

**International Hellenic University**

**Master in Business Administration**

**Health Management**

***"Analyzing relationship marketing regarding pharmaceutical sales representatives and physicians"***

**Student: Athanasios Pastogiannis & Christos Dionysatos**

## **ABSTRACT**

Personal relationships are the key element of many marketing activities for creating, developing and maintaining long term business relationships. Companies today have focused their attention on creating strong personal relationships with partners, suppliers and customers in order to serve their interests. The interest is so big that many believe that promotion through personal relationships is the new model for marketing (Stewart, 2004).

Since marketing is partly based on personal relationships, it is very important that sales representatives in pharmaceutical companies focus on building such relationships. It is of most importance for researchers to evaluate doctor's perception of medical representatives and the impact of this perception.

After gathering all information required for understanding the factors that affect doctor's perception towards pharmaceutical companies, data collection was conducted in big urban areas such as Athens, Patra, Heraklion and Ioannina.

The aim of the research was: To investigate the importance of medical representatives as a parameter of company reputation, to demonstrate how medical representatives can help to the establishment of a positive company reputation, to make useful conclusions which could possibly help a pharmaceutical company change and improve its reputation and to evaluate doctor's opinion for medical representatives.

After analyzing the findings of the primary research we reached to the following conclusions for Medical Representatives as a factor of creating company image in the Pharmaceutical Market and to the doctors.

- ⇒ For the total of the participating doctors and having as trust as a basic criterion, the biggest percentage (about 75%) agreed that indeed they trust the Medical Representatives when they visit them
- ⇒ In the second level of questions and having as a primary topic Moral behavior of Medical Representatives the biggest percentage (76%) of participants agreed that the Medical Representatives show moral behavior
- ⇒ In the final level of questions that was researched, the usefulness of doctors cooperation with Medical Representatives the majority of the

doctors (88%) agreed that Medical Representatives are useful partners for them, having built at the same time good, interpersonal and business relationships with them, (total percent 81%), basing their answers on the good visits, total percent of answers 92%

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## **CHAPTER 1.INTRODUCTION**

### **1.1 Introduction**

Personal relationships are the key element of many marketing activities for creating, developing and maintaining long term business relationships. Companies today have focused their attention on creating strong personal relationships with partners, suppliers and customers in order to serve their interests. The interest is so big that many believe that promotion through personal relationships is the new model for marketing (Stewart, 2004).

In pharmaceutical companies, medical representatives have the hard responsibility of providing credible information to doctors in an environment where restrictions are increasing. The number of rules as well as access to doctors is becoming even more limited. That is why it is very important for medical representatives to promote their image not only to the doctors but also to the rest of the staff.

Although there are many factors that contribute to this, we will focus on the following three:

1. The perception doctors have towards the company for which medical representatives work
2. The perception doctors have for the value of medical representatives as a whole
3. The perception doctors have toward the medical rep himself

Since marketing is partly based on personal relationships, it is very important that sales representatives in pharmaceutical companies focus on building such relationships. It is of most importance for researchers to evaluate doctor's perception of medical representatives and the impact of this perception.

After gathering all information required for understanding the factors that affect doctor's perception towards pharmaceutical companies, data collection was

conducted in big urban areas such as Athens, Patra, Heraklion and Ioannina. The results of this research will present the image perceptions doctors hold for pharmaceutical companies in Greece and the role medical representatives play in forming the doctor's perception. Special attention was given to the elements of medical representatives characteristics that doctors consider essential and valuable during the calls. The ulterior motive of this assignment is the evaluation of the factors that determine a pharmaceutical company's reputation.

A theoretical model was used aiming to depict how a medical's rep positive image could be created. Pharmaceutical market differentiates from the typical market of the other goods especially due to the fact that there is a lack of knowledge to the final consumer. The fact that the consumer does not have sufficient knowledge as well as no selection choice makes the role of the doctor very important, as he is the one who will decide for the customer, based on his knowledge and what is best for him (Souliotis *et al*, 2005).

