QUALITY SERVICE AND CUSTOMER SATISFACTION:
A STUDY IN THE RETAIL PHARMACEUTICAL

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ABSTRACT

Starting on a discussion based on the redemption of the conceptual aspects of satisfaction and expectations, the goal of such investigation is to verify if the services rendered by the distribution networks of the pharmaceutical sector attend to their clients’ expectations and satisfaction level. The deliberately non-probabilistic sample was composed by 91 executives involved directly in the commercial relations established between pharmacies and the pharmaceutical products distribution networks. The data collected by a survey was analyzed having as a base the calculation of arithmetical mean and the application of linear regression to the variables “Expectation”, “Perception” and “Satisfaction”, regarding the dimensions selected in the study. The results showed that there is a low level of satisfaction regarding the services rendered by the distribution networks of the analyzed sector.

Keywords: Service Quality; Client’s Satisfaction; Distribution Networks; Pharmaceutical Retail.

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INTRODUCTION

Inserted on a strong competition and pursuit of survival in the market context, more and more companies have been attending their clients in a way that their needs and expectations become fully satisfied. It is possible, for example, to observe many options of purchase in retail format (Moura, Silva & Batalha, 2006; Tamashiro, Merlo & Silveira, 2008) as well as in services and products (Parassuraman, 2000). Demonstrating agreement with this line of reasoning, Giraldi and Carvalho (2006) highlight that the globalization process has brought opportunities for the companies to offer products and services in global scale. Additionally to this, Wikström, Carlell and Frostling-Henningsson (2002), discuss the issue of the transition of the offer of physical products to the virtual world, which has produced considerable changes towards the choice about “where to buy.”

Towards the context previously explicit, in the last decades the pursuit of excellence in services has been highlighted as an important strategy in the process of client-supplier relationship management, since the establishment of relationship is an important source of competitive advantage (Haley & Haley, 1998; Galaskiewicz & Zaheer, 1999). Singh and Sirdeshmukh (2000) feature that the conquest and, mainly, the maintenance of clients in the raised competitive scenery in which the companies are inserted on have blunted as a big challenge for those who pursue the establishment of a long-term relationship with their clients.

The studies of Holbrook and Hirschman (1982) have long advocated that the improvement in the clients’ level of satisfaction became a strategic goal to be tracked by the companies that wanted to get competitive advantage through a better attendance of the consumers’ needs. Thereby, the attendance and the knowledge over the needs and expectations, while propellers of loyalty of the clients, have been discussed in the academic community.

An important aspect to be considered refers to the measurement of the client satisfaction for allowing data collection that supports the companies in the supply of products and services that fits into the clients’ expectations (Newel, 2000). To do this, the companies need to adopt strategies not only product development oriented, but, mainly, client oriented (Levitt, 1960; 1993), since, according to Day (2001); Cardozo (1965) and Oliver (1997) is the client’s satisfaction that will strengthen the relationship with the company. In this way, the studies of Anderson, Fornell and Rust (1997); Rust and Zahorik (1983) identify other aspects related to the clients’ satisfaction, such as bigger retention and loyalty, and, consequently, bigger profits, since there has been a reduction in the probability of the clients to change their suppliers. Depending on the sector, Reichheld and Sasser Jr. (1990) indicate that the profits may vary from 25% to 85%.
In a research that aimed at analyzing what the clients value in the relationship with their respective suppliers, Souza, Moori and Marcondes (2004) salient that when the markets get mature and the costs for conquering clients become high, it is needed to emphasize the retention of the clients already conquered and the establishment of the previously established relationship among the agents involved in the commercial trades. In such strong competition scenery, the preoccupation with the construct and maintenance of long-term relationships has been a trend, since many companies have substituted the trade market – that emphasized the sales – by the relationship marketing (KOTLER, 1996), because in a relationship, Anderson and Paine (1975) believe that different perceptions inspire the adoption of different strategies that not always meet the clients’ expectations.

Towards the need of acknowledging the clients’ satisfaction as a measure of organizational performance, it is noticeable the importance of developing models that aim at evaluate the satisfaction in different sectors of the economy, mainly, having as a base the fact that such effort in Brazil is still a beginning, regardless the fact that researches done in other countries are largely known by the national academic area (Milan & Trez, 2005).

Based on the previous contextualization, this study was realized with the aim at verifying, in a first moment, if the services rendered by the pharmaceutical products distribution networks are attending the needs and expectations of the clients. In a second moment, we aimed at identifying the level of satisfaction of such clients regarding the services that have been rendered by the networks. In the pursuit of the reach of the proposed goal, it was opted for structuring this study like this: besides this introduction, presented in the first section, we aimed at discussing in the following section, the main aspects related to the theme. The third section brings the procedures used in the study. In the fourth and fifth sections, respectively, are presented and discussed the research results, as well as the final considerations, including the limitations of such study and the suggestions to additional researches.

LITERATURE REVIEW

Conceptual aspects of quality and services

It was possible to verify in the literature reviewed that the concepts of goods and services have been associated to products when issues related to quality are being discussed. Such fact, according to Hoffman and Bateson (2003) has been faced normally, because of the difficulty in distinguishing products and services, or, on the other hand, tangible and intangible goods. To Lovelock (1998), service is a performance from the supplier to the client, since such performance is essentially intangible and normally does not result in property of any production factor, despite the fact that the process is connected to a physical product. In a different way,
goods or products may be defined as everything that a person receives in a trade relation, so that is why it configures objects, gadget, complemented by services along the delivery process (Hoffman & Bateson, 2003; Lamb JR, Hair Jr. & McDaniel, 2004).

