Medication adherence beliefs of U.S community pharmacists,* Witry found that forgetting and instructions changing without a new prescription were the most common reasons for medical non-adherence.

Trust in health care providers also have an importante impact in patient adherence. A study made by Lee and Lin (2009) investigate cognitive factors- self-efficacy and outcome expectations- as possible mediators that might link trust with patient adherence. The data confirmed that patients who trusted their physicians were significantly more likely to have stronger self-efficacy and outcome expectations, which in turn were associated with better treatment adherence and clinical outcomes. Also, highly trusting patients were likely to report better health status through enhanced self-efficacy.

Communication efficacy also has an impact on patient adherence. Studies reported that a high satisfaction with the treatment explanation was associated with a higher perception of necessity of treatment and lower concerns about it (Berglund, Lytsy, & Westerling, 2013). Indeed, patients with high perception of necessity of treatment adhere well to medication/ treatment (Berglund et al., 2013). This issue was tested in 2000, by Bultman and Svarstad where physician initial communication style positively influenced patient's knowledge and initial

beliefs about the depression medication. Moreover, adherence not only depends on health care providers' competence to inform, but also on patients beliefs in their capability for seeking medication information (communication efficacy) (Carter et al., 2012). Indeed, physician communication style and client satisfaction are also predictive of better medication adherence, because when patients have positive beliefs about a treatment, they are more likely to see the physician in follow-up (Bultman & Svarstad, 2000).

2.4 System trust and patient- health care provider relationship

2.4.1 Trust meaning

> *Is the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party*. (Mayer, Davis, & Schoorman, 1995)

Trust is an essential relational attribute that enables the creation of personal/ business relationships, so, it can develop in relation to either a human being or an organization (Zheng, Huib, & Yanga, 2017). Trust is fundamental to effective interpersonal relations and community living (Gilson, 2003) .Grayson, Johnson and Chen (2008) define trust as "*a belief that an exchange partner is benevolent and honest"* and suggested that trust can prevent opportunism, increase customer loyalty and service usage, as well as enhance commitment and create more collaborative, cooperative, and interactive exchange relationships.

2.4.2 Narrow-Scope trust and Broad-Scope trust

Two types of trust have been studied over the years, in the health care industry: interpersonal trust and organizational/ institutional trust (Gilson, 2003; Grayson et al., 2008; Campos-Castillo et al., 2016; Zheng et al., 2017).

People develop interpersonal trust through extensive and long-term interactions with an individual (Campos-Castillo et al., 2016) and has cognitive and affective foundations (McAllister, 1995). In contrast, organizational trust refers to a customers' views regarding the functioning and capability of a particular organization (Hall, Fabian , Dugan, & Balkrishnan, 2002). This type of trust take long time to build and can contribute to a firm's competitive advantage, because by enhancing customers' trust beliefs, encourages customers' purchase

intention and helps organizations maintain a long-term relationship with their customers (Zheng et al., 2017).

Grayson, Johnson and Chen (2008) consider interpersonal trust and organizational trust as "*narrow-scope trust*" because *"it affects only the relationship in which it has developed and thus has a relatively limited scope of influence".* Trust in both a person and an organization is fostered by a process of partner-specific information gathering (Grayson et al., 2008). This information comes through direct interaction with the person/ organization or it can be gain through trusted third party (Zheng et al., 2017).

People are influenced not only by how much they trust in a person or organization, but also by how much they trust the broader context in which a relationship might develop. Grayson, Johnson and Chen (2008) use the term "*broad-scope trust*" to this kind of trust and subdivides it into system trust and generalized trust. Shortly, system trust is defined as *"customer's views regarding the regulation of a particular activity system"* and generalized trust as a *"tendency to trust in all members of a particular social system, regardless of sector or context"* (Grayson et al., 2008).

2.4.3 Health care system trust

The health care industry is a proper context to analyze trust because it exists on both organizational and interpersonal levels (Zheng et al., 2017). Indeed, trust plays an essential role in the health system (Ozawa & Sripad, 2013), where the entire arrangement is largely relational and it is an important aspect for treatment relationships (Thom, Hall, & Pawlso, 2004). Plus, Gilson (2003) adds: *"trust is important to health systems because it underpins the co-operation throughout the system that is required for health production"*.

Trust has been linked with a number of important health care objectives and helps explaining one's access to and utilization of medical care, adherence to medications and continuity/ quality of care (Ozawa & Sripad, 2013). Thom, Hall and Pawlso (2004) refer that trust it's "*more salient for measuring the quality of ongoing relationships"*. This argument supports Zhen, Hall, Dugan, Kidd and Levine's (2002) view, which is: *"trust is one indicator of the quality of relationships".*

Trust affects many important attitudes and behaviors (Hall, Dugan, Zheng, & Mishra, 2001). Ozawa and Sripad (2013) arguee that the way people trust in hospitals, insurers and

health care system can affect their use of services and their health care experience. Some authors refer that patient experience is one of the many critical health care outcome because it enables comparison of different healthcare service providers, enables monitoring health care delivery and helps health care organizations to assess their quality standards (Beirão et al., 2017).

Literature suggests a lack of trust may not necessarily be focused on a single provider. According with the "halo effect", negative experience with one provider may lead to lower trust of the health care sector in general (Campos-Castillo et al., 2016). The opposite also happens and Zheng, Huib and Yanga (2017) wrote that trust in hospital influences the degree of trust in a doctor, who is part of that organization.