Thus, developing and maintaining a positive company image has proven to be a hard and complicated procedure that few companies have managed to succeed in. A more careful examination of the subject shows that there are internal factors that have to be considered from a company in order to outwardly project a positive image.

These factors include what this company represents (personality of the company) or what can be seen in its environment (identity of the company). Company identity is shown through its communicative marketing. For the pharmaceutical market of prescribing drugs, the most important promotional tool for many years has been interface selling. Interface selling has been traditionally considered to be a face-to-face communication tool that refers to actions someone takes through personal intercourse, often by representing a company, aiming to inform, convince or remind someone or a group to do things a company is after through the representatives (Fill, 1995).

This research aims to investigate the value of a medical sales team in developing a company image and to examine doctor's opinion for medical representatives.

The targets of the present work are:

- To make a brief analysis about the environment of the pharmaceutical market
- To proceed to a theoretical approach as complete as possible about the company reputation
- To identify the importance of a positive company reputation in the pharmaceutical business today
- To find information that contributes to building the reputation of pharmaceutical companies
- To present a theoretical model that highlights the factors that build company reputation and project a series of assumptions regarding the way they influence company reputation
- To evaluate the importance of interface contact as a tool of communicational marketing for the industry
- To research the relative importance of the medical representatives as a factor of company reputation
- To demonstrate the contribution of the characteristics of the medical representatives in building a positive reputation for the company
- To make useful conclusions which could possibly help a pharmaceutical company improve or change its corporate reputation
- To examine doctor's opinion for medical representatives.

## **CHAPTER 2. CONCEPTUAL FRAMEWORK**

### **2.1 Relationship Marketing Introduction**

Relationship Marketing was first defined as a form of marketing developed from direct response marketing campaigns which emphasizes customer retention and satisfaction, rather than a dominant focus on sales transactions. As a practice, Relationship Marketing differs from other forms of marketing in that it recognizes the long term value of customer relationships and extends communication beyond intrusive advertising and sales promotional messages (Morgan *et al*, 1994). With the growth of the internet and mobile platforms, Relationship Marketing has continued to evolve and move forward as technology opens more collaborative and social communication channels.

Relationship Marketing is a broadly recognized, widely-implemented strategy for managing and nurturing a company's interactions with clients and sales prospects. It also involves using technology to organize, synchronize business processes, (principally sales and marketing activities), and most importantly, automate those marketing and communication activities on concrete marketing sequences that could run in autopilot, (also known as marketing sequences). The overall goals are to find, attract and win new clients, nurture and retain those the company already has, entice former clients back into the fold, and reduce the costs of marketing and client service. Once simply a label for a category of software tools, today, it generally denotes a company-wide business strategy embracing all client-facing departments and even beyond. When an implementation is effective, people, processes, and technology work in synergy to increase profitability, and reduce operational costs (Morgan *et al*, 1994).

## 2.2 Relationship Marketing in Pharmaceutical Industry

Salespeople play a key role in the formation of long-term buyer–seller relationships, especially in those that have close, interactive, dyadic interfaces. As the primary link between the buying and selling firms, salespeople have considerable influence on the buyer’s perceptions of the seller’s reliability, the value of the seller’s services and, consequently, the buyer’s interest in continuing the relationship (Wright *et al*, 2004). In the pharmaceutical industry, sales representatives are charged with providing credible product information to physicians, in an increasingly constrained environment (ie PhRMA guidelines, reduced physician access, increased numbers of sales representatives and so on). The end result is that physicians are spending less time with pharmaceutical sales representatives (Andaleeb *et al*, 1996). The outcome of this may be a decrease in the perceived value of pharmaceutical sales representatives and an increase in the amount of time in which it takes to develop an effective relationship marketing strategy. Consequently, it is more important than ever for the pharmaceutical sales representative to quickly establish a positive perception with the physician and their staff. Although there may be many areas by which perceptions are established, for the purpose of this paper, there are three areas of primary interest: (1) physician perceptions of the corporation for which the representative works; (2) physician perceptions of the pharmaceutical sales representative’s values; and (3) physician perceptions of the personal characteristics of the pharmaceutical sales representative. Because relationship marketing is one of the primary drivers of sales in the pharmaceutical industry, it is imperative that researchers begin to assess physician perceptions of pharmaceutical sales representatives and their resulting impact (Wright *et al*, 2004).