So as the services, the intangibility and the variability of quality are factors that hamper its evaluation. In this sense, companies have established a generic set of quality determinant factors applicable to all kinds of service (Grönroos, 1995; Parasuraman, Zeithaml, Berry, 1985; Zeithaml, Parasuraman & Berry, 1990; Gianesi & Corrêa, 1996; Robinson, 1999; Dotchin & Oakland, 1994; Brito, Peris & Brito, 2004; Morgan, 1998). The Box 1 brings a summary of the main services characteristics.

### Box 1. Service characterization

<table>
<thead>
<tr>
<th>Authors</th>
<th>Aspects</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kotler (1996); Grönroos, (1995); Parasuraman (1988)</td>
<td>Intangibility</td>
<td>The services cannot be seen, felt, tried, listened to or smelled before being bought.</td>
</tr>
<tr>
<td>Semenik and Bamossy (1995); Kotler (1996)</td>
<td>Inseparability</td>
<td>The services are produced and consumed simultaneously, what implicates in a great interaction between supplier/distributor and client.</td>
</tr>
<tr>
<td>Kotler (1996)</td>
<td>Variability</td>
<td>The services depend on who execute them, and from where they are rendered, hampering the reach of some standardization.</td>
</tr>
<tr>
<td>Kotler (1996); Kotler and Armstrong (1995)</td>
<td>Perishable aspect</td>
<td>The services cannot be stocked up.</td>
</tr>
<tr>
<td>Grönroos (1995); Parasuraman (1985);</td>
<td>Heterogeneity</td>
<td>The performance is influenced by technical and emotional aspects of the contractor, what hampers the standardization and the price evaluation.</td>
</tr>
<tr>
<td>Parasuraman (1985)</td>
<td>Concurrence</td>
<td>They are consumed simultaneously with the production, hampering the detection and the correction of failures that happened before.</td>
</tr>
</tbody>
</table>

Source: Elaborated by the researcher based on the authors mentioned

Among the service concepts presented, it was opted to adopt, in this study, the concepts praised by Lamb Jr, Hair Jr. and McDaniel (2004), conceived as the results of efforts imputed to people or objects which actions cannot be used physically. Such option is justified by the belief that they fit clearly into the proposed research. The consumers’ perception regarding the services level is extremely important to the retailer, but is also considered subjective for its variability and intangibility that always leave gaps that interfere in the clients’ satisfaction (Morris & Johnston, 1987; Dotchin & Oakland, 1994; Zeithmail, Parasuraman & Berry, 1990).
Service quality and clients’ satisfaction

The quality comes from the experience acquired along the purchase and consumption process. Researches indicate that many aspects inherent to the products contribute to the attribution of value by the consumers, and are always associated to the goods characteristics, quality and its respective prices (Brito, Peris & Brito, 2004; Kotler, 2000; Oliver & DeSarbo, 1988; Rust & Zahorik, 1993; Cardozo, 1965). The results of a research done by Cronin; Brady and Hult (2000) suggest that the quality produces impacts over the consumers’ behavioral intentions.

Since the service quality is many times associated to an attitude or global judgment about the superiority of a rendered service, some studies done in such field suggest that the quality comes from the comparison of expectations and performance perception (Robinson, 1999; Brown & Swartz, 1989; Bolton & Drew, 1991). Teas (1993), Cronin and Taylor (1992) argue that the quality comes from the comparison between the performance or ideal levels or only from the perception of the rendered service performance.

Nevertheless, evaluating the services quality has not being an easy task, mainly because of its variability and intangibility that always leave gaps that interfere in the clients’ satisfaction. Such aspect shows in many models of service quality, among them (Morris & Johnston, 1987; Dotchin & Oakland, 1994; Parasuraman, Zeithaml & Berry, 1985). The consumers’ perception regarding the services levels, according to Zeithmail, Parasuraman and Berry (1990) is extremely important for the retailer, but is also considered subjective for its variability and intangibility that always leave gaps that interfere in the clients’ satisfaction.

Even though countless definitions have been attributed to the term satisfaction, the most popular definition admitted by Hoffman and Bateson (2003) is the one that conceives it as a comparison of the clients’ expectations to its perceptions about the meeting of the real service. Grönroos (1995), Parasuraman, Zeithaml and Berry (1985) and Zeithaml, Parasuraman and Berry (1990) share the same idea when they affirm that the quality is determined by the difference between the quality expected and the quality noticed. According to Cardozo (1965), is this satisfaction that takes you to repeat the purchase, as well as the company’s favorable publicity. To such importance may be attributed some factors that reflect directly over the organizations competitiveness support: loyalty to the brand, profitability and market share (Oliver, 1997).

Clients’ needs and expectations

In the conception of Laroche et al., (2004), the clients’ satisfaction or dissatisfaction is associated to the attendance of their needs and expectations, since the satisfaction and quality noticed result of the expectations focused in attitudes or preferences. The expectations, according to some researches (Figueiredo, 1994; Oliver, 1997; Oliver & Desarbo, 1988), correspond to the
probability of a common phenomenon occurrence – for example, the probability of a product to be associated to some specific attributes, benefits or results – that reflects the anticipation of a performance. Larán, Almeida and Hoffman (2004) support the idea that when a consumer is exposed to a consumption situation, he comes up with some desires or expectations, or both of them. If the noticed service corresponds to the service expected or overcomes it, the consumer will be satisfied (Parasuraman, Zeithaml & Berry, 1985).

