

Insurance activity: the quality of service perceived by health plan/insurance customers

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Master in Management

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ABSTRACT

In the era of intensive globalization, the growing number of options available and the increasing awareness of customers leads to a continuous increase in their quality service demands. Therefore, one of the biggest challenges companies faces today is to differentiate their services through quality improvement. The present study aims to identify the dimensions underlying the formation of service quality perceptions in the Portuguese health insurance sector and assess their relationships with satisfaction and loyalty. The primary data has been collected from a non-probabilistic sample of 128 Portuguese citizens over 18 years of age and subscribers to at least one health plan or insurance. Service quality was measured using the SERVPERF methodology (Cronin et al., 1992) and a 26-item scale, structured according to the SERVQUAL five dimensions (Parasuraman et al., 1985), was applied. Principal Component Analysis led to the identification of a four-dimensional hierarchal structure: “Reliability & Responsiveness”, “Assurance & Empathy”, “Tangibles” and “Convenience”. Based on the relevance of each of these factors, the health insurance providers can propose appropriate action plans based on the most crucial dimensions in shaping customer service quality perceptions. Correlational analysis indicated that the perceived quality of service, in all its dimensions, significantly relates to both satisfaction and loyalty, the latter also relating to each other. The mediation analysis showed that quality influences loyalty both directly and indirectly, through satisfaction, which means that to get a competitive advantage over the competitors, the service quality should be used as a strategic tool. It was found that age and gender differentiate satisfaction levels and that loyalty differs depending on product type and age.

Keywords: Service quality; Satisfaction; Loyalty; Health insurance; SERVPERF; SERVQUAL; Principal Component Analysis; Mediation Analysis.

JEL Classification: C38; G22

RESUMO

Num mercado global extremamente competitivo, constituído por clientes cada vez mais informados e exigentes, um dos maiores desafios que se coloca às empresas é o de diferenciar os seus serviços por meio da melhoria da qualidade. O presente estudo visa identificar as dimensões subjacentes à formação das perceções de qualidade de serviço no setor dos seguros de saúde português e avaliar as suas relações com a satisfação e fidelização dos clientes. Os dados primários foram recolhidos a partir de uma amostra não probabilística de 128 cidadãos portugueses com mais de 18 anos e subscritores de pelo menos um plano ou seguro de saúde. Para aferir a qualidade de serviço, foi utilizada a metodologia SERVPERF (Cronin et al., 1992) com recurso a uma escala de 26 itens baseada na estrutura de cinco dimensões da escala SERVQUAL (Parasuraman et al., 1985). A Análise de Componentes Principais levou à identificação de uma estrutura hierárquica de quatro dimensões: “Confiabilidade e Capacidade de resposta”, “Garantia e Empatia”, “Tangíveis” e “Conveniência”. A análise de correlações indicou que a qualidade percebida do serviço, em todas as suas dimensões, está significativamente relacionada tanto com a satisfação como com a fidelização, relacionando-se também estas entre si. Através da análise de mediação foi ainda possível constatar que a qualidade influencia a fidelização tanto de forma direta, como indiretamente via satisfação, o que significa que, para obter vantagem competitiva sobre os concorrentes, a qualidade do serviço deve ser utilizada como uma ferramenta estratégica. Verificou-se ainda que a idade e o género diferenciam os níveis de satisfação e que a fidelização difere consoante o tipo de produto e a idade.

Palavras – Chave: Qualidade de serviço; Satisfação; Lealdade; Seguros de saúde; SERVPERF; SERVQUAL; Análise de Componentes Principais; Análise de mediação.

Classificação JEL: C38; G22

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List of abbreviations

ANOVA - One-Way Analysis of Variance

APS - Portuguese Association of Insurers

ASF - Insurance and Pension Funds Supervisory Authority

GDP - Gross domestic product

KMO - Kaiser-Meyer-Olkin

MSA - Measure of Sampling Adequacy

PCA - Principal Component Analysis

PM – Percent Mediation

SERVPERF – Service Performance Model

SERQUAL – Service Quality Model

SNS - National Health Service

SPSS - Statistical Package for Social Sciences

1. INTRODUCTION

1.1. Research background

The insurance sector is an integral part of the financial system and plays a fundamental role in the economy of any country. The growing importance of insurance activity is associated with the development of modern economies, being responsible for mitigating the risks inherent to economic activity. According to Silva (2000 cit. in Costa, 2022, p.9), “insurance companies contribute to the stability of the capital market, increase the confidence indices of economic agents and are important to the financial system as they enable economic development”.

In 2020, the Covid-19 pandemic and the measures taken to limit the spread of the virus, have significantly disrupted economic activity worldwide and like many other sectors, the insurance sector suffered a strong contraction. In the European market, the insurance penetration rate (ratio of total premiums to GDP, used as an indicator of insurance sector development), which peaked at 9.5% in 2019, dropped in 2020 to 7.4% (European Insurance, 2020). In Portugal, this rate dropped to 4.8%, something that had not been observed since 2002 (Oliveira, 2020). According to the Insurance and Pension Funds Supervisory Authority (ASF, 2021), in 2020 the global production of direct insurance in Portugal decreased by around 20.4% compared to the previous year, although the behaviour of the different branches was different: while the life branch (classic life insurance and financial insurance - capitalization insurance and retirement savings plans) showed a decrease of 36.6%, the Non-Life (other insurance, namely sickness/health insurance) continued to show a positive evolution, with the growth of 4% in the same period, with the largest increase (8.2%) in health insurance, mainly driven by the treatment of diseases other than COVID-19.

According to the Portuguese Association of Insurers (APS, 2020), the contracting of health insurance in Portugal has registered a growth trend over the last few years, which reflects the growing concern of the Portuguese in complementing the services offered by the National Health Service (SNS) with health insurances. These have grown by 26.4% in the last three years, accounting for 3.048.532 Portuguese holders of health insurance in 2020. The most recent figures released by this Association indicate that health insurance beneficiaries continue to increase in Portugal, with 3.125.181 in March 2022 (APS, 2022).

Given the crucial role of the insurance sector in the economic development and financial stability of any country and the growth dynamics of the health insurance market observed in Portugal, it is considered particularly interesting to analyse this specific market, with the general

objective of evaluating the quality of service perceived by health plan/insurance Portuguese customers. This being the focus of this study, it is relevant to mention the distinction between health insurance and a health plan. Although the objective of these two systems is the same, that is, they both seek to protect the insured against health expenses that may arise, there are some differences between them: health plans, unlike insurance, only offer access to a network of health care providers (they do not include the possibility of using a provider outside that network) and only offer discounts (no co-payment/reimbursement entitlement).

1.2. Problem statement and research objectives

As already stated, the general objective of this study is to evaluate the quality of service perceived by health plan/insurance Portuguese customers. Therefore, the main questions that we intend to answer are: “How do the Portuguese holders of health insurance/plans perceive the quality of the service provided to them by insurance companies?” and “Is this perception associated with satisfaction and loyalty of these same customers?”. In this sense, the achievement of the following specific objectives is paramount:

- To define the socio-demographic profile of the Portuguese holders of health insurance/plan;
- To identify their service quality perceptions and its dimensions;
- To analyse the associations between service quality dimensions, satisfaction and loyalty;
- To investigate the mediating role of customer satisfaction in the relation between perceived service quality and loyalty;
- To analyse the possible influence of socio-demographic characteristics on perceived service quality, satisfaction and loyalty.

1.3. Research structure

The present investigation is structured into four sections. Section two (Literature review) presents the theoretical framework that supports the development of the research process. It begins with an approach to the concepts of service and quality, mentioning the main instruments for measuring the quality of services - the SERVQUAL and SERVPERF scales - and some studies that apply these scales in the context of insurance services. The quality of service is also addressed in its relationship with satisfaction and loyalty and the section ends with the presentation of the conceptual model and research hypotheses resulting from the literature review carried out and the chosen research context. In Section three (Methodology), the

research design is described, specifically referring to the sample selection, data collection process, questionnaire structure, scales development procedures, and ending with a reference to the data analysis methods to be used. Data analysis results are reported and discussed in Section four (Presentation and discussion of results) and the conclusions of the research, its limitations and future suggestions are included in Section five (Conclusions and recommendations).

2. LITERATURE REVIEW

2.1. Concept of service

For most economies, the service sector is currently the main engine of growth and makes an important contribution to economic development all over the world (Lovelock & Wirtz, 2011). This is no different in Portugal, where the service sector was responsible for 64.89% of the gross domestic product in 2021 (Statista, 2022).

The subject of service starts to be emphasized in the literature in the 1970s and, since then, several authors have offered various definitions of service. Grönroos (1990) posited that it is an activity that is intangible and that creates an interactive process for customers and service employees; Ramaswamy (1996:3) described service as “the business transactions that take place between a donor (service provider) and receiver (customer) to produce an outcome that satisfies the customer”; Zeithaml and Bitner (1996:5) considered service as “deeds, processes and performances”; Heizer and Render (1999:36) defined services as “those economic activities that typically produce an intangible product such as education, entertainment, transportation, insurance, trade, government, financial, medical, repairs and maintenance” and Kotler et al. (2003) emphasised that the unique characteristics of service require the customer to be part of the service delivery process.

Yong (2000) reviewed the various definitions and noted the following features of service that are important to an understanding of the concept: first, service is a performance, it happens through interaction between consumers and service providers (Sasser et al., 1978; Gronroos, 1990; Deighton, 1992; Ramaswamy, 1996; Zeithaml & Bitner, 1996); second, factors such as physical resources and environments play an important mediating role in the process of service production and consumption (Gronroos, 1990; Collier, 1994) and third, service is a requirement in terms of providing certain functions to consumers, for example, problem-solving (Gronroos, 1990; Ramaswamy, 1996). From these points, Yong (2000:43) concluded that “a service is experienced and evaluated by customers who have particular goals and motivations for consuming the service” and considered that the various conceptualizations fall into two groups.

The first group includes those researchers who view the concept from the perspective of service itself, in an approach that differentiates service (intangibles) from goods (tangibles). This group includes authors such as Zeithaml et al. (1990) as well as Zeithaml and Bitner (1996), that identified the following features of service that distinguish it from goods (IHIP): intangibility (services cannot be inventoried, patented, readily displayed or communicated),

heterogeneity (service quality depends on many uncontrollable factors, so there is no sure knowledge that the service delivered matches what was planned and promoted), inseparability (simultaneous production and consumption) and perishability (service cannot be returned or resold). However, this characterization, through the service's unique attributes, was criticized by several authors who disagreed with the idea that the difference between goods and services is based solely on the characteristics of the latter, because the customer does not distinguish between the two: from the customer's perspective, some intangibles, such as newly acquired skills or a favourable experience, can be considered tangible, and even perishability can be difficult to differentiate as, in services, it is not easy to separate production from consumption (Edvardsson et al., 2005; Lovelock & Gummesson, 2004). Edvardsson et al. (2005) further argue that the endless information on the World Wide Web has managed to reduce the distinction between services and goods and that inseparability and perishability of services can be overcome by the technological advancement that is disrupting the world.