## 2.3 Promotion in the Pharmaceutical Industry

Traditionally, pharmaceutical companies directed their marketing muscle at doctors who have the authority to write prescriptions. This was done primarily through the use of pharmaceutical sales representatives, also known as detailers or drug reps. In 1998, nearly 65 per cent of total spending was on face-to-face selling with office-based physicians, which was conducted by nearly 57,500 pharmaceutical sales representatives located in the USA. Today, estimates of the number of pharmaceutical field sales representatives range as high as 80,000 or more (Nelson, 2004). Sales representatives carry information about drugs to physicians and are a key factor in whether a drug becomes accepted and prescribed. With drugs being continually developed and approved by the Food and Drug Administration (FDA), it is virtually impossible for a busy physician to keep up-to-date with the drug industry through reading, or from medical associates. The pressure on the medical profession caused by cost containment, an ageing population and the 'information explosion' in the field (Wright *et al*, 2004), has curtailed the time available to the physician to keep current with medical journals. Physicians rate salespeople to be important sources of information, second only to pharmacists. A more recent study, indicated that physicians see pharmaceutical sales representatives as an important source of information, yet they feel they could gain the required information without the representative's assistance (Wright *et al*, 2004).

Because sales representatives are a significant source of information in an area fraught with the potential for harmful consequences, it is important for physicians to hold positive perceptions regarding a pharmaceutical sales representative's drug, company, knowledge, values and so on. These positive perceptions are necessary in order for the physician to see the information provided as being credible and to have confidence in prescribing the drug.

The physician's most direct point of contact with a pharmaceutical company is the pharmaceutical sales representative, many of whom provide these types of benefits. It is reasonable, therefore, to expect that the benefits gained from

interacting with pharmaceutical sales representatives would translate into physicians holding positive perceptions of these representatives. However, any negative element in the customer–client (physician–representative) relationship lays the groundwork for negative outcomes: refusal, denial, or passive aggression. (Wright *et al*, 2004)

## **2.4 Theoretical model: The Fombrun-Shanley-Stewart model**

The Fombrun – Shanley model (1990) comes from an extensive study about company reputation that took place in the US and included 292 large enterprises. The assessment of a company’s reputation came from Fortune magazine and comprised the points below:

- The participant’s evaluations were based on an eleven point scale (0=very poor, 10=excellent)
- The research asked the participants to name companies that had leading positions in their branches.

Next, research asked the participants to grade these companies based on the elements below:

- Quality of administration
- Quality of products or services
- Value of long-term investments
- Innovation
- Financial credibility
- Ability to hire, develop and maintain capable employees
- Social and environmental politics
- Use of company assets

The results supported the general assumption that the public builds the reputation of the companies using information about the fundamental status of the companies in the enterprise field. More specifically, they use information about the logistic status and financial performance of the companies and also

information about the participation of institutions or other investors in their capital stock that also show their harmonization with the social needs and also information about the strategic orientation of the companies.

It is worth mentioning that the model that is developed for building company reputation is based on realistic conditions and situations, where information is not complete and also ambiguous. Finally the public does not have homogeneity.