The needs refer to a state in which it is noticeable some privation (Garcez & Rados, 2002) that modifies itself according to the living reality. To Figueiredo, Ozório and Arkader (2002), when the service rendered does not reach the client’s expectations level, there is a problem of quality or a failure in it. Adopting a larger view in this sense, Marchetti and Prado (2001), acknowledge that satisfying the consumer needs must be one of the central goals of the organizations, which makes possible their global performance evaluation.

**Pharmaceutical Retail**

According to the conceptual point of view, the literature review showed the existence of a plurality of concepts related to retail. In general, it was verified that the most used in Brazil are the ones conceived by Parente (2007, p. 22), who defined it as “all the activities that include the products and goods sales process to attend a personal need of the final consumer”, and, Levy and Wetz (2000, p. 27) who understand it as a “set of business activities that add value to products and services sold to consumers to their personal and familiar usage.”

About the borderline that acts in the retail and constitutes a bond between the industry and the final consumers, therefore, the retailer is conceived as a negotiator which role is to sell products and services to the final consumer (Levy & Weitz, 2000; Parente, 2007). AMA (American Marketing Association, 2008), defines the retailer as a “business unit that buy commodities from manufacturers, wholesalers and other distributors, and sell them straight to the final consumers, and, eventually, to other consumers.” The Figure 1 illustrates the position of the retailer along the distribution network.

**Figure 1. Distribution Network**

![Distribution Network Diagram](Image)

Source: Levy and Weitz (2000, p. 26)

The display in the Figure 1 allows inferring that the retailer is the last agent that integrates the goods or services distribution process to the consumers. Showing compliance with such
premise, Parente (2007) affirms that it is the bond established between the level of consumption and the levels of wholesale and production. According to Dubelaar, Chow and Larson, (2001), the retailers are the ones who make decisions of buying independently, and receive the stock straight from the suppliers, instead of from a distribution center.

The retailers are part of a complex marketing system that depends on the participation and integration of the other agents from the distribution network. Such network, according the report made by Coughlan et al, (2002); Kotler (2000); Bucklin (1966) constitutes a bond between the industry and the final consumers. Aiming at accomplishing their role the best way possible, the retailers have been taking into consideration a set of attributes supported by Ailawadi and Keller (2004) such as products variety and quality, services and brands, store’s look, service behavior and quality, prices, promotions frequency, considering that they influence in the store’s image formation process.

Considered one of the biggest and more diversified industries in the world, the retail is in the middle of a revolution that has transformed the simple negotiation way into an automatic and sophisticated administration method, in the areas of logistic, stock control and operational procedures (Mulhern, 1997). In Brazil, such sector tried a strong and increasing reception of foreign investments that became more intense from the nineties on, with the worldwide economy opening process. According to Motta and Silva (2006, p. 101).

“For a long time, the industries, mainly the strong brands withholders with international performing, imposed their conditions to the retailers, who were, in its majority, small companies with regional performing. However, recent changes in the retail sector with the groceries stores globalization, groceries stores networks consolidation, the strengthening of own brands, the expansion of new retail formats, organization in business centrals, competition between distinct retail formats and the online retail, have reversed this relation of power.”

So as in many economy sectors, the competition in the pharmaceutical area has shown itself very strong, mainly from the nineties on with the increase on costs of Research and Development of new products, and because of the advancement of the generic remedies in the main worldwide markets (Magalhães, 2003). According to Paula (2001), the worldwide pharmaceutical industry represents 33% of the chemical production, or US$ 280 billion. In worldwide terms, the productive chain of the pharmaceutical sector is characterized by two basic aspects: (1) Expansion of investments in merging and acquisitions, as well as strategic alliances as a way to strengthen itself because of the intense competitiveness imposed by the economy opening process (Rocha, 2003; Paula, 2001). The Box 2 brings a summary of merging and acquisitions in the area.
Quality service and customer satisfaction: a study in the retail pharmaceutical

Box 2. Merging and Acquisitions in the Worldwide and Brazilian Pharmaceutical Industry – 2004

<table>
<thead>
<tr>
<th>Company</th>
<th>Capital</th>
<th>Operations</th>
<th>Capital</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abbot / EAS</td>
<td>USA</td>
<td>Abbot bought EAS</td>
<td>USA</td>
</tr>
<tr>
<td>Abbot / TheraSense</td>
<td>USA</td>
<td>Abbot concluded the acquisition of TheraSense</td>
<td>USA</td>
</tr>
<tr>
<td>AGT Biosciences / ChemGenexTherapeutics</td>
<td>Australia / USA</td>
<td>The merging created a new company: ChemGenex Pharmaceuticals</td>
<td>Australia / USA</td>
</tr>
<tr>
<td>Amgen / Tularik</td>
<td>USA</td>
<td>Amgen bought Tularik</td>
<td>USA</td>
</tr>
<tr>
<td>Aventis / Sanofi-Synthelabo</td>
<td>France / Germany</td>
<td>The merging created a new company: Sanofi-aventis</td>
<td>France / Germany</td>
</tr>
<tr>
<td>Lilly / Applied Molecular Evolution</td>
<td>USA</td>
<td>Lilly bought Applied Molecular Evolution</td>
<td>USA</td>
</tr>
<tr>
<td>Merck &amp; Co / Aton Pharma</td>
<td>USA</td>
<td>Merck bought Aton</td>
<td>USA</td>
</tr>
<tr>
<td>Bristol Myers Squibb / Acordis</td>
<td>USA</td>
<td>Bristol Myers Squibb bought Acordis</td>
<td>USA</td>
</tr>
<tr>
<td>Mitsubishi Pharma / Green Cross Guangzhou</td>
<td>Japan / China</td>
<td>Mitsubishi Pharma got the total control of its joint venture with Green Cross Guangzhou</td>
<td>Japan</td>
</tr>
<tr>
<td>Fujisawa / Yamannouchi</td>
<td>Japan</td>
<td>The merging created a new company: AstellasPharma</td>
<td>Japan</td>
</tr>
<tr>
<td>Ache / Biosintética</td>
<td>Brazil</td>
<td>Ache bought Biosintética</td>
<td>Brazil</td>
</tr>
<tr>
<td>Biolab / Sintefina</td>
<td>Brazil</td>
<td>BiolabboughtSintefina</td>
<td>Brazil</td>
</tr>
<tr>
<td>Libbs / Mayne Pharma do Brasil</td>
<td>Brazil / Australia</td>
<td>LibbsboughtMayne</td>
<td>Brazil</td>
</tr>
</tbody>
</table>