The second group of researchers comprises those who view service from the perspective of customers. This approach focuses on the utility and total value that a service provides for a consumer and points out that the service combines tangible and intangible aspects to satisfy customers during business transactions (Gronroos 1990; Ramaswamy, 1996). This approach implies that, because consumers evaluate service quality in terms of their own experiences, customers' subjective perceptions have a great impact on service business's success or failure (Shostack, 1997). Expanding on earlier research, several researchers added that service is customer-oriented and solution-focused (Grönroos, 2000; Vargo & Lusch, 2010) and Scott (2012: 184) suggested that "service creates a relation between the service provider and customer that can occur either directly or indirectly".

2.2. Concept of Quality

Although the term quality is quite widely used by practitioners and academics, there is no generally agreed definition of it, since different definitions are appropriate under different circumstances. Indeed, during the last century, quality has been defined as conformance to specifications (Shewhart, 1931; Levitt, 1972), value (Feigenbaum, 1951), conformance to requirements (Crosby, 1979), excellence (Tuchman, 1980), product desirable attributes (Leffler, 1982), fitness for use (Juran, 1951), loss avoidance (Taguchi, 1989), answers to customer needs (Deming, 1989) and satisfying the client expectations (ISO 9000, 2005). To facilitate the understanding of the concept of quality, Garvin (1984) has described five basic

approaches for quality definition: the transcendent approach; the product-based approach; the manufacturing-based approach; the user-based approach and the value-based approach.

The transcendent approach is derived from philosophy, and in this approach, quality is synonymous with innate excellence (Tuchman, 1980). From this perspective, quality cannot be accurately measured, as the notion of excellence is abstract and subjective, with standards being very different between different people. Given the limitations of defining quality as excellence, Leffler (1982) introduced a measurable definition of quality, which Garvin (1984) described as the product-based approach, where quality is based on the existence or absence of a particular attribute. According to this definition, quality can only be gained at a higher cost, because quality reflects the number of desirable attributes that a product includes and because attributes are believed to be costly to produce, quality goods will be more expensive. Moreover, as noted by Reeves and Bednar (1994), quality under this definition may be inappropriate for services, especially when a high degree of human contact is involved. Another measurable definition of quality was introduced by Shewhart (1931) and Levitt (1972), that Garvin (1984) described as the manufacturing approach, where quality is defined as conformance to specification: quality of conformance reflects the degree to which a product meets certain design standards. Deviations from design specification result in inferior quality and, accordingly, increased costs due to rework, scrap or product failure. As in the previous case, this definition fails to address the unique characteristics of services, which require a high degree of human contact (Sebastianelli and Tamimi, 2002).

A widely used definition was introduced by Juran (1951), where quality is defined as fitness for use, meaning, conformance of product/service characteristics with customer requirements. Since this definition assumes that quality is determined by what the customer wants, Garvin (1984) named it the user-based approach. Considering that the price of the service/product may influence the level of customer satisfaction, Ishikawa and Lu (1985) adapted Feigenbaum's (1951) conception and refined Juran's (1951) definition of quality to be fitness for use at an acceptable price (value-based approach). Taguchi (1989) defines quality by defining its opposite and considered non-quality as the loss imparted to society from the time a product is shipped. He thus added a new approach to defining quality, the social loss approach, in which social losses include failure to meet customer requirements, failure to meet ideal performance and harmful side effects. In table 2.1., several quality definitions are presented and grouped according to the mentioned approaches.

Table 2.1. - Quality approaches and definitions

Authors	Definitions	Approaches
Tuchman (1980)	Excellence	Transcendent
Leffler (1982)	Product desirable attributes	Product-based
Shewhart (1931); Levitt (1972)	Conformance to specifications	Manufacturing-based
Crosby (1979)	Conformance to requirements	
Juran (1951)	Fitness for use	User-based
Deming (1989)	Answer to customer needs	
ISO 9000 (2005)	The degree to which a set of inherent characteristics fulfils customer requirements	
Hoyle (2007)	Quality is the extent to which a product or service successfully serves the purposes of the user during usage (not just at the point of sale)	
Feigenbaum (1951)	Product/Service to a customer with certain characteristics at an expectable cost or price	Value-based
Ishikawa and Lu (1985)	Fitness for use at an acceptable price	
Taguchi (1989)	Loss avoidance	Social loss

Source: own elaboration based on literature review

2.3. Service Quality: Conceptualization and Measurement

Quality is one of the competitive priorities which have migrated from the literature of manufacturing strategy to the service arena (Pariseau & McDaniel, 1997) and tends to be defined as “meeting or exceeding customers’ expectations” (Reeves & Bednar, 1994: 419) or, as Buzzell and Gale (1987: 111) stated, “Quality is whatever the customers say it is, and the quality of a particular product or service is whatever the customer perceives it to be.” According to Hishamuddin and Azleen (2008), in the literature, the construct of quality is conceptualized based on perceived service quality, which is defined as a global judgment, or attitude, relating to the superiority of the service (Parasuraman et al., 1988).

Service quality, as a construct, has received considerable attention from academics and practitioners (Izogo & Ogba, 2015) but it has no universally agreed definition. Berry et al. (1988: 17) defined service quality as a measure of “how well the service is delivered as compared with customer expectations” and considered that delivering quality service means conforming to customer expectations consistently. Kotler and Armstrong (1996) referred to service quality as the totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs. Fogli (2006) considered service quality as a judgement, or attitude, directly related to the services offered by the organization and the customer’s impression of the quality received. Zeithaml et al. (2012) referred to service quality as the degree of excellence of service performance and Ennew and Waite (2013) posited that service quality is based on the customer’s perception of how well the service matches their

needs and expectations. Despite the intangible and difficult-to-define nature of service quality, most researchers agree on the notion that it is defined by the customer (Tazreen, 2012) and what can be concluded is that a good service experience will depend on the organization's ability to understand consumer needs, wants and expectations, and then to deliver service in a way that meets or exceeds those expectations. Therefore, it is essential to assess the perception of the quality of the service provided, to allow, through the results obtained, to replicate good practices or make adjustments and corrections in the less positive aspects.

In the empirical literature, there are many alternative service quality models and instruments developed for measuring service quality, namely, the Nordic Model (Grönroos, 1984), the SERVQUAL model (Parasuraman et al., 1985, 1988) and the performance-only model, SERVPERF (Cronin & Taylor, 1992).

Grönroos model (Fig. 2.1.), also known as the Nordic Model (1984) explains the perceived service quality as the outcome of an evaluation process where the customers compare their expectations with the service they have received. The author argued that service quality can be divided into two generic dimensions: technical quality (what is provided) and functional quality (how the service is provided), with image quality (the organization's reputation for quality) mediating the impact of these two dimensions on overall perceived quality. Subsequently, Grönroos (1990) identified six specific dimensions on which service quality could be measured: professionalism and skills, reliability and trustworthiness, attitudes and behaviour, accessibility and flexibility, recovery, and reputation and credibility.

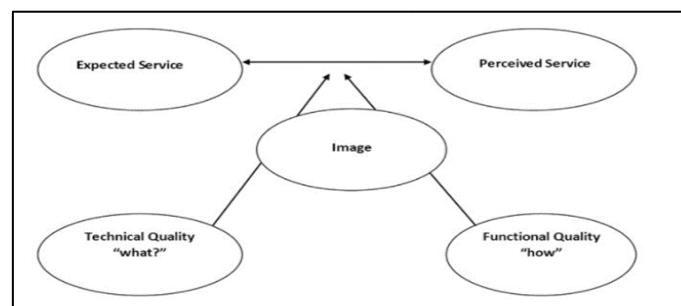


Figure 2.1. - Grönroos service quality model
Source: Grönroos (1984)

Parasuraman et al. (1985, 1988) proposed the gap model of service quality, which operationalised service quality as the differences between consumers' perception of quality and their expectations, using a 22-item SERVQUAL scale and a ten-dimensional structure, which was later condensed into five service quality dimensions (Table 2.2.).

Table 2.2. - Service quality dimensions

Dimension	No. of Items in Questionnaire	Definition
Tangibles	4	The appearance of physical facilities, equipment, personnel and communication materials
Reliability	5	The ability to perform the promised service dependably and accurately
Responsiveness	4	The willingness to help customers and to provide prompt service
Assurance	4	The knowledge and courtesy of employees and their ability to convey trust and confidence
Empathy	5	The provision of caring, individualized attention to customer

Source: Parasuraman et al. (1988)

According to the SERVQUAL scale, service quality can be measured by identifying five main gaps between customer's expectations of the service to be provided and their perceptions of the actual performance of the service (Figure 2.2.):

Gap 1 – Knowledge Gap: misinterpreting consumer quality expectations;

Gap 2 – Standards Gap: differences between Management's perception of consumer quality expectations and service quality specifications;

Gap 3 – Delivery Gap: service delivery process does not meet service quality specifications;

Gap 4 – Communications Gap: external communications do not equate with the actual process of providing services;

Gap 5 – Expectation & Perceived Gap: the difference between perceived service and expected service.

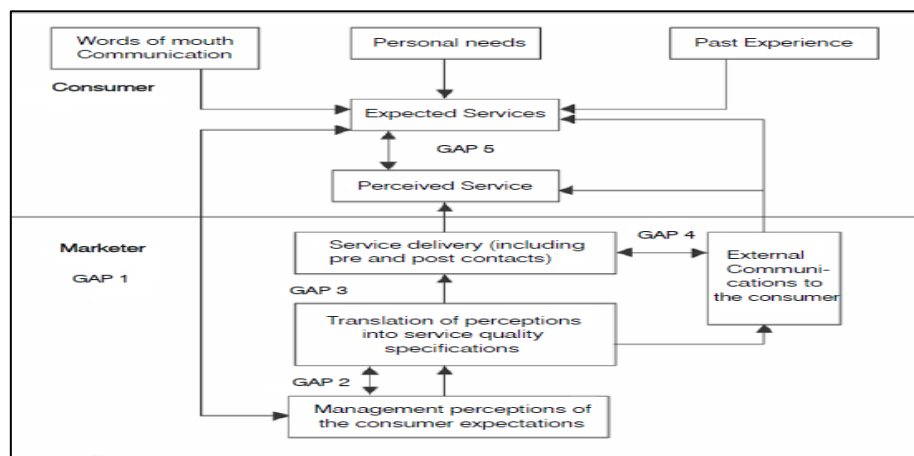


Figure 2.2. - Gap analysis model

Source: Parasuraman et al. (1985)

Even though this instrument has been used in various studies, the SERVQUAL model has faced much criticism from other researchers. Carman (1990), claimed that the five dimensions presented by Parasuraman et al. (1988) are not entirely generic or universal and that

SERVQUAL needed to be adapted to a specific customer of a particular service. Babakus and Boller (1992), commented that the domain of service quality may be factorially complex in some industries and very simple and one-dimensional in others, that is, the number of service quality dimensions is dependent on the particular service being offered. Even Parasuraman et al. (1988) agree that the SERVQUAL scale is just a “base skeleton” that, when necessary, can be adapted or supplemented to match the specifics or research needs of a particular organization. In fact, the SERVQUAL scale has already been presented in several studies in a wide variety of dimensions, from one-dimensional (Babakus & Boller, 1992; Lam, 1997) to nineteen dimensions (Robinson & Pidd, 1998).