## **2.5 Benefits from a positive company reputation**

A reputation of a company is its important and valuable asset. A positive one may bring many benefits to a company, when a negative one may significantly harm it (Milgrom & Roberts, 1986). A company reputation is closely tied up with its stakeholders' emotional beliefs about it. Some main issues about company reputation are:

- In a market, companies are exposed to public. On the other hand the public depends on the companies reputation in order to reach strategic decisions, make career choices or buy products (Dowling, 1986).
- Company reputation informs the public about how its products, its way of function, its strategy and prospective compete with other companies.
- A positive company image could result in high performance for the company by preventing competitor's mobility (Caves & Porter, 1977).
- Positive reputation about the quality of the products of a company allows the company to increase prices for its products (Klein & Lefler, 1981; Milgrom & Roberts, 1986).
- To attract capable candidates (Stigler, 1962).
- To support companies access to the stock market (Beatty & Ritter, 1986)
- To attract more investors (Milgrom & Roberts, 1986)

An important aftermath of positive reputation involves the activities between companies. The strategic alliances between companies allows them to respond

fast and effectively to the changes in the market. These allowances can be found from market research to distribution.

A company with a positive reputation has an increased possibility in regard to companies with negative reputation to find allies for strategic reasons (Spekman et al, 1996).

The theory regarding capability to process information states that there are certain restrictions in assimilating and processing information during a certain time from the human brain (Jacoby et al, 1974).

People seem to form stable impressions for an object, first by categorizing it and at the same time there is a drastic reduction in accepting new information that could change this impression. This characteristic of human nature has to do with the mental processing of an irritant.

Having a general impression of an organization, where detailed information is forgotten as time goes by and the fact that the public evaluates companies according to their reputation may be beneficial for the organization. Also a negative factor can be more easily forgotten (Balzer *et al*, 1992).

From the moment a general reputation is established for a company then it determines the way the public reacts towards this company and more so, sometimes this image may last longer than the real image of the company. In this way in times of crisis, companies with a positive reputation can handle them better and can have better results, while a company with a negative reputation in similar situations will have to give more effort and fight more (Caruana, 1997).

## **2.6 Reputation of pharmaceutical companies and its meaning to the sales force**

Medical information through calls is the most important channel between companies and doctors. Sales teams are considered to be the third most important element of a pharmaceutical company and there is a big degree of correlation with the company identity through the image of a sales force (Stewart, 2004).

Residents' perceptions toward industry gifts and interactions changed modestly during their training to reflect institutional policy. "Appropriate" gifts of minimal value were generally perceived as increasingly appropriate, whereas inappropriate over time. (Schneider, 2006). In April 2003 the federal government issued "Compliance Program Guidance for Pharmaceutical Manufacturers"(Chimonas, 2005). Pharmaceutical companies invest large sums of money promoting their products. They use a multifaceted approach to drug promotion, incorporating techniques such as hospital and office detailing by pharmaceutical representatives. 27% accept receive benefits from the pharmaceutical industry and that is influential in their own prescriptions. (Castresana, 2005). Residents interacted substantially with pharmaceutical representatives. The majority of residents found the interactions useful and believed their prescribing practices were not influenced (Randall, 2005). Contact with pharmaceutical representatives is common among residents. The majority felt that the interactions were appropriate. A minority felt that their own prescribing could be influenced by contact or gifts. Resident prescribing was associated with pharmaceutical representative visits. A variety of policy and educational interventions appear to influence resident attitudes toward interactions with industry (Zipkin DA, 2005). Pharmaceutical company representatives could influence the prescribing habits and professional behavior of physicians (Wofford, 2005).

Considerable evidence from the social sciences suggests that gifts of negligible value can influence the behaviour of the recipient in ways the recipient does not always recognize. Policies and guidelines that rely on arbitrary value limits for gift-giving or receipt should be re-evaluated (Katz, 2003).

Controversy exists over the fact that physicians have regular contact with the pharmaceutical industry and its sales representatives, who spend a large sum of money each year promoting to them by sponsored teachings and symposia. Attending sponsored continuing medical education (CME) events and accepting funding for travel or lodging for educational symposia were associated with

increased prescription rates of the sponsor's medication. The extent of physician-industry interactions appears to affect prescribing and professional behaviour and should be further addressed at the level of policy and education (Wazana, 2000).