Source: Capanema (2006)

Considerable investments in complex and sophisticated technologies (Hansén, 1981). In this sense, Halliday et al. (1997) support that the current competitiveness in the pharmaceutical sector is its capacity of innovation, due to the intensive investments in research and development. The high investments, according to Lisboa et al. (2000), are associated to the approval of medications: from 5,000 to 10,000 synthesized molecules, averagely, only one is approved.

In Brazil, such strategies have created direct effects over the structure and the dynamics of the national industry, due to the dominant position of the foreign companies in the country. Leal (2005), based on a research made by (IMS, 2004) shows that only the forty bigger laboratories respond together by around 90% of the sales in the sector, such as Pfizer, Glaxo, Norvartis, Merck Sharp, Aché and others. In front of such scenery, the medication distribution sector, according to Campos, Csillag and Sampaio (2001), is one of the many sectors of our economy that has presented considerable advancements in the logistic area, since it pursues competitive advantages that will guarantee them, more and more, a sustainable competitiveness. Small and medium drugstores are choosing the distributors direct purchase, while borderlines or wholesalers have as a function to perform as purchase and distribution agents of the products that they need (BOWERSOX; COOPER, 1992).

According to Machline and Júnior (1998), purchases made by distributors constitute the main option for the independent drugstores that do not movement the minimum volume needed to make the direct acquisition with the manufacturer. It is verified that the distribution networks exert
an important role in the process of efficiency improvement of small and medium retailers (Lastres, 2002; Goldsmid, 2001; Machline & Júnior, 1998). On the other hand, drugstores and institutional shoppers while final borderlines of pharmaceutical products, constitute the most important customer portfolio for the distributors of the sector.

For the distribution networks to be able to render a good quality service to its clients, it is necessary that they perform in a perspective of knowledge over their needs and expectations, because according to Cardozo (1965), the knowledge over the clients’ needs and expectations is essential to a better monitoring of their satisfaction with the goods and services that have been rendered to them. Under this point of view, the management of the service quality configures itself as a strategic factor important to the companies that aim at building with their clients a long-term relationship that has as a central pillar their maximum satisfaction.

Therefore, a possible segmentation is in profiting the available knowledge about the subject and orienting it to the study of the object among the distribution networks and the pharmaceutical retail. In this sense, the development of the research was oriented to the analysis of the aspects related to the retailers satisfaction while clients of such networks.

PROCEDURES OF THE EMPIRICAL INVESTIGATION

In this section we present the research’s unfoldments, having observed the structuring suggestions found in the literature about the subject. Thus, it was opted initially for describing the objects proposed to the research. Next, we discuss the implementation of it that involved two basic steps: the exploratory research and the field research.

The research goals

The aim of the research was at verifying if the services rendered by the pharmaceutical distribution networks of Ribeirão Preto - SP correspond to the expectations of the clients. To reach the proposed goals, it was investigated the dimensions represented in the Figure 2.

**Figure 2.** Structure of the study investigation constructs.

Source: Elaborated by the researches based on Parasuraman, Zeithaml and Berry (1985)
Measurement of the selected variables

Aiming at identifying the concepts related to the variables considered in such study, as well as the definition of the research issue and description of the phenomena behavior analyzed (MALHOTRA, 1993), were used in the first phase of the study secondary sources such as books, articles in national and international magazines, thesis, dissertations and database. In a second phase, it was opted for a quantitative descriptive research to measure the selected variables. According to Richardson (1999), such procedure allows the quantification along the data collection and study, and guarantees a higher precision of results. Such option seems to be the most adequate way for allowing the researcher to initiate, from a set of results on, a deductive or inductive approach when he uses samples, observing only a part of the cases to affirm over all the elements (Trujillo, 2001).

Population and statistic sample

The first procedure of the researcher related to the choice of the population consists in delimitating the unit that will constitute the case study that may be composed by: people, communities, cultures, companies, set of relation or processes, etc. (GIL, 1994). The research universe or population, according to Mattar (1997), is represented by the set of all the pertinent cases to a set of specifications previously established. Therefore, the universe of this research was constituted by the distributors, pharmacies and drugstores in São Paulo countryside, specifically in Ribeirão Preto. The respondents were the executives involved directly in the commercial trades between the distributors, pharmacies and drugstores of the geographical unit selected. To find such universe, it was acquired a list in the Pharmaceutical Products Retail Commerce Union (Sindicato do ComércioVarejista de Produtos Farmacêuticos [SINCOVARP], 2006), with the name and address of pharmacies and drugstores companies of Ribeirão Preto and surroundings.