Also, Cronin and Taylor (1992) questioned the need to measure customer expectations, as perceptions of service firm’s performance explain a greater percentage of the overall quality assessment than quality gaps. These authors thus developed another service quality analysis model, called SERVPERF (Fig.2.3.). This methodology does not take into account the analysis of expectations, focusing on the evaluation of the service performance perceptions. In the SERVPERF model, service quality is operationalised only through a performance score based on the same 22 items and a five-dimensional structure of SERVQUAL.

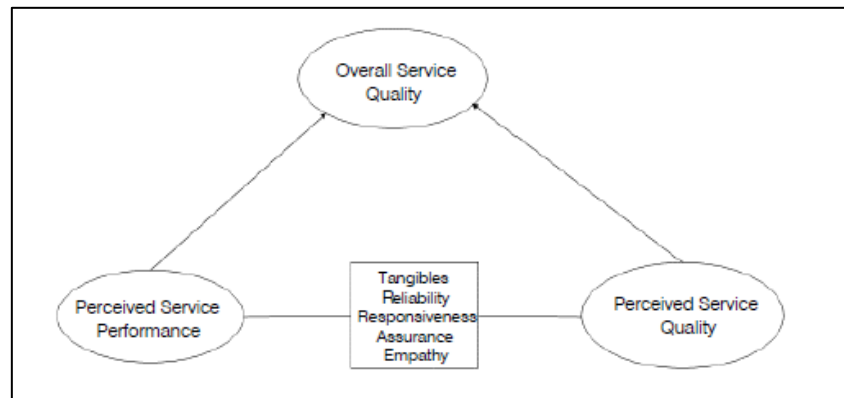


Figure 2.3. - Performance only model (SERVPERF)
Source: Cronin and Taylor (1992)

Jain and Gupta (2004) considered that SERVPERF, in comparison with SERVQUAL, is a more accurate measurement for service quality, as it has a more convergent and discriminant valid explanation of service quality construct, and Adil et al. (2013) stated that SERVPERF has greater psychometric soundness and greater instrument parsimoniousness. In the opinion of Souto and Neto (2017), both SERVQUAL and SERVPERF are valid instruments and have a similar consistency, which is why they point to the latter as the most appropriate tool for practical use, due to the lower cost and operational time.

2.3.1. Application of the SERVQUAL/SERVPERF paradigm in the context of insurance services

In the era of intensive globalization, competition between companies is increasingly fierce and the difference between the services/products sold by different companies is increasingly tenuous, so, according to authors such as Christensen et al. (2016), meet and exceed customer needs and expectations, providing the best customer experience, is one of the biggest challenges companies face today.

In addition to the growing number of options available and the increasing awareness of customers, technology allows them to make comparisons quickly and accurately, leading to a continuous increase in expectations and demands regarding quality service. Therefore, delivering quality service is considered an essential strategy for success and survival in today's competitive environment. Like in many other sectors, in the case of the insurance sector, particularly in the case of firms that offer nearly identical products, such as health insurance, service quality may be the only way of differentiating oneself. As pointed out by Singh et al. (2014), this is what led insurance companies to shift from a product-centred approach to a customer-centred one, focusing on enhancing customer satisfaction through improved service quality, which leads to improved customer retention, loyalty and profitability. It is therefore not surprising that measurement of service quality is of paramount importance to the industry in general and to the insurance industry in particular, as demonstrated by several studies regarding this industry. To name just a few: Sidiqi and Sharma (2010) developed a SERVQUAL type instrument to measure customer perceived service quality in Indian life-insurance sector, comprised of the dimensions assurance, personalized financial planning, competence, corporate image, tangibles and technology; Sharma and Bansal (2011) also used the same six dimensions to assess and compare customers perceived service quality in Indian and Chinese insurance companies; Nwankwo and Durowoju (2011) measured service quality of life insurance in Nigeria through a nine-dimensional scale (prompt claim settlement, staff attitude, advertisement, ability to reach customers, financial incentives to customers, premises of business, association with other organizations, caring for customers, and deployment of technology); Borah (2013) assessed service quality in public and private life insurance in Assam through twelve dimensions, which included five SERVQUAL dimensions and seven added dimensions (competence, credibility, accessibility, communication, understanding, price, offering and overall performance); Singh et al. (2014), established four dimensions (responsiveness and assurance, convenience, tangible, empathy) of service quality and analysed

its relation with age, gender and education level; Choudhuri (2015) assessed six dimensions which included five SERVQUAL factors and one added factor (information technology enabled services) to measure service quality in private life insurance companies in West Bengal; Abu-Salim et al. (2017) measured service-quality perceptions from customers of fourteen major health insurance companies across the United Arab Emirates, using an instrument based on the SERVQUAL model; Shreenivasan et al. (2018) assessed life insurance service quality, in Delta region, using the five dimensions of service quality, as per the SERVPERF scale, and relating them to customer satisfaction and loyalty.

It is clear, from the above, that several studies have been carried out for the measurement of service quality in the insurance sector, most of them based on the SERVQUAL paradigm, though some modifications have been incorporated.

2.4. Service quality, customer satisfaction and loyalty

Quality, customer satisfaction and loyalty are widely recognized as playing an important role in success and survival in today's competitive market. According to Woodside et al. (1989), customer satisfaction can be stated as the outcome of customers' post-purchase perception about a service when the performance of service exceeds the expectations, and Kotler (2000:36) states that "satisfaction is a person's feelings of pleasure or disappointment resulting from comparing a product's perceived performance (or outcome) to his or her expectations. According to Nguyen et al. (2018), the most important aspect of customer satisfaction is to lead to customer loyalty and profitability and thus contribute to the sustainable development of the company. The same authors state that "maintaining customer loyalty is very difficult and challenging for any company, however, when customers feel satisfied with products/services, they will tend to be loyal to companies" (Nguyen et al., 2018:3). Several studies agree on the fact that customer satisfaction has a significant positive effect on customer's loyalty (Nazir et al., 2016; Yang et al., 2017) and authors such as Mittal and Kamakura (2001), have mentioned that both satisfaction and loyalty can vary according to customer demographics, like gender and age.

The relationship between service quality and customer satisfaction is often mentioned in the literature (Ali & Raza, 2015; Haque & Sultan, 2019; Kuo et al., 2013; Siddiqui & Sharma, 2010). Moreover, several studies such as (Cronin et al., 2000; Bei et al., 2006; Nguyen et al. 2018) agreed that there is a direct impact of perceived quality on loyalty as well as an indirect impact through customer satisfaction. The study conducted by Siddiqui and Sharma (2010)

determined that utilizing all five dimensions of SERVQUAL/SERPERF increases customer satisfaction and Kuo et al. (2013) state that companies often enhance their service quality as a way to increase customer satisfaction. However, customer satisfaction is problematic to define and operationalize, especially concerning perceived service quality. Some authors have suggested that perceived service quality and customer satisfaction are distinct constructs (Oliver, 1997; Taylor and Baker, 1994) and that there is a causal relationship between the two (Cronin and Taylor, 1992; Spreng and Mackoy, 1996). In some cases, however, the constructs have been used interchangeably (Iacobucci et al., 1994; Parasuraman et al., 1994; Mittal et al., 1998). According to Arora and Kushwaha (2018), although satisfaction and service quality have common points, in general, satisfaction is a more extensive concept, since quality focuses on services dimensions and indicates the customer's understanding of the service, while satisfaction is more extensive, including service quality, product's quality, price, situational factors and immediate ones. Therefore, the authors emphasize that, given the fact that the success of organizations depends on customer satisfaction, quality must be assumed as a fundamental vehicle to increase customer satisfaction and loyalty. Molina et al. (2009), as well as Rai and Medha (2013), consider that service quality is the key factor that has the strongest impact on customer loyalty, which can be modelled, according to Sotechand and Barua (2020), as a product of three specific components, namely: purchase (commitment to repurchase in the future), attitude (willingness to recommend to other customers) and cognition (intention to persist with a provider).

2.5. Conceptual model and research hypotheses

Based on the literature review presented above, the framework for the study was developed (Fig. 2.4.) and the key concepts were operationalized as follows:

- Perceived Service Quality - measures the extent of customer perception regarding the five quality dimensions defined by Parasuraman et al. (1988);
- Customer Satisfaction - evaluates whether the customer was satisfied with the insurance services, insurance transaction and their relationship with the insurance company (Nguyen et al. 2018);
- Customer loyalty - assesses whether the customer intends to persist with the insurer, is committed to repurchasing in the future and is willing to recommend its service to third parties (Sotechand & Barua, 2020).

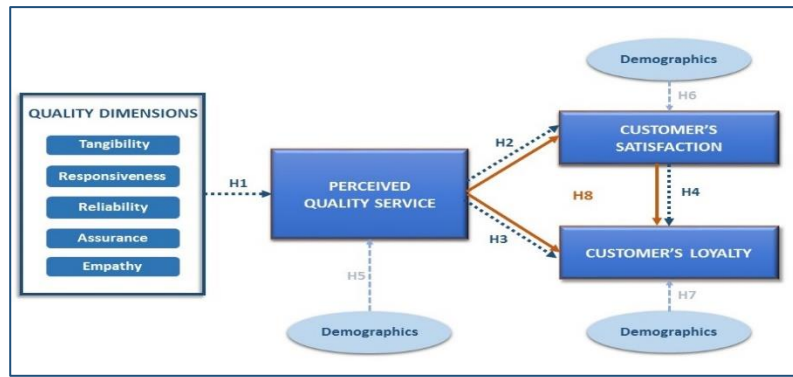


Figure 2.4. - Research framework

Source: Authors' proposal based on the literature review

The main objective of this study is to analyse the service quality perceived by health plan/insurance Portuguese customers. Accordingly, specific objectives are: to identify the socio-demographic profile of respondents, as well as their service quality perceptions; to investigate the multidimensionality of this construct; to analyse the relations between satisfaction, loyalty and perceived service quality, in the identified dimensions, and the possible influence of both socio-demographic characteristics and the type of health product; to investigate the mediating role of customer satisfaction in the relationship between perceived service quality and loyalty. Based on the defined objectives, the following research hypotheses were formulated:

H1: Perceived service quality is a five-dimensional construct [Parasuraman et al., 1988,1985; Cronin & Taylor, 1992];

H2: Perceived service quality is directly related to customer satisfaction [Siddiqui & Sharma, 2010; Shreenivasan et al., 2018; Haque & Sultan, 2019];

H3: Perceived service quality is directly related to customer loyalty [Molina et al., 2009; Rai & Medha, 2013];

H4: Customer satisfaction is directly related to customer loyalty [Nazir et al., 2016; Yang et al., 2017; Nguyen et al., 2018];

H5: Different sociodemographic characteristics lead to different service quality perceptions [Singh et al., 2014];

H6: Different sociodemographic characteristics lead to different satisfaction levels [Mittal & Kamakura, 2001];

H7: Different sociodemographic characteristics lead to different loyalty levels [Mittal & Kamakura, 2001];

H8: Customer satisfaction mediates the relationship between perceived service quality and customer loyalty [Cronin et al., 2000; Bei et al., 2006; Nguyen et al. 2018].