Little is known about patients' awareness of and attitudes about gifts to physicians from pharmaceutical companies. 32,5 percent did not approve of their physicians accepting payment by a pharmaceutical company of medical conference expenses and from 28,0 percent to 43,4 percent disapproved of their physicians attending specific social events sponsored by pharmaceutical companies at a medical conference (Blake, 1995).

There is an effect of three types of interaction between physicians and the pharmaceutical industry-company-funded clinical trials, company-sponsored continuing medical information (CMD) and information for physicians supplied by pharmaceutical detailers-on orientation and quality of clinical trials, content of CME courses and physicians' prescribing behaviour. Physicians are affected by their interactions with the pharmaceutical industry (Lexchin, 1993).

Pharmaceutical companies in industrialized countries generally view Medical Representatives as the most crucial element in the promotion of their products, with the result that over 50 percent of expenditures on promotion are devoted to Medical Representatives. Studies from a number of industrialized countries have shown that over 90 percent of physicians see view Medical Representatives and a substantial percentage rely heavily on them as sources of information about therapeutics (Lexchin, 1989).

Factors that influence prescribing decisions are (Schumock, 2004):

- Safety
- Effectiveness
- Formulary status
- Restrictions on prescribing

Factors that were drug-related or what involved policy-related programs tended to be more influential than indirect factors.

According to the doctors the most important sources of influence in their professional practice are: attendance at training courses, reading articles and reports, implementation of protocols designed by the professionals of the centre themselves and discussion with colleagues on how to deal with a given health problem. Accordingly, the least important ones are: economic incentives and information provided by medical representatives from pharmaceutical companies (Fernandez, 2000)

Some of the largest pharmaceutical companies are classified according to their corporate image, the performance of the sales force and their other potential, as these are seen from the doctor's point of view.

Therefore extra attention must be given to the enhancement of the elements of the sales team, because this can contribute significantly to shaping a positive and strong image of a company.

The Marketing Communications department of a pharmaceutical company has some specific goals (Smith, 1991), which can include one or more of company's levels, like the functional, the SBU or the corporate (Fill, 1995):

- To make a product known
- To build an image for the product to the target customers group
- To transfer information about the value this has to its customers and its specific features
- To be effective against competitive actions
- To build an intimacy and familiarity for consumers with the packaging and the name of the product
- To show a unique proposal in the prescribers mind that supports the specific choice of product
- To build a positive and strong image for the company

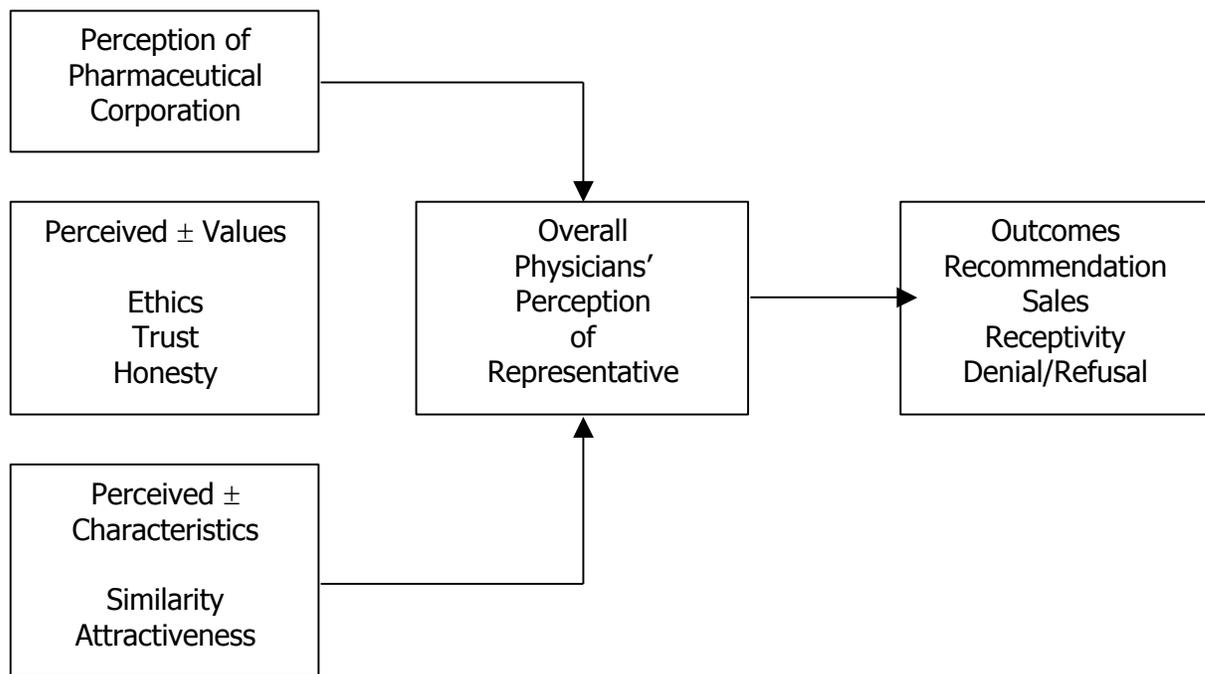
Company image of a pharmaceutical business can be defined by a variety of factors and engage several groups. The development and enhancement of a