Among the 271 companies in the list, 103, constituted by pharmacies and drugstores were selected by the deliberately non-probabilistic technique to compose the sample. Aiming at researching the pharmaceutical retailers that used to buy from the distribution networks of RibeirãoPreto, the others were discarded for not presenting the characteristics that corresponded to the goals of such study. From the 103 selected companies, 12 did not answer the questionnaire, so they were discarded. Since some selected companies used to buy from more than one distributor, it was requested that they answered a questionnaire for each supplier/distributor, providing a total of 97 analyzed questionnaires.

Data collection techniques

The research done between July and November 2006 was subsidized by non-disguised structured questionnaires, made by closed questions due to the quantitative character of the study. In
the questionnaire, the respondents indicate a level regarding their expectation and satisfaction towards the service rendered that varies from “low” to “high”, and a level related to the perception of the levels of the rendered service, that varies from “terrible” to “great”, using as a base the numeric scale known as Likert that varies from 1 to 5. In the end of the collection, the scoring of each item is added to produce a final result to the respondent. Some advantages are attributed to the usage of such questionnaire: a) it may be used in different segments of the population; b) facility in the tabulation and quantification of the data; c) it may be adaptable to the object of study, to the sources available to do the research and to the accuracy of the desired information (Gil, 1994; Barros & Lehfeld, 2000).

Regarding the population designation, according to Mattar (1997) it must involve: a) definition of the research elements specifications; b) definition of the unit used as a sample; c) geographical extensiveness; d) period of time. The research element refers to the unit which is studied for the data to be collected while the unit used as a sample it the elements available for selection in some stage of the sample process (Mattar, 1997). The Box 3 summarizes the identification and the selection of the universe, as well as the data collection techniques used in this study.

**Box 3. Identification and Selection of the Universe and the Data Collection Techniques**

<table>
<thead>
<tr>
<th>Research universe</th>
<th>The Pharmaceutical sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>Retail of pharmacies and drugstores</td>
</tr>
<tr>
<td>Research elements / respondents</td>
<td>Executives of the Pharmaceutical Retail</td>
</tr>
<tr>
<td>Unit used as a sample</td>
<td>Pharmacies and drugstores clients of the distribution networks from the selected geographical unit</td>
</tr>
<tr>
<td>Geographical extensiveness</td>
<td>RibeirãoPreto</td>
</tr>
<tr>
<td>Sample technique</td>
<td>Deliberately non-probabilistic sample</td>
</tr>
<tr>
<td>Sample size</td>
<td>91 companies (97) questionnaires</td>
</tr>
<tr>
<td>Application format</td>
<td>Personal application</td>
</tr>
</tbody>
</table>

Source: Elaborated by researches based on Mattar (1997)

The elements selected to the research are justified for taking into consideration their direct involvement in the commercial trades established between the distribution networks and the retail. Regarding the geographical extensiveness, it is justified for the easy access to the companies that compose the universe of study. The dimensions that subsidized the elaboration of the questionnaire were based on the Model SERVQUAL - Qualidade de Serviço (Service Quality), developed by Zeithaml, Parasuraman and Berry (1990), and widely used in researches that have adapted it according to the object of study in the evaluation of service quality context (Parasuraman, Zeithaml & Berry, 1985; Robinsom, 1999; Robledo, 2001; Eleutério & Souza, 2002). The format of such Model that aims at identifying the quality gasps is represented in the Table 1.

**Table 1. Format of the Model Servqual**
Quality service and customer satisfaction: a study in the retail pharmaceutical

Expectations regarding the Services Level | Perception of the Services Performance | Level of Satisfaction regarding the Services Level |
--- | --- | --- |
Low | High | Terrible | Great |
1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5

Source: Adapted from Parasuraman; Zeithaml and Berry (1985)

Data Treatment

The data collected through this research were analyzed using the software Excel and SPSS (Statistical Package for the Social Sciences) that allows the realization of statistical calculations, the visualization of the results in a quick way, providing the researcher with a presentation and an evoked interpretation of the results. It was used as statistical measures the arithmetical mean (\(\bar{x}\)) and the percentage statistical probability (\(P\)). The arithmetical mean is a central trend measure that represents the central entrance of a set of data and shows the value in which the data are distributed around based on the following expression (Silver, 2000):

\[
\bar{x} = \frac{\sum x_i}{n}
\]

where: \(\bar{x}\): arithmetical mean; \(X_i\): simple occurrence of each variable; \(n\): total of considered data.

The percentage statistical probability, according to Larson and Farber (2004), refers to the observations gathered in probabilistic statistical experiences; it means the percentage relative frequency of the event considered. The expression to be used is:

\[
P = \frac{A.100}{T}
\]

where: \(P\): percentage relative frequency; \(A\): quantity of answers to a specific variable in a specific occurrence scale; \(T\): total of questionnaires applied.

RESULTS ANALYZES AND DISCUSSION

The results related to the clients’ expectations, perceptions and level of satisfaction regarding the level of the services rendered to each distribution network are presented and discussed in the subsections that follow. We emphasize that for a matter of non-confidentiality of the research, we hid the identities of the studied companies, the distribution networks and its corporative clients. In this case, the pharmacies and drugstores chains in the selected geographical unit. Thus, the distributors mentioned in the study are named “Distributor A, B, C and D.”

Clients’ Expectations over the level of the Services Rendered

The clients’ level of expectations regarding the services rendered by each distributor was
gathered through a calculation of the values of arithmetical mean, according the observed in the Table 2.