Also, organizational reputation affects customer's judgments. An organization with a good reputation signals a high-level of trustworthiness (Zheng, Huib, & Yanga, 2017) and when the levels of trust in the health system are high, which is linked with better utilization of care, may result in better health (Ozawa & Sripad, 2013).

2.4.4 Patient/ Health care provider interaction

At the heart of health care delivery is the patient/ provider interaction. The effective delivery of health care requires not only the supply of care but also the acceptance and use of services by the patient (Gilson, 2003).

Trust is widely recognized as being central to the patient-health care providers relationship (Thom et al., 2004). This relationship vary in accordance with the amount of participation and decision-making that the patient has in the relationship (Worley-Louisa, Schommer, & Finnegan, 2003). For example, patient delegate significant responsibility for decision-making to physicians, while the patient assumes a passive role or a more active and participatory role to manage his/her health (Carter et al., 2012; Dwyer, Liu and Rizzo, 2012). The level of patient trust reflects the degree of which they need to monitor the behavior of their physician. A very trusting patient would feel the need for little or no monitoring. In contrast, a distrustful patient would monitor more closely and make some question about the physician's decisions (Dwyer et al., 2012). Also, patient trust in their health care provider express patient's willingness to disclosure and that enables the provider to encourage necessary behavioral changes (Gilson, 2003). Trust has been shown to influence treatment adherence, to not changing physicians and seeking second opinions, to recommend a physician to others, to decrease disputes with the physician and also to increase perceived effectiveness of care (Hall et al., 2001).

Patients can interact and create professional relationships with many different health care providers. The community pharmacy is one of those (Worley-Louisa et al., 2003).

The role of pharmacists has been defined as promoting and supporting the safe, effective, and rational use of medicines (Schindel , et al., 2017) and empirical evidence demonstrates that community pharmacy viability is under threat if the business model continues to rely on dispensing (Hermansyah, Sainsbury, & Krass, 2017). In this way, community pharmacy is adopting a more active role in health care through providing medication management services, such as providing dose administration, simplifying or synchronizing medication regimens, exploring barriers to adherence, or helping patients' medication taking (Huston, 2015). Also, its active role is manifested by provide health promotion and screening, and chronic disease support (Hermansyah et al., 2017). Therefore, pharmacy profession is changing as pharmacy services are shifting toward patient care (Schindel et al., 2017).

The expansion of the role of the pharmacist, as a service provider, may be resulting in changing patients' perceptions of the community pharmacist and it could, in turn, influence patients' expectations and reactions to pharmacists' roles (Sabater-Galindo et al., 2017). Research has shown that patients and pharmacists may have differing views about the pharmacist role (Schindel et al., 2017). So, pharmacists must demonstrate ongoing commitment to building relationships with patients in order to know and meet their expectations by clearly communicating their roles and providing consistent patient care services (Carter et al., 2012).

In 2016, McCullough et al., developed a study about how pharmacists develop pharmacist-patient relationship. The authors refer that relationships occur over time, and it produce familiarity and trust. This trusting relationship manifested by identifying the patient's unmet needs, explaining other medications, and helping the patient navigate the system. Carter, Moles, White and Chen (2012) refers that *"is essential for patient adherence that pharmacists and patients build relationships so that pharmacists are better able to educate the patient in part because of a relationship based on trust."*

Recent studies suggest that pharmacy are making their practice more patient-centered (Huston, 2015; McCullough et al., 2016; Hermansyah et al., 2017; Sabater-Galindo et al., 2017; Schindel et al., 2017; Siddiqua et al., 2017) and so, further studies are needed about pharmacist "knowing" the patient, and related kinds of care taking (McCullough et al., 2016). Plus, more

work is required also in the service adherence domain, Huston (2015) refers thar little is know about current adherence service provision in community pharmacies.