3. METHODOLOGY

3.1. Research design

Given the stated objectives, this study is based on a quantitative survey using a questionnaire, as a data collection strategy, aimed at Portuguese people over 18 years of age and subscribers to, at least, one health plan or insurance. A non-probabilistic method was chosen and snowball sampling techniques were used, which consist of identifying members of the study population and asking them to share the questionnaire, thus growing the sample. According to Esteban-Santos et al. (2018), this method is recommended when it is difficult to identify the desired population because it makes it possible to obtain a significant number of responses thanks to the action of the respondents themselves. Data collection took place from June 1st to September 1st, 2022, and responses were collected through an online survey, using Google forms, and also in person.

The questionnaire consists of four main sections. The first part includes questions related to the features of the subscribed health product like the type of product (plan/insurance), product subscription method, how long has it been subscribed and health insurance/plan provider. In the second part, respondents were asked to evaluate a set of parameters on service quality using a 5-point Likert scale (anchored at “strongly disagree” and “strongly agree”).

For the measurement of service quality, a scale of 26 statements was used, based on the SERVQUAL scale proposed by Parasuraman et al. (1988), but adapted to the insurance industry context. This scale was submitted to the evaluation of some elements of the quality department of an insurance company and, as a result of this process and a pilot test carried out with 15 health plan/insurance customers, some statements were reformulated and the number of statements per dimension also underwent a slight change (Table 3.1.).

Table 3.1. - Changes to the original instrument

Dimensions	Statements	
	Original	Applied
Tangibles	4	6 (1-6)
Reliability	5	5 (7-11)
Responsiveness	4	6 (12-17)
Assurance	4	4 (18-21)
Empathy	5	5 (22-26)

Source: Own elaboration

The statements contained in the final service quality assessment instrument, and their respective authors, are shown in table 3.2.

Table 3.2. - Service quality variables and literature sources

Statements	Authors
Service Quality	
1) This Insurer uses modern equipment and technologies	Khurana (2012); Saha and Dutta (2019)
2) This Insurer has materials associated with the service (brochures, pamphlets, posters, etc.) visually attractive	Saha & Dutta (2019); Sandhu & Bala (2011)
3) This insurance company provides several means of communication (email, telephone, internet)	Siddiqui & Sharma (2010); Paposa et al. (2019)
4) It is very easy to locate the website of this Insurer	Oparah et al. (2018); Paposa et al. (2019)
5) It is very easy to find the desired information on the website of this Insurer	Oparah et al. (2018); Paposa et al. (2019)
6) This Insurer provides clear and transparent information about its products and services	Khurana (2012)
7) In this Insurer, the procedure for subscribing to a plan/policy is simple and fast	Siddiqui & Sharma (2010)
8) This Insurer promotes ethical conduct	Sandhu & Bala (2011)
9) This Insurer is financially stable	Siddiqui & Sharma (2010)
10) This Insurer fully performs the promised service	Saha and Dutta (2019)
11) This Insurer provides an effective customer support service	Anjor et al. (2014)
12) This Insurer has flexible products that meet the needs of customers	Sandhu & Bala (2011); Siddiqui & Sharma (2010)
13) This Insurer provides prompt customer service	Sandhu & Bala (2011); Haque & Sultan (2019)
14) Prompt & Efficient Grievance handling mechanism	Siddiqui & Sharma (2010)
15) This Insurer offers a wide range of services/products	Anjor et al. (2014); Haque & Sultan (2019)
16) This Insurer is innovative in introducing new products	Siddiqui & Sharma (2010)
17) The prices of this Insurer are competitive	Khurana (2012)
18) The employees/agents of this Insurer understand the specific needs of customers	Oparah et al. (2018); Saha & Dutta (2019)
19) The employees/agents of this Insurer have adequate knowledge and competence to answer customer requests	Haque & Sultan (2019); Saha & Dutta (2019)
20) This Insurer makes customers feel safe and protected in their transactions	Haque & Sultan (2019); Saha & Dutta (2019)
21) The terms and the clauses of the insurance contract are clear and easy to understand	Nguyen et al (2018)
22) The behaviour of the Insurer's employees/agents inspires trust and confidence in the customer	Khurana (2012); Saha & Dutta (2019)
23) The employees/agents of this Insurer provide individualized attention to the customer	Khurana (2012); Saha & Dutta (2019)
24) This Insurer has convenient opening hours for all customers	Haque & Sultan (2019)
25) The employees/agents of this Insurer are always willing to help the customer	Saha & Dutta (2019)
26) This Insurer provides flexible and convenient payment options	Anjor et al. (2014); Sandhu & Bala (2011)

Source: Own elaboration

The third part of the questionnaire intends to evaluate (on the same 5-point Likert scale) whether the customer is satisfied with the current insurer company and is committed to it. Table 3.3. shows the authors and items used to measure satisfaction and loyalty. Finally, in the fourth and last part of the questionnaire, a set of questions addressed socio-demographic information (age, gender, marital status, education degree, professional situation, residence and income).

Table 3.3. - Customer satisfaction and loyalty variables and literature sources

Statements	Authors
Satisfaction	
S1) Overall, I am satisfied with the services provided by this Insurer	Nguyen et al (2018); Rai & Medha (2013)
S2) Overall, I feel satisfied after each transaction with this Insurer	Nguyen et al (2018); Rai & Medha (2013)
S3) Overall, I am satisfied with the relationship between me and this insurer	Nguyen et al (2018); Rai & Medha (2013)
Loyalty	
L1) I will recommend this Insurer to others	Nguyen et al (2018); Sotchand&Barua (2020)
L2) Although there are many Insurers, I will continue with my current insurer	Nguyen et al (2018); Sotchand&Barua (2020)
L3) I will continue with my current insurance company despite promotions that others may launch	Nguyen et al (2018); Sotchand&Barua (2020)

Source: Own elaboration

3.2. Data analysis methods

As previously mentioned, for its online application, the questionnaire was built using Google forms. This makes it possible to automatically transfer respondents' responses to the Microsoft Office Excel program and then transfer the data directly to the IBM SPSS Statistics (Statistical Package for Social Sciences), the statistical analysis software used in this investigation (vs 27). However, this transfer entails some problems, as regards the qualitative variables, requiring some recoding work. Once the database was organized, the data were first analysed through the construction of frequency tables and the calculation of location (mean, median, mode) and dispersion (standard deviation) measures. In addition, the reliability analysis of all constructs was carried out through the calculation of Cronbach's Alpha. After that, to confirm whether the service quality perceived by Portuguese customers is a five-dimensional construct (H1), the 26-item scale was factor analysed using the Principal Component method with Varimax rotation. The application of this technique requires quantitative data and minimum sample size. Although, in this case, the data are ordinal, it is mentioned by Hill and Hill (2012: 111-112) that "it is common to treat the numerical values obtained through the so-called evaluation scales, as having been obtained through a metric scale", which is the procedure followed in this investigation. Regarding the size of the sample, it should not be less than 50 observations and preferably equal to or greater than 100, having, according to (Hair et al., 2009:108), a minimum of 5 observations per variable which, in this case, would require a minimum of 130 observations (5x26). However, authors such as Malhotra (2006:550) consider that "there must be 4 to 5 times more observations than variables", so our 128 valid responses are above this minimum threshold of 104 observations (4x26).

Once the principal component analysis has been carried out, a correlational analysis will be performed, through the calculation of Pearson's correlation coefficients, to identify the associations between perceived service quality, in the previously identified dimensions, satisfaction and loyalty (H2 - H4). To analyse whether both demographic characteristics (H5-H7) and the type of product lead to differences in service quality perceptions, satisfaction and loyalty, some statistical tests will be used, namely, the t-test for independent samples and ANOVA. If the assumptions for applying the latter are not met (normality and homoscedasticity), the non-parametric Kruskal-Wallis test will be used instead. All tests will be performed at a significance level of 5%. Finally, mediation analysis will be performed to access the mediating role of customer satisfaction in the relationship between perceived service

quality and loyalty. For this analysis bootstrapping method was performed using SPSS Process macro.

4. PRESENTATION AND DISCUSSION OF RESULTS

4.1. Sociodemographic characterization of respondents and features of their health products

As shown in table 4.1., the 128 respondents have an average age of 40 years, with the youngest being 20 years old and the oldest 76 years. The greatest part is single (49.2%), lives in the Lisbon area (38.3%) and belong to a household with a net monthly income between 2000 and 4000€ (50.0%). The majority of respondents are male (52.3%), have higher education qualifications (60.9%) and are employed (68.8%).

Table 4.1. - Sociodemographic characterization

Age	Minimum	Maximum	Mode	Median	Mean	Std deviation
	20	76	51	36	39,85	13,73
Gender	Frequency			Valid %		
Female	61			47,7		
Male	67			52,3		
Marital Status	Frequency			Valid %		
Single	63			49,2		
Married/civil partnership	55			43,0		
Divorced/separated	10			7,8		
Education level	Frequency			Valid %		
Secondary Education	38			29,7		
Higher Education	78			60,9		
Technical/Professional	12			9,4		
Professional status	Frequency			Valid %		
Unemployed	15			11,7		
Employed	88			68,8		
Student	13			10,2		
Retired	12			9,4		
Mensual income	Frequency			Valid %		
Less than 1000 €	4			3,1		
1000 - 2000 €	36			28,1		
2000 - 4000€	64			50,0		
4000 – 6000€	14			10,9		
More than 6000 €	10			7,8		
Area of Residence	Frequency			Valid %		
Alentejo	5			3,9		
Algarve	39			30,5		
Centro	8			6,3		
Lisboa e Vale do Tejo	49			38,3		
Norte	27			21,1		

Source: Own elaboration based on research data

As for the health product modality (plan/insurance), the vast majority of respondents claim to have insurance (70.1%), with “Fidelidade” (23.4%) and “Ageas” (21.9%) being the preferred insurance companies. Regarding the method and duration of the contract, the options that

collected the largest number of references are, respectively, the agent (30.4%) and the period of 1 to 3 years (29.7%) (Table 4.2.).