**Table 2. Average Expectation regarding the level of service rendered by the distributors**

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Average expectation by distributor</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
</tr>
<tr>
<td>1. Product availability</td>
<td>4.36</td>
</tr>
<tr>
<td>2. Order time cycle</td>
<td>4.49</td>
</tr>
<tr>
<td>3. Consistency of the service delivery deadline</td>
<td>4.44</td>
</tr>
<tr>
<td>4. Accessibility</td>
<td>4.38</td>
</tr>
<tr>
<td>5. Flexibility in the delivery system</td>
<td>4.21</td>
</tr>
<tr>
<td>6. System of failures correction</td>
<td>3.35</td>
</tr>
<tr>
<td>7. Attendance quality</td>
<td>4.39</td>
</tr>
<tr>
<td>8. Support in the physical delivery</td>
<td>4.31</td>
</tr>
<tr>
<td>9. Post-delivery support</td>
<td>4.35</td>
</tr>
</tbody>
</table>

Source: Research’s Data

It is possible to verify that: regarding the distributor A’s clients, the higher expectation regarding the level of service rendered refers to the item “Order time cycle”, and the lower expectation refers to the item “System of failures correction”. Among the distributor B’s clients, it is noticed that the higher expectation refers to the item “Support post-delivery”, and the lower expectation refers to the item “Flexibility in the delivery system.” For the clients of the distributors C and D, we realize that the perceptions over the service level that present higher expectation are referred to the item “Consistency of the delivery deadline.” The lower expectation of the distributor C’s clients is in the dimension “Order time cycle”, and the lower expectation of the distributor D’s clients is realized in the item “Post-sale support.”

**Clients’ perception over the level of the services rendered**

Regarding the results related to the clients’ perceptions over the level of the services rendered by each distributor, these ones were gathered based on calculations of arithmetical mean values, according to the Table 3.

**Table 3. Average perception over the level of the rendered service**

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Average perception by supplier / distributor</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
</tr>
<tr>
<td>1. Product availability</td>
<td>3.80</td>
</tr>
<tr>
<td>2. Order time cycle</td>
<td>4.09</td>
</tr>
<tr>
<td>3. Consistency of the service delivery deadline</td>
<td>4.00</td>
</tr>
<tr>
<td>4. Accessibility</td>
<td>3.67</td>
</tr>
<tr>
<td>5. Flexibility in the delivery system</td>
<td>3.12</td>
</tr>
<tr>
<td>7. Attendance quality</td>
<td>4.02</td>
</tr>
<tr>
<td>8. Support in the physical delivery</td>
<td>3.18</td>
</tr>
<tr>
<td>9. Post-sale support</td>
<td>2.48</td>
</tr>
</tbody>
</table>

Source: Research’s Data

It is noticeable that: the clients of the distributors A, B, C and D present great perception
regarding the dimension “Consistency of the service delivery deadline”. The clients of the distributor A and C, on their turn, show great perception towards the item “Order time cycle.” The same perception can be found in the dimension “Attendance quality” to the clients of the distributor B, and in the dimension “Product availability” to the distributor C’s clients. All the respondents were unanimous declaring their perceptions over the dimension “Post-sale support”. The clients of all the distributors attributed terrible perception to such item, making clear that the majority of suppliers show inefficiency in this task.

**Clients’ satisfaction regarding the level of the services rendered**

The Table 4 brings the clients’ levels of satisfaction regarding the services rendered, gathered by the calculation of the arithmetical means values.

**Table 4.** Average satisfaction regarding the level of the services rendered

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Average satisfaction by supplier/ distributor</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
</tr>
<tr>
<td>1. Product availability</td>
<td>3.85</td>
</tr>
<tr>
<td>2. Order time cycle</td>
<td>3.67</td>
</tr>
<tr>
<td>3. Consistency of the service delivery deadline</td>
<td>3.98</td>
</tr>
<tr>
<td>4. Accessibility</td>
<td>3.82</td>
</tr>
<tr>
<td>5. Flexibility in the delivery system</td>
<td>3.00</td>
</tr>
<tr>
<td>6. System of failures correction</td>
<td>3.52</td>
</tr>
<tr>
<td>7. Attendance quality</td>
<td>4.08</td>
</tr>
<tr>
<td>8. Support in the physical delivery</td>
<td>3.04</td>
</tr>
<tr>
<td>9. Post-sale support</td>
<td>2.30</td>
</tr>
</tbody>
</table>

Source: Research’s Data

Through the analysis of the table above it is possible to observe that the clients of the distributors A and B show high level of satisfaction regarding the “Attendance quality.” The clients of the distributors C and D showed to be very satisfied with the “Product availability.” The distributor C’s clients also showed a high level of satisfaction regarding the “Consistency of the service delivery deadline.” Despite the positive declarations about the dimensions mentioned above, we detach that in the item “Post-sale support”, all of them presented low level of satisfaction, what allows us to infer that according to the deficiencies showed in the support offered by the distributors, there is an urgent necessity of rethinking the way that such item has been treated. The summary of the average global results involving the variables “Expectation”, “Perception” and “Satisfaction” are available in Table 5.
Table 5. Average expectation, average perception and average satisfaction (joint evaluation to the clients of the distributors A, B, C and D)