2.5 Conceptual Framework and Test Hypothesis

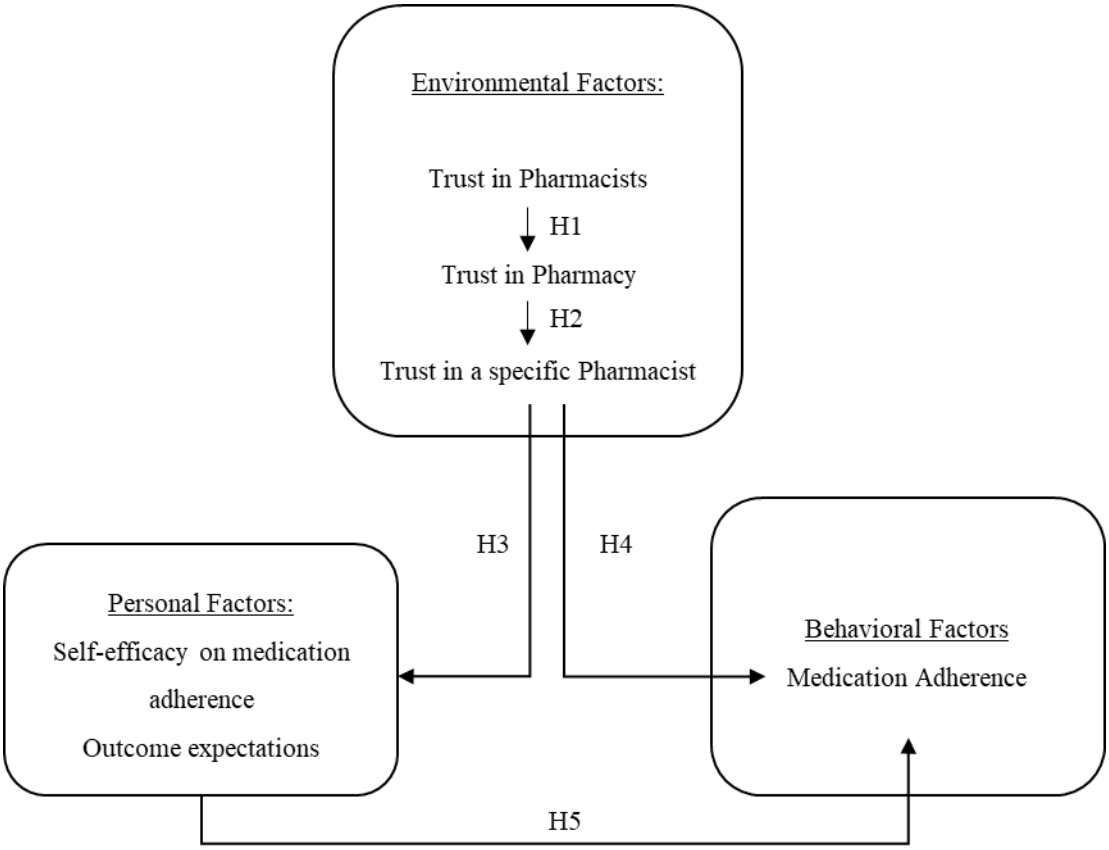

Figure 2.2. Conceptual Framework and Test Hypothesis

According with the literature review, it's evident that trust is a valuable factor that enables the creation of interpersonal and institutional relationships (Zheng et al., 2017).

In this sense, trust was divided into three factors: trust in pharmacists, trust in pharmacy and trust in specific pharmacist. This trust subdivision is due to the fact that there are authors that shows the relationship existence between trust in health care system and in health care provider (Grayson et al., 2008; Campos-Castillo et al., 2016).

Therefore, to understand if these tree trust factors are influenced by each other, the following test hypothesis were created:

H1: Pharmacy trust is influenced by trust in pharmacists.

H2: Trust in specific pharmacist is influenced by pharmacy trust.

As mentioned in the literature review, people develop interpersonal trust through extensive and long-term interactions with an individual (Campos-Castillo et al., 2016) and has cognitive and affective foundations (McAllister, 1995).

According with Bandura's Social Cognitive Theory, self-efficacy and outcome expectations are cognitive factors inheret to behavior performance. It was found that several studies state that self-efficacy and outcome expectancy plays an important role in driving customer adherence behavior in the health care context.

Thus, to validate the influence of cognitive factors on behavior, the next test hypothesis was developed:

H5: Self-efficacy and outcome expectancy have a positive effect on medication adherence.

Trust affects many important attitudes and behaviors (Hall et al., 2001). Gilson (2003) referred that patient trust in their health care provider express patient's willingness to disclosure and that enables the provider to encourage necessary behavioral changes. Indeed, the literature review showed that organizational and environmental factors, regarding trust, has influence over people's personal and behavioral factors.

Based on Bandura's Social Cognitive Theory, environmental factors, personal factors and behavioral factors are influenced by each other mutually. In this way, to validate this relationship, test hypothesis H3 and H4 were made:

H3: Trust in a specific pharmacist have a positive effect on self-efficacy and outcome expectancy.

H4: Trust in a specific pharmacist have a positive effect on medication adherence.

CHAPTER 3

Methodology

3.1 Type of research

On this academic project, an exploratory and qualitative research will be approached for a better understanding of how patient-pharmacist trust and patient perceived self-efficacy influence patient medication adherence.

According with Sandelowski (2000), *"the qualitative descriptive study is the method of choice when straight descriptions of phenomena are desired",* because "*qualitative research attempts to understand the world (or the part of it we are interested in) from the perspective of the participants."* (Green & Thorogood, 2018)

For Green and Thorogood (2018) qualitative research is explained by the type of data that is generated. The data are usually in the form of words rather that numbers. Text data might be in verbal, print, or electronic form (Hsieh & Shannon, 2005) and can be obtained from narrative responses, open-ended survey questions, interviews, focus groups and observations (Graneheim & Lundman, 2004; Hsieh & Shannon, 2005; Green & Thorogood, 2018). Also, qualitative research questions tend to be about the "what", "how" or "why" of phenomenon in order to understand phenomena, not to quantify them (Green & Thorogood, 2018).

This type of research can be used in exploratory work driving to quantitative research. Equally, it can follow quantitative research with the aim of adding "deph" to findings from quantitative studies, or exploring the meaning of quantitative findings (Green & Thorogood, 2018).

3.2 Participants

A total of 27 individuals participated in this study (six professional pharmacists and twenty-one customers).

About customers, their age varies from 38 to 68 years. Also, 16 individuals are female, 5 are male. Plus, two of them are from Almada, four from Évora, ten from Sesimbra, three from Lisboa and two from Torres Vedras.

Regarding the pharmacists, they have different years in practice and distinct practice locations: Setúbal, Lisboa, Castelo Branco. The six professional pharmacists also have different job positions.