Table 4.2. - Health product features

Modality	Frequency	Valid %
Health insurance	89	70,1
Health plan	38	29,9
Contracting method	Frequency	Valid %
Agent	38	30,4
Internet	34	27,2
Headquarters/Branch	20	16,0
Telephone	33	26,4
How long	Frequency	Valid %
Less than 1 year	15	11,7
From 1 to 3 years	38	29,7
From 3 to 5 years	26	20,3
From 5 to 10 years	23	18,0
10 or more years	26	20,3
Insurance company	Frequency	Valid %
Grupo Fidelidade (Multicare)	30	23,4
Grupo Ageas (Médis)	28	21,9
Grupo Generali	4	3,1
Allianz Portugal	15	11,7
Vitória Seguros	15	11,7
GNB Seguros	2	1,6
Lusitania Seguros	7	5,5
CA Seguros	2	1,6
Zurich Insurance	3	2,3
Liberty Seguros	5	3,9
Grupo Future Healthcare	7	5,5
Outro	10	7,8

Source: Own elaboration based on research data

4.2. Respondents' perceptions of service quality

Each of the dimensions proposed by Parasuraman et al. (1988) was evaluated for its reliability through the analysis of Cronbach's Alpha. All of them recorded values above 0.8, which, according to Hair et al. (2009), indicates a good level of internal consistency (Table 4.3.).

Both in global terms and for each of the dimensions, the analysis of the averages indicates a moderately positive perception of service quality, with all values above 3.5. The highest value is recorded in the "Empathy" dimension (3.71) and the lowest in "Responsiveness" (3.62), which, together with the "Assurance" dimension (3.65), are the only ones to record values below the global average of the scale (3.67).

Analysing each of the dimensions individually, it can be observed that in the "Tangibles" dimension, the best-scored items concern technological aspects (ease of locating the website and finding the desired information in it), while those related to the means and materials of communication register the lowest values (publicity materials and means of communication).

Concerning "Reliability", the item "This Insurer is financially stable" stands out positively, being the only one to register a value higher than the global average of this dimension, while the perception regarding the full performance of the promised service registers the lowest value. In the "Responsiveness" dimension, the item "The insurer offers a wide range of products/services" is the one with the highest level of agreement, however, the respondents do not consider that the products have enough flexibility to meet the needs of customers, this being the aspect in which the lowest average is recorded, both for this dimension and the entire scale. Regarding dimension "Assurance", the best and worst aspects perceived are, respectively, "The employees/agents of this Insurer have adequate knowledge and competence to answer customer requests" and "The terms and the clauses of the insurance/plan contract are clear and easy to understand". Finally, in dimension "Empathy", the statements that raised the highest level of agreement concern the availability of convenient business hours and means of payment, with the lowest value being recorded in the statement "The behaviour of the Insurer's employees/agents inspire trust and confidence to the customer".

Table 4.3. - Service quality perceptions

Service quality	Strongly Disagree (%)	Disagree (%)	Neither disagree nor agree (%)	Agree (%)	Strongly Agree (%)	Mean	Standard Deviation
Tangibles $\alpha = 0,881$						Mean = 3,70	
1) This Insurer uses modern equipment and technologies	1,6	10,9	25,0	48,4	14,1	3,63	,914
2) This Insurer has materials associated with the service (brochures, pamphlets, posters, etc.) visually attractive	1,6	10,9	25,0	51,6	10,9	3,59	,882
3) This insurance company provides several means of communication (email, telephone, internet)	4,7	7,0	25,8	46,9	15,6	3,62	,989
4) It is very easy to locate the website of this Insurer	2,3	5,5	13,3	54,7	24,2	3,93	,898
5) It is very easy to find the desired information on the website of this Insurer	3,1	6,3	25,0	44,5	21,1	3,74	,966
6) This Insurer provides clear and transparent information about its products and services	1,6	8,6	25,8	47,7	16,4	3,69	,903
Reliability $\alpha = 0,804$						Mean = 3,69	
7) In this Insurer, the procedure for subscribing to a plan/policy is simple and fast	2,3	7,0	30,5	43,0	17,2	3,66	,926
8) This Insurer promotes ethical conduct	1,6	8,6	21,9	55,5	12,5	3,69	,858
9) This Insurer is financially stable	1,6	8,6	26,6	36,6	26,6	3,78	,988
10) This Insurer fully performs the promised service	1,6	9,4	28,9	43,8	16,4	3,64	,920
11) This Insurer provides an effective customer support service	2,3	5,5	30,5	46,1	15,6	3,67	,888
Responsiveness $\alpha = 0,812$						Mean = 3,62	
12) This Insurer has flexible products that meet the needs of customers	0,8	7,0	39,8	46,1	6,3	3,50	,753
13) This Insurer provides prompt customer service	1,6	7,0	39,8	35,9	15,6	3,57	,893
14) Prompt & Efficient Grievance handling mechanism	1,6	7,8	32,8	35,2	22,7	3,70	,960

15) This Insurer offers a wide range of services/products	1,6	7,8	19,5	51,6	19,5	3,80	,899
16) This Insurer is innovative in introducing new products	2,3	4,7	39,1	42,2	11,7	3,56	,849
17) The prices of this Insurer are competitive	3,9	7,0	24,2	52,3	12,5	3,62	,931
Assurance $\alpha = 0,834$						Mean = 3,65	
18) The employees/agents of this Insurer understand the specific needs of customers	3,9	5,5	28,9	47,7	14,1	3,63	,931
19) The employees/agents of this Insurer have adequate knowledge and competence to answer customer requests	1,6	4,7	28,9	48,4	16,4	3,73	,846
20) This Insurer makes customers feel safe and protected in their transactions	1,6	6,3	23,4	58,6	10,2	3,70	,799
21) The terms and the clauses of the insurance/plan contract are clear and easy to understand	1,6	4,7	21,1	54,7	18,0	3,55	,833
Empathy $\alpha = 0,829$						Mean = 3,71	
22) The behaviour of the Insurer's employees/agents inspires trust and confidence in the customer	1,6	7,8	31,3	46,9	12,5	3,61	,862
23) The employees/agents of this Insurer provide individualized attention to the customer	3,1	7,0	31,3	40,6	18,0	3,63	,963
24) This Insurer has convenient opening hours for all customers	2,3	3,9	18,0	60,2	15,6	3,83	,824
25) The employees/agents of this Insurer are always willing to help the customer	2,3	6,3	29,7	46,9	14,8	3,66	,891
26) This Insurer provides flexible and convenient payment options	1,6	10,2	30,5	46,9	10,9	3,83	,877
Global perception		$\alpha_{Global} = 0,961$			Mean $_{Global} = 3,67$		

Source: Own elaboration based on research data

4.3. Respondent's satisfaction and loyalty

As in the previous point, the reliability of these constructs was evaluated through Cronbach's Alpha, which presents values above the acceptability threshold of 0.7 (Hair et al., 2009) in both cases (Table 4.4.). The highest level of satisfaction concerns the services provided by the insurance company (3.83). As for loyalty, although the intention to remain with the current insurer, despite the existence of many others, is the most expressive (3.77), this intention turns out to be the least valued when faced with the launch of promotions by the other companies (3.59).

Table 4.4. - Satisfaction and Loyalty

Satisfaction and Loyalty	Strongly Disagree (%)	Disagree (%)	Neither disagree nor agree (%)	Agree (%)	Strongly Agree (%)	Mean	Standard Deviation
Satisfaction $\alpha = 0,804$						Global Mean = 3,76	
S1) Overall, I am satisfied with the services provided by this Insurer	1,6	5,5	19,5	55,5	18,0	3,83	,843

S2) Overall, I feel satisfied after each transaction with this Insurer	2,3	5,5	19,5	60,9	11,7	3,74	,825
S3) Overall, I am satisfied with the relationship between me and this insurer	1,6	3,1	31,3	52,3	11,7	3,70	,779
Loyalty $\alpha = 0,771$						Global Mean = 3,67	
L1) I will recommend this Insurer to others	1,6	5,5	32,8	46,9	13,3	3,65	,838
L2) Although there are many Insurers, I will continue with my current insurer	3,1	3,9	19,5	59,4	14,1	3,77	,853
L3) I will continue with my current insurance company despite promotions that others may launch	4,7	5,5	28,1	49,2	12,5	3,59	,943

Source: Own elaboration based on research data

4.4. Service quality dimensions

To analyse whether service quality perceived by customers is a five-dimensional construct, as hypothesized in H1, the 26-item scale was factor analysed using the Principal Component Analysis (PCA) with Varimax rotation. However, before applying factor analysis, Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy (MSA) and Bartlett's test of Sphericity were applied to verify the appropriateness of data for factor analysis. In this study, the value of KMO for the overall matrix was found to be excellent (0.902) and Bartlett's test of Sphericity was highly significant ($p < 0.001$). The results thus indicated that the sample taken was appropriate to proceed with a factor analysis procedure. Besides Bartlett's Test of Sphericity and the KMO Measure of Sampling Adequacy, communality values of all variables were also observed. The extraction value of the Communalities of all the variables was above 0.50 (Table 4.5.) as per the recommendation of Hair et al. (2009).

Table 4.5. - Communalities

Communalities - Extraction Method: Principal Component Analysis																									
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
0,75	0,66	0,74	0,68	0,69	0,66	0,62	0,64	0,73	0,67	0,63	0,61	0,67	0,57	0,57	0,78	0,61	0,65	0,63	0,64	0,55	0,61	0,66	0,72	0,64	0,65

Source: Own elaboration based on research data

As for the number of components to be retained, the Kaiser criterion was used, which suggests the extraction of factors with an eigenvalue greater than 1, and also the criterion of accumulated variance which, according to Hair et al. (2009), should reach the level of 60%. Thus, four components were retained, which were interpreted based on the factor loadings contained in the Rotated Component Matrix.

Table 4.6. summarizes the results of the Principal Components Analysis, presenting the items, and respective factor loadings, that make up each factor, their eigenvalues, explained

variance and Cronbach's alpha values. All dimensions were named based on the contents of the final items making up each of the four dimensions: the first factor mainly represents elements related to the insurer's ability to fully, dependably, promptly and ethically perform the promised service, it is therefore labelled “Reliability & Responsiveness”; the second factor was designated as “Assurance & Empathy”, since most of these variables reflect the ability of employees to convey reassurance and empathy to the customer; the third factor was named “Tangibles” because it includes variables referring to tangible attributes of a physical or communicational nature and finally, considering that the variables included in the fourth factor reflect the convenience provided to customers, the designation applied by Shreenivasan et al. (2018) was used for this factor: “Convenience”.