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Average expectation</th>
<th>Average perception</th>
<th>Average satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Product availability</td>
<td>4.70</td>
<td>4.13</td>
<td>4.17</td>
</tr>
<tr>
<td>2. Order time cycle</td>
<td>4.73</td>
<td>4.31</td>
<td>3.93</td>
</tr>
<tr>
<td>3. Consistency of the service delivery deadline</td>
<td>4.79</td>
<td>4.26</td>
<td>4.22</td>
</tr>
<tr>
<td>4. Accessibility</td>
<td>4.70</td>
<td>3.92</td>
<td>4.08</td>
</tr>
<tr>
<td>5. Flexibility in the delivery system</td>
<td>4.45</td>
<td>3.35</td>
<td>3.22</td>
</tr>
<tr>
<td>6. System of failures correction</td>
<td>3.95</td>
<td>3.98</td>
<td>3.79</td>
</tr>
<tr>
<td>7. Attendance quality</td>
<td>4.81</td>
<td>4.33</td>
<td>4.37</td>
</tr>
<tr>
<td>8. Support in the physical delivery</td>
<td>4.58</td>
<td>3.49</td>
<td>3.37</td>
</tr>
<tr>
<td>9. Post-sale support</td>
<td>4.57</td>
<td>2.72</td>
<td>2.70</td>
</tr>
</tbody>
</table>

Source: Research’s Data

In global terms, it is observed a high expectation regarding the “Attendance Quality”, and a low one over the “System of Failure Correction.” The item “Attendance Quality” presents a great perception from the clients, but a terrible perception over the “Post-sale support”. Regarding the “Attendance quality”, it is noticed a high satisfaction level, and the dimension “Post-sale support”, on its turn, presents low level of satisfaction, according to the respondents’ declaration.

Correlation among expectation, perception and satisfaction

Aiming at obtaining a higher precision of the results regarding the level of the services rendered by the distribution networks, it was opted to determine the existence of correlation among the pairs of the variables “Expectation” and “Perception”, “Expectation” and “Satisfaction” and “Perception” and “Satisfaction”. To do so, it was used Pearson’s linear correlation coefficient \( r \) that is (Downing & Clark, 2002):

\[
r = \frac{n \sum(x, y) - (\sum x)(\sum y)}{\sqrt{n \sum(x^2) - (\sum x)^2} \sqrt{n \sum(y^2) - (\sum y)^2}}
\]

Aiming at testing the correlation significance level among the variables, it was used Student’s patterned statistic \( t \) (Larson & Farber, 2004), in a bipolar test, with \( (n-2) \) levels of freedom expressed by:

\[
t = \frac{r \sqrt{n-2}}{\sqrt{1-r^2}}
\]

To make the proposed test, it was determined that the hypothesis to be tested were: \( H_0: \rho = 0 \), there is no linear correlation between the independent variable and the dependent one; \( H_1: \rho \neq 0 \); there is linear correlation among the variables. The linear regression can also be used as an analysis auxiliary form (Silver, 2000). Thus, supposing that \( x \) is the independent variable and \( y \) the dependent one, the linear regression function is defined as:

\[
Y = a.x + b
\]
The values of the angular coefficient $a$ and of the linear coefficient $b$ are calculated by:

$$a = \frac{n \cdot \Sigma (x,y) - (\Sigma x)(\Sigma y)}{n \cdot \Sigma (x^2) - (\Sigma x)^2}$$

$$b = \frac{-\Sigma y}{n} - \frac{-\Sigma x}{n} = y - a \cdot x$$

The value $r = 0.26$ reveals positive correlation between “*expectation*” and “*perception*”, but relatively weak. Having $t = 0.72$ with $\alpha = 0.05$, the null hypothesis $H_0$ cannot be rejected. For “*expectation*” and “*satisfaction*” it was found the value $r = 0.35$ showing that there is positive correlation, since $r > 0$; however, it is a moderate correlation. Having $t = 1.00$ with $\alpha = 0.05$, the null hypothesis keep being accepted. For “*perception*” and “*satisfaction*” it was gathered a value $r = 0.96$, revealing that there is positive correlation. Having $t = 8.93$ with $\alpha = 0.05$, the null hypothesis is rejected. Due to the strong correlation between both variables it was possible to produce the linear regression equation: $Y = 0.98x + 0.02$, according the Figure 3.

**Figure 3.** Linear tendency among the selected variables

The first graphic from the left to the right shows that more than 5% of the ordered pairs between the analyzed variables (expectation, perception) do not follow the distribution linear tendency, reinforcing the impossibility of doing an analysis of the linear regression. The scattering observed in the graphic makes clear that $H_0$ must be accepted, since the increase of the expectations did not follow linearly the perception increase.

The points scattering presented in the middle graphic reveals that there is no distribution linear tendency. Even though the correlation between the variables “*expectation*” and “*satisfaction*” is moderated and the null hypothesis $H_0$ is accepted, there is no consistency in the data to produce the linear regression equation. The last graphic on the right indicates that less than 5% of the ordered pairs between the analyzed variables (perception, satisfaction) do not follow the distribution linear tendency. Such results show that there is a strong correlation found in the analyzed variables. Actually, this is the only pair of variables with considerable correlation.
FINAL CONSIDERATIONS

The conclusions, according to Marconi and Lakatos (1991), represent the research’s last stage that should explicit the final results considered relevant, verifying if they present consistency regarding the goals proposed initially by the researcher. The results should be bonded to the investigation hypothesis (Marconi & Lakatos, 1991; Vieira, 1994). Therefore, we conclude that even though in a general way the expectations declared by the clients are high, the level of perception is relatively low. Thus, the results gathered allowed the construct of a reality panorama of the services rendered by the networks: a) there is no considerable correlation among the expectations of the wished services and the ones received; b) there is no considerable correlation among the clients’ expectations and satisfaction with the service rendered by the networks, mainly concerning on the post-sale support. In this perspective, the results show that there is a low level of satisfaction among the clients regarding the services that are rendered to them. Since the clients’ satisfaction or dissatisfaction is associated to the attendance of their needs and expectations (Laroche, Kalamas, Cheikhrouhou & Cézard et al., 2004), when the service rendered does not attend the client’s level of expectation there is a quality problem or a failure in the service (Figueiredo, Ozório & Arkader, 2002).