3.3 Data collection

> *What people say is a major source of qualitative data, whether what they say is obtained verbally through an interview or in written form through document analysis or survey responses.* (Patton, 2015)

Based on qualitative methods literature, qualitative findings data are based on in-depth, open-ended interviews; direct observations and written communications, as open-ended written responses to questionnaires (Sandelowski, 2000; Graneheim & Lundman, 2004; Patton, 2015; Green & Thorogood, 2018).

This present study intends to understand pharmacists and people's view/opinion about patient/ pharmacists trusting-relationship and how people's behavior is influenced when a trusting patient/pharmacists relationship exists. In this sense, a population approach was carried out by distributing questionnaires with open questions (see Annex A) and by some structured interviews.

When starting to gather data from pharmacists and from their customers, the initial intention was to adopt a semi-structured interview method, which consist of several key questions that help to define the areas to be explored and also allows to diverge in order to pursue an idea or response in more detail (Gill, Stewart, Treasure, & Chadwick, 2008). However, due to the pandemic Covid-19, the study faced some complications. Pharmacists were overworked and had no time to be interviewed and customers were always in a hurry, with vague and synthetic responses.

The starting point to resolve this issue was asking friendly people if they knew someone who is working in pharmacies, with superior responsibilities and/or many years of experience and in case they knew, if they could provide their e-mails. In this case, a questionnaire with open-ended questions was created and were sent, by e-mail, to the arranged pharmacists.

Also, those questionnaires were sent to the author's friends and answered by one of their parents and/ or one of their grandparents. The aim of this requirement was to obtain more specific answers, based on many years of experience.

Plus, some structured interview was adopted by the author, that is, essentially, verbally administered questionnaire, in which the same open-ended questions were asked (Gill et al., 2008). The answers were noted in paper and occurred in Almada.

This process of collecting data took two weeks and all the questions/answers were performed in Portuguese language.

The questionnaire is divided in three phases. The phase one aim to gather information about people's and pharmacies' perception of pharmacy's role. Phase two consists of three questions that seek to extract opinions about trust in pharmacy in general, in pharmacists and in a specific pharmacist for a better understanding of the patient/ pharmacist's trusting relationship. Phase three addresses questions about trust, self-efficacy and medication adherence with the goal to get more knowledge about how people's behavior is influenced. Also, only socio-demographics factors were asked in order to safeguard people's identity. Pharmacists were asked about their gender, practice location, years in practice and job position, and people were asked about their gender, age and residence area.

Finally, after receiving the completed questionnaires with direct quotations from people (Patton, 2015) about their views, beliefs and experiences on the project theme (Gill et al., 2008), an Excel document was made with all the answers, to facilitate further analysis.

3.4 Method of data analysis

The data analysis starts with the preparation of raw data file, which mean that a single Excel file was made where all the answers were grouped by question. Once the file has been prepared, the collected data was read in detail to get familiar with the content. While reading a selected text, the researcher progressively highlighted all the relevant content that appear to capture key thoughts or concepts. Then, the highlighted data was grouped by preconceived topic from the respective question. Next, the researcher approached the text by making a new sheet, with notes of her first impressions, thoughts and initial analysis.

Through this process, it was possible to increase the understanding of study material, providing support evidence for the project conceptual framework.

CHAPTER 4

Data Analysis and Results

4.1 Sample analysis

As already has been mentioned in the section 3.3, the questionnaires were released by personal e-mail and the structured interviews occurred in-person. The data collection took place in September 2020 and a total of 27 individuals answered to open-ended survey questions (see Annex A) and interviews.

The sample is composed by 6 professional pharmacists and 21 customers.

A summary of the pharmacist's characteristics is presented in Table 4.1. Most of the respondents were female (83,33%) and 50% of the participants are pharmacy technicians. Also, de majority of the respondents have until 10 years of practice (66,67%). About the practice location, the data came from Castelo Branco, Lisbon and Setúbal with equal relative frequency.

Table 4.1. Pharmacists' characteristics (n= 6)

	Frequency	Percentage
Gender		
Male	1	16,67%
Female	5	83,33%
Practice location		
Setúbal	2	33,33%
Lisboa	2	33,33%
Castelo Branco	2	33,33%
Years in practice		
≤ 10	4	66,67%
11-20	1	16,67%
21-30	1	16,67%
Job position		
Pharmacy technician	3	50,00%
Associate director	2	33,33%
Technical director	1	16,67%

About customers' socio-demographic aspects, their age varies from 38 to 68 years old. The following age group, between 46 and 55 year is the one with the highest relative frequency (42,86%), followed by the group between 56 and 65 years (28,57%). Regarding the gender, most of the respondents are female (76,19%). Also, the most frequent residence areas are Sesimbra (46,70%) and Évora (19,04%). Customers' characteristics are presented in Table 4.2.

Table 4.2. Customers' socio- demographic characteristics (n=21)

	Frequency	Percentage
Gender		
Male	5	23,81%
Female	16	76,19%
Age, years		
35-45	5	23,81%
46- 55	9	42,86%
56-65	6	28,57%
≥66	1	4,76%
Residence area		
Almada	2	9,52%
Évora	4	19,05%
Lisboa	3	14,29%
Sesimbra	10	47,62%
Torres vedras	2	9,52%

4.2 Results

4.2.1 Analysis of pharmacy practice activities

In an introductory phase, participants were asked about what kind of services were provided in pharmacies.