Table 4.6. - PCA results

Service quality perceptions						
Adequacy			Factor extraction	Factor rotation	Factors to retain criteria	
Bartlett's test		KMO			Kaiser	Variance %
X 2	Sig.					
2499,713	0.000	,902	Orthogonal	Varimax	13,236	18,158
					1,519	36,236
					1,212	53,071
					1,087	65,593
“Reliability & Responsiveness” (α = 0.890)						Factor loadings
This Insurer fully performs the promised service						,729
This Insurer makes customers feel safe and protected in their transactions						,669
This Insurer provides prompt customer service						,652
This Insurer promotes ethical conduct						,617
This Insurer provides an effective customer support service						,597
This Insurer has materials associated with the service (brochures, posters, etc.) visually attractive						,561
The prices of this Insurer are competitive						,548
Prompt & efficient grievance handling mechanism						,503
“Assurance & Empathy” (α = 0.889)						Factor loadings
The employees/agents of this Insurer provide individualized attention to the customer						,783
This Insurer has flexible products that meet the needs of customers						,684
The employees/agents of this Insurer understand the specific needs of customers						,617
The employees/agents of this Insurer have adequate knowledge and competence to answer customer requests						,541
The employees/agents of this Insurer are always willing to help the customer						,525
The behaviour of the Insurer's employees/agents inspires trust and confidence in the customer						,517
This Insurer offers a wide range of services/products						,469
“Tangibles” (α = 0,888)						Factor loadings
This Insurer uses modern equipment and technologies						,739
This Insurer is financially stable						,724
It is very easy to locate the website of this Insurer						,614
This Insurer provides clear and transparent information about its products and services						,594
It is very easy to find the desired information on the website of this Insurer						,558
“Convenience” (α = 0,869)						Factor loadings
This Insurer is innovative in introducing new products						,820
In this Insurer, the procedure for subscribing to a plan/policy is simple and fast						,540
This insurance company provides several means of communication (email, telephone, internet)						,536
The terms and the clauses of the insurance/plan contract are clear and easy to understand						,531
This Insurer provides flexible and convenient payment options						,507
This Insurer has convenient opening hours for all customers						,499

Source: Own elaboration based on research data

The results obtained do not reproduce the five-dimensional structure proposed by Parasuraman et al. (1985) and the four retained factors are composed of a mix match of various items from the original service quality instrument. This is the case of the first component, that aggregates aspects of both the original “Reliability” and “Responsiveness” dimensions, which coincides with the first factor extracted in Singh et al. (2014) work and is in agreement with what was mentioned by Shreenivasan et al. (2018:1310): "reliability and responsiveness show to be most important factors of service quality construction". Overall, the results indicate a significant pattern of service quality perceptions, but do not allow us to confirm H1, since the service quality perceived by Portuguese health insurance customers revealed a four-dimensional structure. This result is in agreement with Babakus and Boller's (1992) indication that the number of dimensions of this construct is dependent on the specific service being offered.

Based on this structure, and considering the subsequent analyses, four new variables were created, representing the perception of service quality in the identified dimensions and resulting from the arithmetic means of the variables associated with each of them.

4.5. Correlations between perceived service quality, satisfaction and loyalty

For the analysis of hypotheses H2 to H4, Pearson's correlation coefficients were calculated between satisfaction and loyalty and between these and the four identified dimensions of perceived service quality (Table 4.7.). As in Shreenivasan et al. (2018), the results show that there are significant and strong direct correlations between all the constructs, which lead us to confirmation of the mentioned research hypotheses.

However, while in the work of those authors, the empathy dimension has the strongest relation with customer satisfaction and the assurance dimension with loyalty, in the case of the present study it is concluded that the dimension of quality that most strongly relates to satisfaction is “Reliability & Responsiveness”, a dimension that appears in second place in the case of loyalty, whose strongest relationship is registered with “Convenience”.

Table 4.7. - Correlations

	Satisfaction	Loyalty	Reliability & Responsiveness	Assurance & Empathy	Tangibles	Convenience
Satisfaction	1					
Loyalty	,753**	1				
Reliability & Responsiveness	,856**	,726**	1			
Assurance & Empathy	,789**	,632**	,786**	1		
Tangibles	,778**	,696**	,730**	,799**	1	

Convenience	,769**	,820**	,783**	,740**	,786**	1
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Source: Own elaboration based on research data

4.6. Influence of demographic characteristics

At this point, it is intended to find out whether perceptions of service quality, satisfaction and loyalty differ according to customer demographics. Only the results for which statistically significant differences were detected will be presented ($\alpha=5\%$).

4.6.1. Age

In an attempt to detect the existence of possible differences as a function of age, the respondents were grouped into three age groups and, as the assumption of normality for the application of ANOVA was not met, the non-parametric Kruskal-Wallis test was used. This test led to the rejection of the null hypothesis, thus indicating the existence of differences in at least two age groups, in the cases of "Assurance & Empathy", satisfaction and loyalty. To identify which groups, differ from each other, Fisher's multiple comparison test was used.

Regarding the only perceived quality dimension that presents significant differences according to age, "Assurance & Empathy", it appears that this differentiation occurs between the younger age group (less than 31 years old) and the oldest group (over 50 years old), in the sense that the latter has a significantly higher perception than the former (Table 4.8.).

Table 4.8. - Age / "Assurance & Empathy"

Kruskal-Wallis and Fisher Tests						
Assurance & Empathy (Average values)	Age groups			Kruskal - Wallis		Fisher's LSD
	< 31 anos (1)	[31-50] (2)	> 50 (3)	χ^2	p	1 ≠ 3
	3,5	3,7	3,8	8,10	0,018	

Source: Own elaboration based on research data

The same is true concerning satisfaction, with a significant difference between younger customers, with lower levels of satisfaction, and older customers, with higher levels of satisfaction (Table 4.9.).

Table 4.9. - Age / Satisfaction

Kruskal-Wallis and Fisher Tests						
Satisfaction (Average values)	Age groups			Kruskal - Wallis		Fisher's LSD
	< 31 anos (1)	[31-50] (2)	> 50 (3)	χ^2	p	1 ≠ 3
	3,6	3,7	4,0	8,54	0,014	

Source: Own elaboration based on research data

The younger group also shows a lower level of loyalty, significantly different from the other two age groups (Table 4.10).

Table 4.10 - Age / Loyalty

Kruskal-Wallis and Fisher Tests						
Loyalty (Average values)	Age classes			Kruskal - Wallis		Fisher's LSD
	< 31 anos (1)	[31-50] (2)	> 50 (3)	χ^2	p	1 ≠ 2, 3
	3,4	3,7	3,9	9,72	0,008	

Source: Own elaboration based on research data

4.6.2. Education level

Through the application of the Kruskal-Wallis test (since the assumption of normality for the application of ANOVA was not met), differentiation was also detected in "Assurance & Empathy", according to educational qualifications, with customers with secondary education having a significantly higher perception of this quality dimension than the remaining groups (Table 4.11.). This result is in line with that obtained in this quality dimension in terms of age, as respondents with secondary education have the highest average age (44 years versus 39 at the technical/ professional level and 38 at the higher education level).

Table 4.11. - Education level / "Assurance & Empathy"

Kruskal-Wallis and Fisher Tests						
"Assurance & Empathy"	Education level			Kruskal - Wallis		Fisher's LSD
	Secondary Education (1)	Technical/ Professional (2)	Higher Education (3)	χ^2	p	1 ≠ 2, 3
	3,89	3,58	3,36	7,24	0,027	

Source: Own elaboration based on research data

4.6.3. Gender

Finally, it was also possible to detect a differentiation according to gender in the “Reliability & Responsiveness” and “Convenience” quality dimensions, and in both, women register a significantly higher perception (Table 4.12.). The same is true with regard to satisfaction.

Table 4.12. - Gender / Quality and Satisfaction

t Test independent samples						
Quality dimensions	Female		Male		t Student	p-value
	Mean	Standard deviation	Mean	Standard deviation		
“Reliability & Responsiveness”	3,80	0,52	3,51	0,76	2,54	0,013
“Convenience”	3,83	0,57	3,53	0,75	2,55	0,012
Satisfaction	3,91	0,58	3,62	0,76	2,41	0,017

Source: Own elaboration based on research data

Given these results, we can conclude that research hypotheses H5 to H7 are only partially confirmed. In the case of H5, only the differentiation according to age, educational qualifications and gender, in three of the perceived quality dimensions (“Assurance & Empathy”, “Reliability & Responsiveness”, “Convenience”) are confirmed. In H6, the hypothesis related to satisfaction, it is verified that this differs only according to age and gender and in the case of H7 there is only a single variation in loyalty according to age.

4.7. Influence of the type of health product

Finally, and despite the lack of theoretical support since we found no studies addressing the dichotomy of health plan/insurance, it was decided to analyse the possible influence of the type of product on service quality perceptions, satisfaction and loyalty. The analysis carried out allowed the identification of only one significant difference in terms of loyalty, indicating that this is significantly higher in health insurance subscribers (Table 4.13.).

Table 4.13. - Product / Loyalty

t Test independent samples						
Loyalty	Health insurance		Health plan		t Student	p-value
	Mean	Standard deviation	Mean	Standard deviation		
	3,76	0,71	3,42	0,70	2,50	0,014

Source: Own elaboration based on research data

4.8. Mediating role of satisfaction

Mediation analysis was performed to assess the mediating role of customer satisfaction in the relation between perceived service quality and loyalty. According to Shrout and Bolger (2002), mediation is said to occur when a causal effect of some variable X (quality) on an outcome Y (loyalty) is influenced by some intervening variable M (satisfaction). For this analysis, the bootstrapping method was applied, using the SPSS Process macro, a procedure that does not have normality assumptions and that, according to the same authors, is a more robust strategy to assess indirect effects than traditional mediation tests.

The results (Fig. 4.1.) show that quality (independent variable) is a significant predictor of satisfaction ($a=0.96$, $t=20.89$, $p=0.000$) that, in turn, is a significant predictor of loyalty ($b=0.28$, $t=2.34$, $p=0.021$). The total effect of quality on loyalty is significant ($c=0.90$, $t=14.30$, $p=0.000$, $R^2_{aj} = 0.62$) and, with the inclusion of the mediator (satisfaction), the direct effect of quality on loyalty is still significant ($c'=0.63$, $t=4.82$, $p=0.000$, $R^2_{aj} = 0.63$). The results of the indirect effect based on 5000 bootstrap samples show a significant indirect relationship between quality and loyalty mediated by satisfaction ($a*b=0.27$, Bootstrap $CI^{95\%} = 0.02; 0.47$). As the direct and indirect effects are significant, it can be concluded that this is a situation of partial mediation, as quality (independent variable) exerts both a direct influence on loyalty and an indirect influence through satisfaction (moderating variable), which accounts for 30% of the total effect on loyalty [$PM = (0.27) / (0.90)$]. Thus, these results allow us to confirm what was hypothesized in H8.