Having as parameter the results of this research and the juncture problems evidenced by the literature, it seems to be timely to highlight the distribution networks – we suggest it without any pretension of solving the problems identified – to the suggestion of some factors that may help to equation the levels of dissatisfaction declared by their respective clients: a) that they dedicate more attention to the maximization of their clients’ satisfaction – despite the countless limitations made explicit in here – since, according Cardozo (1965), is the satisfaction that leads the client to repeat the purchase, as well as the favorable word of mouth, which reflects directly over the sustainability of the competitiveness in any organization (Oliver, 1997). These are the factors that will determine the strengthening of the relationship, as well as the retention of clients and company’s survival; b) that they pay a special attention on the “post-sale support” since the expectations, perception and clients’ satisfaction global analysis reveal that such variable presents a very low level of satisfaction (2.7 in the arithmetical mean). It is believed that such issue may be solved in a short term through the adoption of actions focused on the narrowing of relationships among companies and their respective clients. It is believed that such measure may produce a bigger approximation among all the agents, so the clients will see it as an opportunity to speak frankly about the strong and weak factors that they noticed along the relationship established with the companies. It is believed that by doing this, the companies will be able to solve its internal organizational problems of relationship and communication among the departments, according the suggestion of Machline and Júnior (1998).
Study Limitations and Suggestions to Further Researches

It is timely to emphasize that some limitations have been identified in this study: i) regarding the indicators: we used practically the same indicators found in the literature with little modifications in specific questions; despite the care in ascertain the adjustment of such indicators to the reality of the selected sector. ii) regarding the dimension of the sample: compatible, if compared to the size of the universe, but, at the same time, there was difficult in the people acceptance in joining the research process. Besides, the sample used in this study is restricted to Ribeirão Preto; it cannot, this way, be generalized or extended to the whole state of São Paulo. iii) respondents availability: since in the majority of the researched companies the potential respondent was its owner, who, on his turn, was the main responsible for the general management of the company, it contributed for him to considered the questionnaire not very important or to answer it in a hurry, in a careless way. iv) research delay: there has been a hard work in the application of the questionnaires.

Many pharmacies have been contacted many times via email, phone or even in person, but even in this way it was hard to get an opinion regarding its participation in the data collection. It delayed the questionnaires reception and, consequently, caused delay in the analysis and conclusion of the study. Besides, the results gathered cannot be generalized to the whole population, since they have been extracted from an analysis of a specific segment in a single geographical unit.

Towards the highlighted limitations, it is important to detach the need for additional studies to validate the constructs: 1) reevaluate the way the services are being rendered by the distribution networks in the pharmaceutical sector, verifying if the services attend the expectations of the retailers of Ribeirão Preto – SP; 2) doing a wider study that would involve other cities on the state of São Paulo. We believe that a comparative analysis could provide a larger view over the expectations, perceptions and satisfaction of the pharmaceutical retail regarding the services rendered by the distribution networks from São Paulo; 3) It would also be interesting the implementation of a study that would aim at comparing the perceptions of the managers of the distribution networks with the clients’ expectations to verify if there is difference between their perceptions.

REFERENCES


QUALIDADE DE SERVIÇO E SATISFAÇÃO DO CLIENTE: 
UM ESTUDO NO VAREJO FARMACÊUTICO

RESUMO
A partir de uma discussão com base no resgate dos aspectos conceituais de satisfação e expectativas, esta pesquisa tem o objetivo de verificar se os serviços prestados pelas redes de distribuição do setor farmacêutico atende às expectativas de seus clientes e o respectivo nível de satisfação. A amostra deliberadamente não-probabilística foi composta por 91 executivos envolvidos diretamente nas relações comerciais estabelecidas entre as farmácias e os produtos farmacêuticos redes de distribuição. Os dados coletados por uma pesquisa foram analisados tendo como base de cálculo da média aritmética e a aplicação de regressão linear para as variáveis "expectativa", "Percepção" e "Satisfação", em relação às dimensões selecionadas no estudo. Os resultados mostraram que há um baixo nível de satisfação em relação aos serviços prestados pelas redes de distribuição do setor analisado.

Palavras-chave: Qualidade de serviço; Satisfação do cliente; Rede de distribuição, Varejo farmacêutico.

CALIDAD DE SERVICIO Y SATISFACCIÓN DEL CLIENTE: 
UN ESTUDIO SOBRE EL RETAIL FARMACEUTICO

RESUMEN
A partir de un análisis basado en el rescate de los aspectos conceptuales de la satisfacción y expectativas, esta investigación tiene como objetivo verificar si los servicios prestados por las redes de distribución de la industria farmacéutica cumplen con las expectativas de sus clientes y su nivel de satisfacción. Una muestra deliberadamente no probabilístico se compone de 91 ejecutivos que participan directamente en las relaciones comerciales entre las farmacias y las redes de distribución farmacéutica. Los datos recogidos se analizaron mediante una encuesta sobre la base de la media aritmética y la aplicación de la regresión lineal para las variables "expectativa", "Percepción" y "satisfacción", en relación con las dimensiones seleccionadas en el estudio. Los resultados mostraron que existe un bajo nivel de satisfacción con los servicios prestados por las redes de distribución del sector analizado.

Palabras clave: Calidad de servicio; satisfacción del cliente; Red de Distribución; Retail Farmacéutico.