Pharmacists referred various types of services, such as: measurement of blood parameters (cholesterol, triglycerides and glucose test), pregnancy test, arterial pressure evaluation, individualized medication preparation, nutrition consulting, administration of injectables, weight, height and capillary evaluation. Also, a drug delivery program (PEMProx) was

mentioned allowing chronically ill patients to choose the pharmacy where they intend to receive prescription drugs exclusively from the hospital.

Customers also perceive that, generally, the service provided by pharmacies is based on storing and distributing prescription and non-prescription drugs, including providing advices and information about medicines and others related to health and well-being. Participants reported that pharmacies provide "*health and wellness services*", like "*sale of medicines, basic symptom identification services and screening*". Plus, a respondent shared that pharmacies "*measure blood pressure as well as diabetes*".

4.2.2 Analysis of trust in pharmacists

To understand the importance of trust in pharmacists, all the participants answered to the following question: Do you think it is important customers trust in pharmacists in general? Why?

In a sample of pharmacists, 100% of the participants answered "yes", giving various reasons. First, because they have the technical knowledge to give the best advice on medicine/ treatments. Secondly, because trust in the pharmacist not only helps with customer loyalty but also helps with adherence to therapy. Third, because pharmacists are the patient's most direct contact with the health services. One participant mentioned that is important to trust in pharmacists to "*trust in their own medications, thus allowing better adherence to therapy*". Also, a pharmacist deepened this issue saying:

> *"It is essential that patient trust in pharmacist, despite the fact that it is increasingly a banal area, the patient has to rely on advices provided by the pharmacist because can always be prescription errors, poorly calculated dosages or even errors in explaining the dose, and so, it is up to the pharmacist to provide the appropriate resolution directed to the patient. Within the community pharmacy the patient who goes to the pharmacy has to get out knowing 3 important things: the dosage of the medication; how it is taken and the duration of treatment. Finally, this is where the patient's trust must be retained."*

In the sample of customers, the majority also agreed that is important to trust in pharmacists. Some answers focus on pharmacists' academic studies saying that it is important to trust pharmacists because:

"They have the necessary training and knowledge by having spent years studying effects, symptoms and the type of drugs that exist",

"During the years they studied, they acquired deep knowledge about the world of drugs",

"They are more involved on medication issues",

"If they took a course, they will not deceive us".

Other individuals think it is important because consider pharmacists as the first contact with health and often are the link between the patient and the doctor. Also, because "*they can replace the doctor and help solve health problems that are not very serious*". Certain participants mentioned that is essential to trust pharmacists because "*there are recipes with delicate prescriptions that require professional secrecy, and a pharmacist is almost a confidant of patients' problems".* One of the inquiries shared that "*is important because my pharmacist already knows all my problems and it is easier when I need help with some medication*". Indeed, some participants reported that when they trust in pharmacists, they feel free to clarify any doubts they may have because they feel that pharmacists are taking care and concerned about patient's health and well-being.

4.2.3 Analysis of trust management

Participants were asked about the most important aspects for confidence building in pharmacists, pharmacy and a in a specific pharmacist.

From the point of view of pharmacists, "*the professionalism of each one is fundamental to the credibility of pharmacists and pharmacies*".

In general terms, inquiries stated that confidence "*is created over time and with a good relationship between pharmacists and the customers*", specifying that trust is managed by " *providing answers to the questions of each patient, in a direct and not generalist way in order to meet their specific needs and solve their health problems*" with good service care: showing empathy, security (confidence in providing care), sympathy and understanding. One of the respondents mentioned that: "*It is extremely essential to establish a empathy relationship with the user. The verbal and non-verbal communication must be combined with the technical-scientific knowledge of the pharmacists*".

To put it succinctly, a participant stated that the title "*Dr*", "*Drª*" and the seniority in the pharmacy (the more pharmacist is known, higher is the confidence) trigger trust in pharmacists. Plus, the seniority of the pharmacy and it's employees are important aspect to create trust in a specific pharmacy. Finally, the confidence in a specific pharmacist is established on friendliness, empathy and on patient / pharmacist relationship (the closer it is, the more trust).

From the point of view of customers, trust in pharmacists are related with their role:

"Pharmacists have a broader knowledge in terms of the various areas of health and well-being, because the range of products and services sold in pharmacies are increasing and diversifying. Nowadays it goes far beyond of medication distribution (sale of insurance, nutrition consultations, range of wellness products or cosmetics). Thus, it is essential for pharmacists to master very well the various services that are provided in the pharmacies to ensure confidence in pharmacies and its professionals".

To explain how trust in a pharmacy is created, some customers pointed out that if the expected results are achieved, customers rely on pharmacist and on pharmacy, while others revealed that it depends on customers' trust on its pharmacists:

"If there is trust in the pharmacist, no other pharmacies are sought, except when on-duty pharmacy is a need";

"If the patient finds himself well assisted and advised by the pharmacist, he will end up returning to the same pharmacy";

"I have my pharmacy of choice, as well as the professionals I have known for many years".

For customers, trusting a specific pharmacist is related to his ability to communicate ("*ease in explaining the effects of drugs and their benefits*") and to solve unexpected situations ("*trusting the patient who forgot a prescription and urgently needs a medication , sells that medicine to you and awaits a prescription* "), and to their technical knowledge. Participants also mentioned that friendliness, transparency, availability and attention are important factors in building trust.