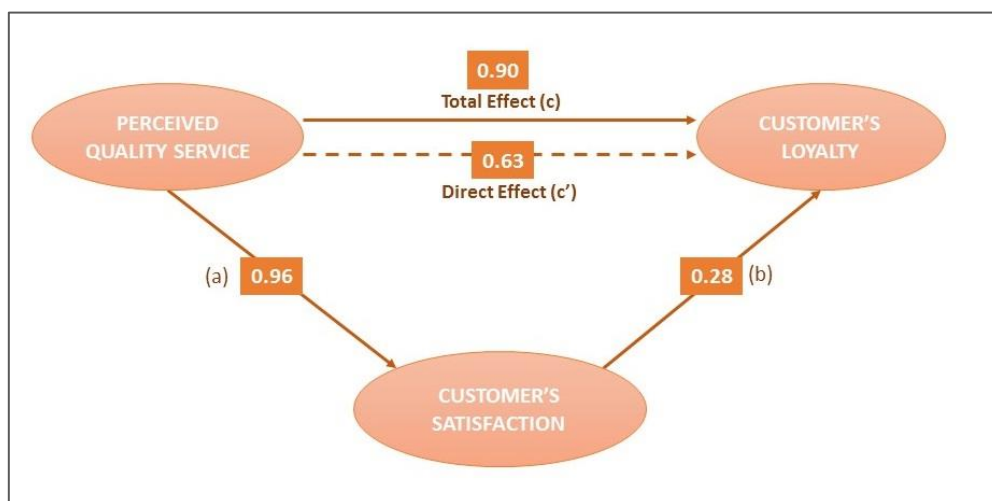


Fig. 4.1. - Model of perceived quality as a predictor of loyalty, mediated by satisfaction

To conclude this section, a summary of the analyzed hypotheses and respective results is presented in table 4.14.

Table 4.14. - Hypotheses - summary

Hypotheses	Result
H1: Perceived service quality is a five-dimensional construct	Not confirmed
H2: Perceived service quality is directly related to customer satisfaction	Confirmed
H3: Perceived service quality is directly related to customer loyalty	Confirmed
H4: Customer satisfaction is directly related to customer loyalty	Confirmed
H5: Different sociodemographic characteristics lead to different service quality perceptions	Partially confirmed
H6: Different sociodemographic characteristics lead to different satisfaction levels	Partially confirmed
H7: Different sociodemographic characteristics lead to different loyalty levels	Partially confirmed
H8: Customer satisfaction mediates the relationship between perceived service quality and customer loyalty	Confirmed

5. CONCLUSIONS AND RECOMMENDATIONS

According to Siddiqui and Sharma (2010), the most important aspect of the service provider-customer relationship is that service providers do not have an in-depth view of customer preferences, resulting in a disconnect between what customers want and what service providers offer. This is particularly true in the case of services such as health insurance, due to the intangibility element associated with it.

The present study aimed to identify the significant factors which contribute to the formation of customers' perception of service quality in the Portuguese health insurance sector and to assess their relationships with satisfaction and loyalty, thus enabling this sector to develop appropriate action plans based on the relevance of the factors identified. For this purpose, a survey was carried out on a non-probabilistic sample of 128 Portuguese citizens over 18 years of age and subscribers to at least one health plan or insurance. For the service quality analysis, the SERVPERF methodology (Cronin et al., 1992) was used, based on a 26-item scale and five-dimensional structure suggested by Parasuraman et al. (1988).

Respondents have an average age of 40 years and show quite a moderate level of satisfaction in the five dimensions of service quality. The greatest part is single (49.2%), lives in the Lisbon area (38.3%) and belong to a household with a net monthly income between 2000 and 4000€ (50.0%). The majority of respondents are male (52.3%), employed (68.8%), have higher education qualifications (60.9%) and have health insurance (70.1%).

The factor analysis results show that all the items are relevant for measuring the perception of customers toward service quality in the Portuguese health insurance sector, but that these are reallocated under four different factors. This result is in line with the results of some authors (Singh et al., 2014; Choudhuri, 2015), who agree that although service quality is a multi-dimensional construct, the number and composition of its dimensions may vary depending on the service setting.

Among the four identified factors, "Reliability & Responsiveness" is the most important determinant of the customer's perception of service quality, followed by "Assurance & Empathy", "Tangibles" and "Convenience", in that order. It is therefore extremely important that insurance companies understand what consumers mean by "Reliability & Responsiveness" which, in the case of this study, was primarily identified with a behaviour, on the part of the insurer, that involves the full and rapid execution of the promised service, in a way that customers feel protected and promoting ethical conduct. Our results also indicate that men have a significantly lower perception of this quality dimension than women. "Assurance & Empathy"

is the second most important dimension, mostly associated with employees/agents who provide individualized attention to customers, understand their specific needs, respond competently to their requests and are always willing to help them. Therefore, companies must provide adequate training to their collaborators to improve their customer interaction skills, especially with regard to younger customers and those with higher education qualifications, who have lower quality perceptions in this factor. Thirdly, in the hierarchy of dimensions, tangible aspects emerge, the most important being the use of modern technologies and equipment as well as the financial stability of the company. This dimension is the only one in which there are no significant differences between the quality perceptions of customers with different demographic characteristics. “Convenience” is the only dimension identified in this study without correspondence in the structure proposed by Parasuraman et al. (1988). In this case, companies should focus on innovating in the introduction of new products, simplifying their subscription procedures and providing different means of communication, as these are the most important attributes in this dimension. As in the case of the “Reliability & Responsiveness” factor, it appears that this quality dimension has a significantly lower perception among males. Furthermore, companies should be aware that these aspects are extremely important for customer retention because, as the correlational analysis showed, this is the dimension of service quality that is most strongly related to loyalty. From a managerial perspective, these findings contribute to a better understanding of how customers assess service quality. Based on the relevance of each of the factors mentioned, the health insurance providers can propose appropriate action plans based on the most crucial dimensions in shaping customer service quality perceptions.

In the context of correlational analysis, the results also allow us to conclude that the perceived quality of service, in all its dimensions, is significantly related to both satisfaction and loyalty and that customer satisfaction is significantly linked to customer loyalty. Through the mediation analysis it was possible to confirm that, indeed, the perceived service quality exerts both a direct influence on loyalty and an indirect influence through satisfaction, which accounts for 30% of the total effect on loyalty. These results are found to be in line with previous studies (Rai & Medha, 2013; Singh et al., 2014) and reaffirm, as mentioned by Nguyen et al. (2018:4) “the existence of both direct and indirect impacts between service quality and customer loyalty”, which means that, to get a competitive advantage over the competitors, the service quality should be used as a strategic tool.

Regarding the analysis of disparities in satisfaction and loyalty levels among the customers across demographic profiles, results indicate lower satisfaction and loyalty levels for younger

customers. It is also possible to identify lower satisfaction levels among men and lower loyalty levels among customers with health plans. These results may be relevant for insurance providers when designing their products/services offerings and promotions because, as Nguyen et al. (2018:12) state: “customer satisfaction and loyalty are often viewed as drivers for enhancing the competitive advantages of a company and are significant determinants in sustainable business management”.

Although this study contributes to the existing literature on quality perceptions in the service sector and narrows the research gap in terms of the application of the SERVPERF methodology to measure service quality in the Portuguese health insurance sector, it has some limitations. The first limitation to highlight concerns the use of cross-sectional data. Cross-sectional studies, that measure service quality perceptions at one point in time, may understate or overstate true perceptions because, accordingly to Siddiqui and Sharma (2010), these are known to be affected by customers’ immediate reactions to specific service encounters. Future studies in this area should measure changes in service quality perceptions over time, to have a better understanding of its determinant dimensions and its relationship with satisfaction and loyalty. Furthermore, in the present study, exploratory factor analysis was used with the application of the principal component method. In future studies, the results obtained may be validated using confirmatory factor analysis. Finally, it is suggested that future studies use a random sample rather than a snowball sample, which will allow a better representation of the population.

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ANNEX A - Questionnaire (Portuguese version)

iscte

Este inquérito faz parte do trabalho final do Mestrado em Management do ISCTE e tem como objetivo analisar a perceção dos subscritores de planos/seguros de saúde sobre a qualidade de serviço prestado pelas Seguradoras. Todas as respostas são confidenciais e serão apenas utilizadas no contexto desta investigação. Agradecemos desde já a sua colaboração, fundamental para a concretização deste estudo.

Quem deverá preencher este questionário?

- Cidadãos portugueses, com mais de 18 anos, que detenham pelo menos um seguro/plano de saúde -

1. Tendo em atenção que:

Um plano de saúde é uma rede de descontos em cuidados de saúde. Ao contrário dos seguros de saúde, oferece apenas acesso a uma rede de prestadores de cuidados de saúde (não contempla a possibilidade de recorrer a um prestador fora dessa rede) e só oferece descontos (não dá direito a copagamento/reembolso);

indique de que modalidade é subscritor: Seguro de Saúde Plano de Saúde

2. Qual o meio utilizado para contratar o seu plano/seguro de saúde?

Sede/Sucursal da Seguradora Telefone
Agente de Seguros Outros
Internet Qual/Quais? _____

3. Há quanto tempo está com o seu provedor de seguro/plano de saúde atual?

Menos de 1 ano
De 1 até 3 anos
De 3 até 5 anos
De 5 até 10 anos
10 ou mais anos

4. Qual o seu provedor de seguro/plano de saúde atual?

Grupo Fidelidade (<i>Multicare</i>)	<input type="checkbox"/>	CA Seguros	<input type="checkbox"/>
Grupo Ageas (<i>Médis</i>)	<input type="checkbox"/>	Zurich Insurance	<input type="checkbox"/>
Grupo Generali	<input type="checkbox"/>	Una Seguros	<input type="checkbox"/>
Allianz Portugal	<input type="checkbox"/>	Liberty Seguros	<input type="checkbox"/>
Vitória Seguros	<input type="checkbox"/>	Grupo <i>Future Healthcare</i>	<input type="checkbox"/>
GNB Seguros	<input type="checkbox"/>	Outro	<input type="checkbox"/>
Lusitania Seguros	<input type="checkbox"/>		