positive and preferable image for a pharmaceutical company is important for five categories-targets (Corstjens, 1991):

- Prescribers (builds a environment of credibility and trust and acts as a mechanism of reducing risks while making decisions regarding prescribing)
- Stock market (enhances and increases the price of a stock, which is very important in case of merge or buying off and appeasing shareholders)
- Government and regulatory services (for speeding up approval procedures)
- Employees (to improve the devotion of HR and attract the best candidates)
- Groups with special interest (e.g. unions and consumer organizations to prevent negative action from them)

Even though patients are not included in this list, in the past years there is an increase in the attention given to patients from pharmaceutical companies, especially in the US (Pratley, 1996), where since June 1996 company image is promoted through the media, especially television, which targets medical staff, stock buyers and the general population. It is a fact that a company with a good reputation attracts employees, investors and suppliers. Good reputation enhances the value of a company and contributes to building strong bases that can guarantee the effective handling of future crisis.

## *Doctor's perception for the model of Medical Representatives*



**Source:** Wright *et al*, 2004

### **2.7 The role and significance of medical representatives**

Personal sale is traditionally considered to be an interpersonal tool that refers to action one makes through interpersonal contact often by representing a company and aiming at informing, convincing or reminding a person or a group to do beneficial things for the company one works for (Fill, 1995).

According to the Association of the British Pharmaceutical Industry (ABPI) some of them are:

- To provide additional scientific information for the drugs they promote (Ziegler *et al*, 1995)
- To work as a link between the company and the doctor by carrying importation from one to another

- To provide studies for the company products and related issues
- To organize meetings, not only for promotional causes but also for educational
- To consult doctors for adverse effects

Medico-Pharmaceutical Forum (1995) characterized medical representatives as the basic link between pharmaceutical industry and doctors not only because they act as a promotional mean but also because they are the center for a both way communication relationship.

During the visits medical representatives give the doctors detailed information about the company products, their characteristics, their composition, indications and adverse events as well as the cautions (ABPI August 2004). Doctors accept the fact that they contribute to their education as they inform them about recent developments and that helps them in their job (Andaleeb and Tallman, 1996).

The benefits that pharmaceutical companies have are discussed in a publication of ABPI (Industry's Issues, 1996). Medical representatives work for their companies benefit by pointing out the needs, changes in needs and behavior of the doctors (Lambert et al, 1990). In fact some researchers think that medical representatives can influence the doctors decisions on which drug they will prescribe (Beardsley, 1993).

Medical representatives have a significant role in carrying information before the launch of a product, about the trends and doctors needs and the possible acceptance a new drug could have. Additionally medical representatives carry doctors' interest for clinical studies. Clinical studies are particularly important as they build a very strong relationship between doctors participating and companies (Wells, 1987) and second of all because phase IV proceeds (evaluation of the drug after the launch) which is essential for the development of each chemical substance (ABPI briefing, 1996).