Trust for a pharmacist is managed over time, with affection and through close customer service. A customer shared that:

"*For me, my pharmacist is also a confidant, whom I trust to deal with extremely sensitive matters. Subjects that I never spoke with my family doctor because it changes very often. The complicity ends up passing to the pharmacist who careful listen my particular issues*".

While other mentioned that "*this trust existed decades ago because there was proximity between people. Today we enter in pharmacy A, B, C, etc., and we never have a close relationship with the pharmacist. Signs of the times ...*".

4.2.4 Analysis of trust relationship

Questionnaire participants were asked if they thought that trust in pharmacists triggers trust in pharmacy and, consequently, trust in specific pharmacist.

From the sample of pharmacists, the majority argued that people automatically go to pharmacies, because they believe in the pharmacists' role ("*from the moment they see us in uniform, they actively listen our advices, more than the neighbor's - so we hope - knowing that the pharmacy institution protects them*").When a customer always goes to the same pharmacy, he creates a loyalty relationship with the pharmacy and, subsequently, a relationship of trust with a specific pharmacist can be created. However, for a respondent, customers may prefer a specific pharmacist and, consequently, a pharmacy. Therefore, in his opinion, trust starts with a specific pharmacist, triggering trust by the pharmacy.

Participants also mentioned that there are people who trust in all pharmacists and there are others who only trust a specific pharmacist. Also, exist people who trust in pharmacists in general and in pharmacies, but cannot empathize with a specific pharmacist for several reasons. One participant said, "*if at any point in the past the advices of the pharmacist has not resulted, trust is not establishe*".

The general opinion, reported by customers, is that these three types of trust are related. Some think that the basis of trust comes from the pharmacist in particular. They shared: "*Trust in the pharmacy and pharmacists, in general, depends to a large extent on the type of relationship that exist with the pharmacist in particular*", "*if we trust the pharmacist who assist us, it is obvious that we go to the same pharmacy and the opposite also applies*". Others believe that the basis of the trust comes from the pharmacists in general, because "*they are the pharmacy's face, if they are trusting, customers will trust in pharmacy and in a particular pharmacist*". In addition, a respondent wrote that trust in the pharmacy depends as much on

trust in pharmacists as on specific pharmacists. Quoting his explanations: "*All the "advertising" and exposure of pharmacies and pharmacists in the media, like on TV news, can increase/decrease the confidence in pharmacists in general and consequently in pharmacies*".

4.2.5 Influence analysis regarding patient-pharmacist trust, patient self-efficacy and outcome expectancy and patient medication adherence

According to the opinion of pharmacists, medication adherence is one of the pillars of pharmaceutical activity and professionals have the task of clarifying and helping patients in their decision-making, in favor of medication adherence. Pharmacists referred:

> "*Many patients arrive at the pharmacy "unmotivated" by the amount of medication they have to take. However, when medications are prescribed by a doctor, patients comply with the medication. Trust in a pharmacist is important when dealing with cases in which a doctor has not yet seen them, or when the symptoms experienced persist. In these cases, trust in our advices is decisive in adhering to medication*".

> "*Often, they do not understand the purpose of a particular medicine, how it works or what they can feel. Then, in that critical moment of choosing or not the medication, the pharmacist has a predominant word*".

Also, a participant justified that "*an clarified customer will, undoubtedly, adhere better to the medication because they are not afraid to take a certain medication*", "*it is up to the pharmacist to explain how to take the medication*".

In general, customers agree that patient trust in pharmacists influence patient's beliefs about their capability to adhere to medical treatment.

Respondents explained that pharmacists help to understand how medication should be administered and if they believe in pharmacist, they get more "encouraged" to take the medication.

One participant wrote that: "*Support can be essential, especially for those who have more difficulties in reading and interpreting indications*". Additionally, respondents stated that "*confident pharmacist's explanations, makes patients feel secure to follow the pharmacists' indications*" and "*if the patient- pharmacist relationship is trustworthy, it becomes easier to achieve the expected medicine outcome*".

4.2.6 Influence analysis of patient-pharmacist trust on patient medication adherence

It was perceived that for pharmacists, confidence is important when medicines are not prescribed, because when it is, the patient already has the confidence he needs on medication adherence. However, they emphasize that, in general, trust in the pharmacist is always a factor that influences the behavior of taking the medication, because "*the patient adheres better to a therapeutic regimen if it is well explained and if he has some guarantees regarding the treatment*".

From customers' point of view, the influence of patient trust in pharmacist on patient medication adherence, depends on whether the medication was prescribed or not by a doctor.

When medication is prescribed, the following explanations were obtained:

"*If the medicine needs a prescription, a doctor is consulted before going to the pharmacy. In this case, the pharmacist acts more like a salesperson and the trust placed in the pharmacist is, somehow, irrelevant";*

"When we are talking about medications prescribed by the doctor, it is clear that the pharmacist does not influence the taking of the medication".

"Most people, when decide to go to the doctor, they know right away that a medication or any treatment will be prescribed. So, when they go to the pharmacy it will be to raise that medication".