5. Considerando o seu provedor de seguro/plano de saúde atual, indique por favor em que medida concorda com as seguintes afirmações:	Discordo fortemente 1	Discordo 2	Não discordo nem concordo 3	Concordo 4	Concordo fortemente 5
1) Esta Seguradora utiliza equipamentos e tecnologias modernos	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2) Esta Seguradora dispõe de materiais associados ao serviço (brochuras, panfletos, posters, etc) visualmente atrativos	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3) Esta Seguradora disponibiliza diversos meios de comunicação (email, telefone, internet)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4) É muito fácil localizar o website desta Seguradora	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5) É muito fácil encontrar a informação pretendida no website desta Seguradora	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6) Esta Seguradora disponibiliza informação clara e transparente sobre os seus produtos e serviços	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7) Nesta Seguradora o procedimento para subscrever um plano/ apólice é simples e rápido	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8) Esta Seguradora promove uma conduta ética	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9) Esta Seguradora é financeiramente estável	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10) Esta Seguradora executa na íntegra o serviço prometido	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11) Esta Seguradora disponibiliza um eficaz serviço de suporte ao cliente	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12) Esta Seguradora dispõe de produtos flexíveis que atendem às necessidades dos clientes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13) Esta Seguradora presta um pronto atendimento aos clientes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14) Esta Seguradora dispõe de um mecanismo de tratamento de reclamações fácil e eficiente	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15) Esta Seguradora disponibiliza uma ampla gama de serviços/produtos	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16) Esta Seguradora é inovadora na introdução de novos produtos	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17) Os preços desta Seguradora são competitivos	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18) Os colaboradores/agentes desta Seguradora entendem as necessidades específicas dos clientes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19) Os colaboradores/agentes desta Seguradora possuem o conhecimento e competência adequados para responder às solicitações dos clientes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20) Esta Seguradora faz com que os clientes se sintam seguros e protegidos nas suas transações	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21) Os termos e as cláusulas do contrato de seguro/plano são claros e fáceis de entender	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22) O comportamento dos colaboradores/agentes da Seguradora transmite confiança ao cliente	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23) Os colaboradores/agentes desta Seguradora prestam atenção individualizada ao cliente	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24) Esta Seguradora dispõe de horários de funcionamento convenientes a todos os clientes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25) Os colaboradores/agentes desta Seguradora estão sempre dispostos a ajudar o cliente	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26) Esta Seguradora disponibiliza opções de pagamento flexíveis e convenientes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
S1) No geral, sinto-me satisfeito com os serviços prestados por esta Seguradora	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
S2) No geral, sinto-me satisfeito após cada transação com esta Seguradora	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
S3) No geral, sinto-me satisfeito com o relacionamento entre mim e esta seguradora	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
L1) Vou recomendar esta Seguradora a outros	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
L2) Embora existam muitas Seguradoras, continuarei com minha seguradora atual	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
L3) Continuarei com minha seguradora atual apesar das promoções que outras possam lançar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Caraterização Sociodemográfica

Idade: ____

Género: Feminino Masculino

Estado Civil: Casado/União de facto Solteiro
Divorciado/Separado Viúvo

Habilitações literárias: Ensino Básico Ensino Superior
Ensino Secundário Formação Técnica/Profissional

Situação perante o trabalho: Empregado Desempregado Reformado
Estudante Doméstico Outro

Área de residência: Norte Lisboa e Vale do Tejo Alentejo Açores
Centro Algarve Madeira

Valor de rendimento líquido mensal do seu agregado familiar:

Até 1000€ 1000 – 2000€ 2000 – 4000€
4000 – 6000€ Mais de 6000€

ANNEX B - Questionnaire (English version)

iscte

This survey is part of the final work of the Master in Management at ISCTE and aims to analyse the perception of health plan/insurance subscribers on the quality of service provided by Insurers. All responses are confidential and will only be used in the context of this investigation. We thank you in advance for your cooperation, which is essential for the completion of this study.

Who should complete this questionnaire?

- Portuguese citizens, over 18 years old, who hold at least one insurance/health plan --

1. Bearing in mind that:

A health plan is a network of discounts on health care. Unlike health insurance, it only offers access to a network of health care providers (does not include the possibility of using a provider outside that network) and only offers discounts (no co-payment/reimbursement entitlement);

indicate which modality you are subscribed to: Health insurance Health plan

2. How did you contract your health plan/insurance?

Headquarters/Branch	<input type="checkbox"/>	Telephone	<input type="checkbox"/>
Agent	<input type="checkbox"/>	Others	<input type="checkbox"/>
Internet	<input type="checkbox"/>	Which? _____	

3. How long have you been with your current health plan/insurance provider?

Less than 1 year	<input type="checkbox"/>
From 1 to 3 years	<input type="checkbox"/>
From 3 to 5 years	<input type="checkbox"/>
From 5 to 10 years	<input type="checkbox"/>
10 or more years	<input type="checkbox"/>

4. What is your current insurance/health plan provider?

Grupo Fidelidade (<i>Multicare</i>)	<input type="checkbox"/>	CA Seguros	<input type="checkbox"/>
Grupo Ageas (<i>Médis</i>)	<input type="checkbox"/>	Zurich Insurance	<input type="checkbox"/>
Grupo Generali	<input type="checkbox"/>	Una Seguros	<input type="checkbox"/>
Allianz Portugal	<input type="checkbox"/>	Liberty Seguros	<input type="checkbox"/>
Vitória Seguros	<input type="checkbox"/>	Grupo Future Healthcare	<input type="checkbox"/>
GNB Seguros	<input type="checkbox"/>	Other	<input type="checkbox"/>
Lusitania Seguros	<input type="checkbox"/>		

5. Considering your current health plan/insurance provider, please indicate the extent to which you agree with the following statements:	Strongly disagree 1	Disagree 2	Neither disagree nor agree 3	Agree 4	Strongly agree 5
1) This Insurer uses modern equipment and technologies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2) This Insurer has materials associated with the service (brochures, pamphlets, posters, etc.) visually attractive	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3) This insurance company provides several means of communication (email, telephone, internet)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4) It is very easy to locate the website of this Insurer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5) It is very easy to find the desired information on the website of this Insurer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6) This Insurer provides clear and transparent information about its products and services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7) In this Insurer, the procedure for subscribing to a plan/policy is simple and fast	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8) This Insurer promotes ethical conduct	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9) This Insurer is financially stable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10) This Insurer fully performs the promised service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11) This Insurer provides an effective customer support service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12) This Insurer has flexible products that meet the needs of customers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13) This Insurer provides prompt customer service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14) Prompt & Efficient Grievance handling mechanism	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15) This Insurer offers a wide range of services/products	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16) This Insurer is innovative in introducing new products	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17) The prices of this Insurer are competitive	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18) The employees/agents of this Insurer understand the specific needs of customers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19) The employees/agents of this Insurer have adequate knowledge and competence to answer customer requests	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20) This Insurer makes customers feel safe and protected in their transactions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21) The terms and the clauses of the insurance/plan contract are clear and easy to understand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22) The behaviour of the Insurer's employees/agents inspires trust and confidence in the customer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23) The employees/agents of this Insurer provide individualized attention to the customer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24) This Insurer has convenient opening hours for all customers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25) The employees/agents of this Insurer are always willing to help the customer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26) This Insurer provides flexible and convenient payment options	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
S1) Overall, I am satisfied with the services provided by this Insurer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
S2) Overall, I feel satisfied after each transaction with this Insurer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
S3) Overall, I am satisfied with the relationship between me and this insurer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
L1) I will recommend this Insurer to others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
L2) Although there are many Insurers, I will continue with my current insurer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
L3) I will continue with my current insurance company despite promotions that others may launch	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Sociodemographic Characterization

Age: _____

Gender: Female Male

Marital Status: Married/civil partnership Single
Divorced/separated Widower

Education level: Basic Education Higher Education
Secondary Education Technical/Professional

Professional status: Employed Unemployed Retired
Student Homemaker Other

Area of Residence: Norte Lisboa e Vale do Tejo Alentejo Açores
Centro Algarve Madeira

Monthly net income of your household:

Up to 1000€ 1000 – 2000€ 2000 – 4000€
4000 – 6000€ More than 6000€

ANNEX C - SPSS outputs: mediation analysis

OUTCOME VARIABLE: SatGlob

Model Summary

R	R-sq	MSE	F	df1	df2	p
,8809	,7760	,1080	436,6101	1,0000	126,0000	,0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	,2313	,1711	1,3519	,1788	-,1073	,5700
QualGlob	,9589	,0459	20,8952	,0000	,8681	1,0497

OUTCOME VARIABLE: LoyaGlob

Model Summary

R	R-sq	MSE	F	df1	df2	p
,7968	,6349	,1967	108,6741	2,0000	125,0000	,0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	,2946	,2326	1,2666	,2077	-,1657	,7549
QualGlob	,6312	,1308	4,8242	,0000	,3723	,8902
SatGlob	,2816	,1202	2,3430	,0207	,0437	,5195

***** TOTAL EFFECT MODEL *****

OUTCOME VARIABLE: LoyaGlob

Model Summary

R	R-sq	MSE	F	df1	df2	p
,7867	,6188	,2037	204,5696	1,0000	126,0000	,0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	,3597	,2350	1,5309	,1283	-,1053	,8248
QualGlob	,9013	,0630	14,3028	,0000	,7766	1,0260

***** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y *****

Total effect of X on Y

Effect	se	t	p	LLCI	ULCI	c_cs
,9013	,0630	14,3028	,0000	,7766	1,0260	,7867

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI	c'_cs
,6312	,1308	4,8242	,0000	,3723	,8902	,5509

Indirect effect(s) of X on Y:

Effect	BootSE	BootLLCI	BootULCI
SatGlob	,2701	,1170	,0201 ,4742

**ANNEX D - SPSS outputs: differentiation analysis (non-statistically significant results)
H5 – H7**

Age * Service quality dimensions

	Estatísticas de teste ^{a,b}		
	Reliability & Responsiveness	Tangibles	Convenience
H de Kruskal-Wallis	5,638	4,906	4,517
Significância Sig.	,060	,086	,104

a. Teste Kruskal Wallis

b. Variável de Agrupamento: Idade3CI

Education level * Service quality dimensions / Loyalty / Satisfaction

	Estatísticas de teste ^{a,b}				
	Reliability & Responsiveness	Tangibles	Convenience	Loyalty	Satisfaction
H de Kruskal-Wallis	4,577	1,739	5,860	4,680	1,879
Significância Sig.	,101	,419	,053	,096	,391

a. Teste Kruskal Wallis

b. Variável de Agrupamento: Habilitações literárias

Gender * Service quality dimensions / Loyalty

		Teste de amostras independentes				
		Teste de Levene para igualdade de variâncias		teste-t para Igualdade de Médias		
		Z	Sig.	t	df	Significância Bilateral p
Assurance & Emphaty	Variâncias iguais assumidas	5,232	,024	1,957	126	,053
	Variâncias iguais não assumidas			1,990	117,390	,050
Tangibles	Variâncias iguais assumidas	6,135	,015	1,901	126	,060
	Variâncias iguais não assumidas			1,927	121,622	,056
Loyalty	Variâncias iguais assumidas	,066	,798	1,635	126	,105
	Variâncias iguais não assumidas			1,632	124,044	,105

Type of health product * Service quality dimensions / Satisfaction

		Teste de amostras independentes				
		Teste de Levene para igualdade de variâncias		teste-t para Igualdade de Médias		
		Z	Sig.	t	df	Significância Bilateral p
Reliability & Responsiveness	Variâncias iguais assumidas	,602	,439	-,317	125	,752
	Variâncias iguais não assumidas			-,315	68,713	,754
Assurance & Emphaty	Variâncias iguais assumidas	,140	,709	-1,296	125	,197
	Variâncias iguais não assumidas			-1,326	73,651	,189
Tangibles	Variâncias iguais assumidas	1,260	,264	-1,028	125	,306
	Variâncias iguais não assumidas			-1,012	67,502	,315
Convenience	Variâncias iguais assumidas	,200	,656	-1,458	125	,147
	Variâncias iguais não assumidas			-1,486	73,127	,142
Satisfaction	Variâncias iguais assumidas	,870	,353	-1,610	125	,110
	Variâncias iguais não assumidas			-1,610	70,042	,112