The importance of medical representatives can also be seen from the huge amounts of money invested in them from pharmaceutical companies. Usually 40-

50% of the total promotional budget is meant for this issue (Mackowiak *et al*, 1985; Marshall, 1994).

According to Smith (1991), even though the practices are different, usually the pharmaceutical companies spend the majority of their promotional expenses in medical representatives.

Riedlinger (1994) says that the average yearly cost in 1994 for training a medical representative was about 150.000\$ in USA, while Wilson (1990) in data from 1990 referred to this kind of expenses as investment. In the UK it is estimated that the training of a new rep costs about 80.000£ (Bannon, 1997). Moreover, the importance of medical reps can also be seen from the increasing hiring number.

To sum up, the value of medical representatives as a selling mean is based on the nature of the products, the nature of the industry and also the nature of the clients, which for the pharmaceutical industry are the prescribers.

## **2.8 The medical's representative value**

A medical rep must have excellent knowledge of the competitive products, however must never give false information and mislead the doctor. Therefore knowledge of products and correct presentation are basic and define honesty, which is essential for the health factor.

- Medical reps that speak honestly have a positive image to doctors.

Doctors' trust for a rep is created in many ways. Generally it means that the doctor counts on the rep that he will serve his interests right and long term. What is more, trust plays a determinant role in selling.

Doctors trust for a medical rep can be created in many ways.

- Medical reps that seem trustworthy have a positive image to doctors.

Providing accurate information to doctors is very important, as the doctor depends also on them to make decisions. The moral rep must not exaggerate, hide or change information, especially since such behavior has a negative impact

for doctor's perception of the rep, his company but also for medical reps in general. But also the reputation of a doctor can be influenced if prescribing wrong drugs.

- Medical reps that are moral have a positive image in doctors.

Honestly, trust and morality are three of the basic reasons that build a positive image to the reps and also give them value.

Based on all the previous data presented, the following hypotheses were developed:

H1: There is a difference between doctors understanding the Medical Representatives usefulness

H2: There is a difference as for the quality of the relationship of the Medical Representatives that visit me .

H3: There is a difference as for the quality of Medical Representative's calls

## **CHAPTER 3. RESEARCH DESIGN**

### **3.1 Aim of the research**

The aim of the research is:

- To investigate the importance of medical representatives as a parameter of company reputation
- To demonstrate how medical representatives can help to the establishment of a positive company reputation
- To make useful conclusions which could possibly help a pharmaceutical company change and improve its reputation
- To evaluate doctor's opinion for medical representatives

### **3.2 Collecting and analyzing information**

Collecting data may take longer than secondary and the procedure is more complicated. However its results may be more accurate (Kent, 1995). Data can be collected with qualitative and quantitative research. Qualitative research has to do with data that are hard to find or acquiring them is hard. Such data may be opinions or evaluations which are not countable, mathematic figures (Marshall & Rossman, 1994). On the other hand quantitative research is the one that uses techniques and samples and gives results that can be statistically evaluated (Churchill, 1995). For the causes of this assignment quantitative research was used.

### **3.3 Planning of the research**

The questionnaires were personally and face to face since the probability of getting responses by doctors is poor given their limited time spent to administrative tasks and full focus on their medical practice. Telephone interviews would be too impersonal and valuable information might have missed.

The logistics of the data collection process requested pre-arranged appointments with doctors. Each doctor personally was given specific instructions for the completion of the questionnaires. The aims and objectives of the study were explained to doctors prior to their consent in taking part to the study.

### **3.4 Methods for collecting evidence**

For reasons that have to do with cost, time and human limits it is not possible to gather information from all doctors who are a part of the medical community. Therefore a sample was taken from this population and used a sampling method in order to reach conclusions about the contribution of Medical Representatives and their role in shaping a company's reputation. The steps in planning the sample were:

1. Definition of the population that will participate in the research
2. Definition of the size of the sample
3. Definition of the sampling procedure that will better serve the goals of the research

### **3.5 Sampling**

The population, as mentioned before, were Psychiatrists, Neurologists (easiest access, provide more time for these types of research, involvement with human behaviour) that practice the medical profession in the areas of Athens, Patra, Heraklion and Ioannina.