Participants justified the influence of patient- pharmacist trust on patient medication adherence, in cases without prescribed medication, with the following relevant arguments:

"In non-prescribed cases, trust influences the patient's taking of medication either because there is already a relationship of trust resulting from other previous situations, or because the pharmacist was able to explain and advise the patient";

"I only think that it happens if the medication is prescribed by the pharmacist. It is his job to sell products to make profit. I am not saying that the pharmacist indicates the taking of unnecessary drugs, but if he can advise between two products, I think he will advise the most profitable on for the company";

"Pharmacists must be aware that the patient may not know how to proceed with the medication, and if the patient trusts the pharmacist, his work is facilitated in convincing the patient of the effects of a proper medication and the consequences of a improper medication, influencing patient's behavior";

"Yes, many times a pharmacist who knows the patient's illnesses, becomes in addition to a friend, a second doctor who is believed, without a doubt";

"I'll share something that happened to me… Once I went to the doctor with complaints of urinary infection. Then, I went to the pharmacy to buy the prescribed medicines and a pharmacist told me that the doctor was wrong because that medication was for depression. It was not the only time that the doctor was cheated on medication. So, of course I trust in pharmacist's opinion".

Although these contextual differences, the majority of the participants think that patient trust in pharmacist influences their medication adherence behavior**.**

CHAPTER 5

Conclusion

5.1 Discussion

The main objective of this dissertation was to test the theory defended by Bandura, the Social Cognitive Theory, in the pharmaceutical sector, considering "trust" as environmental variable, which was subdivided into: trust in pharmacists, trust in pharmacy and trust in specific pharmacist. As far as we know from analyzing several documents related to this topic, we are led to conclude that this approach, in the context of pharmacy, is poorly developed.

Therefore, with the progress of the investigation, several possibilities were approached, the one that seemed most interesting and useful for this market was to understand how relational factors (trust in the pharmacists, in the pharmacy and in a specific pharmacist) and social cognitive factors (self-efficacy) influence patients in performing the bahavior of medication adherence.

In this study it was used a qualitative methodology in order to describe and understand what is occuring within the patient-pharmacists relationship, taking into account the confidence and self-efficacy variables in medication adherence.

According with (Huston, 2015; Hermansyah et al., 2017; Sabater-Galindo et al., 2017), pharmacies practice activities are changing, shifting toward patient care in contrast to a focus on drug distribution. Our findings support the idea that pharmacies not only sell medicines, but also provide medication management services, such as providing dose administration or helping patients' medication taking.

From the past decades that trust has been linked with a number of important health care objectives (Ozawa & Sripad, 2013). Results showed that trust in pharmacists is important because not only helps with customer loyalty but also helps with adherence to therapy. Also, because pharmacists are the first contact with health and links patient with the doctor. Plus, with a trusty relationship, patient feel free to clarify their doubts or concerns (Gilson, 2003) and when pharmacists know their patients, it is easier to help patients with their medications .

Findings from trust management demonstrate that trust is created over time and with a good relationship between customers and pharmacists, supporting McCullough, et al.´s (2016) study.

Most patients reported that trust depends on pharmacists' verbal and non-verbal communication capabilities, pharmacists' technical- scientific knowledge and on outcome expectations. The following most important aspects were also highlighted: empathy, security (confidence in providing care), sympathy and understanding.

Analyzing the data from the two samples (pharmacists and customers), the trust placed in the pharmacists influences the trust in pharmacy and, consequently, this influences the trust in a specific pharmacist. However, it does not happen linearly. Some participants agree that there are people who trust in all pharmacists and there are others who only trust a specific pharmacist. Also, they mentioned that exist people who trust in pharmacists in general and in pharmacies but cannot empathize with a specific pharmacist. Therefore, our findings support our test hypnotizes H1 and H2, which are: **pharmacy trust is influenced by trust in pharmacists and trust in specific pharmacist is influenced by pharmacy trust**. Additionally, results demonstrated that these three types of trust are related and trust in one, influence the trust in the others, but, it was not possible to conclude where does trust start, whether it is in the pharmacists, in the pharmacy or in a specific pharmaceutical.

According to Portuguese law, medications are prescribed by a doctor. But, when patients are well informed about their medication, they adhere better to medical treatment because they are timorous to take the medication. Also, when customers have interpretation and reading difficulties, their capability to adhere to medical treatment is undermined and this is where pharmacists' support is essential. On these bases, it has been possible to conclude that in situations where the patients have the perception that they must take the medication to reach a health outcome, they don't question whether or not to take the medication, even if they need help. In this way, the fact that patients are aware about the necessity of medication taking, and if they feel that are well informed and helped, makes them adhere to medication. With these findings, we conclude also that **self-efficacy and outcome expectancy have a positive effect on medication adherence** (H5).

From the data analysis, we found that patients get more "encouraged" and feel secure in taking the medication when pharmacists provide confident explanations about how medicals should be administrated. Furthermore, when patients trust in pharmacist's suggestions and explanations, they believe that they will achieve the expected medicine outcome. Based on this evidences, hypothesis H3 is confirmed: **Trust in a specific pharmacist have a positive effect on self-efficacy and outcome expectancy**.

When analyzing the influence that the trust placed in a pharmacist has on medication adherence, we found that this influence depends on whether the medication was prescribed or not.

In cases where there is no medication prescription, patients' trust is a specific pharmacist influence their medication adherence behavior. We can conclude that in this context, the relationship of trust between the patient and the pharmacist is the decisive factor in patients' adherence to medicines, because a patient will only buy a medicine and follow the pharmacist's instructions if he believes and trusts on pharmacist's recommendations and explanations.

On the other hand, when medication is prescribed, in general, patients' medication adherence behavior is not influenced by their trust in a pharmacist. Finding demonstrate that in these cases customers see pharmacists as salespersons. Yet, it was possible to conclude that pharmacists' opinion is not irrelevant when raising the medication, because when a pharmacist detects some medication prescription flaws, customers' medication adherence behavior can be influenced.

Therefore, **trust in a specific pharmacist have a positive effect on medication adherence** (H4) **in cases of non-prescribed medications and when is detected some medication prescription flaws.**

In conclusion, patients' medication adherence behavior is affected by the trust they place in a pharmacist, in cases of non-prescribed drugs and in the event of any irregularity in prescribed ones, because patients will only adhere to a medicine and follow the pharmacist' instructions, if they believe and trust on pharmacist's recommendations and explanations. Furthermore, patients' self-efficacy beliefs, and outcome expectancy also influence their medication adherence behavior. They must be aware about the necessity of medication taking to reach the desired health outcome, also, they must feel that they are well informed and helped. But patients' self-efficacy beliefs and outcome expectancy are influenced by their trust in a pharmacists.

In view of the above, the research question (how does patient-pharmacist trust and patient self-efficacy influence patient medication adherence?) was answered.

5.2 Practical Implications and Contributions

The findings from this study suggest that trust in pharmacists and patients' self-efficacy may influence medication adherence. For this reason, interventions designed to enhance patients' sense of self-efficacy for medication adherence, as well as patients' trust in pharmacists, may be effective to detect adherence barriers and to settle non- adherence's issues.

Practitioners may facilitate patients' self-efficacy beliefs by addressing the concerns patients have regarding medications and encouraging them to take an active role in medical treatment.

Pharmacists still have a way to go before they fully influence patients' behaviors. To improve patient trust in pharmacists, patients need to develop positive perceptions about pharmacists' technical competence and communications skills. This can be achieved by regular e-learning courses to update pharmacist's technical knowledge, and by mystery patient to check and evaluate pharmacies' care and customer services.

Also, pharmacists must demonstrate ongoing commitment to building relationships with patients, in light of promoting patient trust in pharmacists, by providing all necessary education and information related to their prescribed and non-prescribed medication, with consistent patient care services.

This academic dissertation provides empirical support for the predictive power of social cognition on health behavior. Moreover, this study offers a better understanding about patient trust, how is managed by pharmacists and about patient- pharmacist relationship. It offers a real perspective about people and pharmacists' view/opinion, that enriches our understanding of consumer behavior and contributes to strengthen pharmacists' knowledge about how patients' trust is created, what importance patients given to pharmacists and how their attitudes are influenced when they have a close relationship with a pharmacist. Therefore, this study helps pharmacists to better understand patients' beliefs, fears and trends.

5.3 Limitations and Future Research

This study presents some limitations.

The first limitation is related with the fact that the study was carried out in a short period of time, and it was not possible to go further. The second limitation is due to the fact that it was

not possible to personally interview the participants in order to observe their reactions and understand, in detail, some opinions. The third limitation is related to the questionnaire. It was developed and launched in a short period of time. It should have been launched for a longer time, in order to get a larger sample.

Considering the limitations, researchers can deepen their studies on how does patient-pharmacist trust and patient self-efficacy influence patient medication adherence under different conditions, for a longer period of time and in other location, aiming to get a larger sample of observations and respondents, a correct target and therefore more accurate results. For example, researchers can try to understand, in a more in-depth way, where trust begins, whether it is in the pharmacist, in the pharmacy or in pharmacists in general, as well as understanding how trust in pharmacist is managed in prescribed and non- prescribed medication situations.

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Attachments

Annex A. Pharmacists and Customers' Questionnaire

Introduction

Theme: The impact of trust and self-efficacy on medication adherence

This study is part of the master's thesis in Management of Services and Technology, from ISCTE-IUL. All responses are anonymous and confidential. The expected time for answer the questions is approximately 10 minutes.

Thank you in advance for your cooperation!

If you have any questions, send an email to lumi0711@gmail.com.

Thank you,

Luminita Zaharciuc

Filled by pharmacists	**Filled by customers**
Gender:	Gender:
Practice location:	Age:
Years in practice:	Residence area:
Job position:	

Questions for Pharmacists/ Customers:

1. What kind of services is provided by pharmacies?

2. Do you think it is important for customers to trust in pharmacists in general? Why?

3. How is that trust managed? In other words, what are the most important aspects for trust building in pharmacists in general, in a pharmacy and in a specific pharmacist?

4. In your opinion, does trust in pharmacists, in general, trigger trust in pharmacy and, consequently, in a specific pharmacist? Why?

5. Assuming the doctor has prescribed a medication, but the patient is reticent and has doubts about the medication. Do you feel that pharmacists can help to clarify customer's doubts, making them aware of the effects of a proper medication and the consequences improper one, for facilitating their medication adherence?

6. Does this support from pharmacists influences the patients' ability to take the medication and achieve the desired health outcomes, thus helping with medication adherence? Explain briefly.

7. In your opinion, does trust in a pharmacist influence customers' medication-taking behavior? In other words, the fact that customer trusts a pharmacist, believing in his recommendations, can influence customer's medication- taking behavior? Explain briefly.