The selection of specific specialties happened after a research that took place in doctors in the area of Athens and especially with 40 key opinion leaders. The research was performed with interviews and the question was which specialty of doctors they thought was the most indicated to have an opinion for the Medical Representatives of pharmaceutical companies active in Greece.

The larger the sample, the less the probability for error (Robson, 1997). However, due to the limited time and the fact that the research will be conducted by only one person (the author), the largest number of doctors that could participate is 200. Out of 200 doctors that were selected, 149 completed the questionnaire. (95 men and 54, women). As far as place of work is concerned, 72 have private office, 65 work in hospital, 2 in private clinic and 10 did not answer this question.

The various methods of sampling are divided into those that are based on known probability (regular) and those based on unknown probability (where the chance of selecting each candidate is not known). Each of these methods can be further divided e.g. the not possible samples are classified as convenience, judgmental or quota, while the samples with known possibility can be simply random, stratified or cluster and some of them can be further divided.

In regular samples the sample is being extracted representative (cross-section) and in not normal samples the personal judgment takes part in selecting it. Since the goal of this assignment is to make generalized assumptions on doctor's perceptions, there is a need to find a method that serves this goal. After thought the simple random sampling method was selected. This method is a clear method of sampling. Each participant has equal chance of being selected. In this case a full catalogue of the participants is required. The major reason for selecting this method is the fact that a full list of Psychiatris-Neurologists in the selected areas (Athens, Patras, Ioannina and Heraklion) is available.

### **3.6 Planning of the questionnaire**

It is important to note that a significant extent of standardization is given to the questionnaire on purpose (Questionnaire is provided in the Appendix). The questions were presented with the exact same order to all participants. The reason for the high standardisation grade was essential to make sure that all participants would answer the same questions. Additionally, the standardised

questionnaire was selected because it is easier to use, to process and analyse, since it evaluates subjective opinions. The questionnaire was pretested in 5 people to check whether the language is comprehensive. The pretest of the questionnaire resulted in slight changes in the wording of the questions and items examined. The 5 completed questionnaires were discarded and were not considered in the final analysis. Items and questions used aimed to simplicity and clear meaning to ease the respondents' completion. Taking into account that the introduction of a researcher may influence the acceptance rate of the questionnaire and furthermore participants trust and cooperation, the first page of the questionnaire was used to explain the study, revealed the researcher's identity and the study's aims and objectives. It was clarified that any answers given would be confidential. Also it was stated that the assignment was academic and that they would be informed of the results of the research if they requested them

The questionnaire was created to calculate the relative impact of the Medical Information Team (Medical Representatives) in building the company image as well as doctor's perceptions of Medical Representatives. The bases on which the questionnaire was structured where:

☞ Morality

☞ Trust

☞ Honesty

- as described in the Henry Stewart (Stewart 2004) model. Constructs used by Doney and Cannon (1997), Lagace, Ingram and Boorum (1999) and Ramsey and Sohi (1997) were the sources of the used items and scales. Likert scale was used. Its selection was based on its simplicity and objectivity while it allowed participants to show their level of agreement or disagreement with a series of statements depending on the study topic.

### 3.7 Questions-goals

The goals of the questions featured in the questionnaire are the following:

- The first group of questions involves the components of Medical Representatives, based on the issue of trust and how this is evaluated from doctors. The aim of these questions is to locate the parameters doctors think are essential so to reach a conclusion about the Medical Representatives. An agreement scale from 1 (totally disagree) to 7 (totally agree) was used to rank the answers.
- Questions 1 to 14 request from the participants to evaluate the morality behavior of Medical Representatives. The goal is to evaluate each parameter separately so to base a valuation on it regarding doctor's opinion for Medical Representatives and the morality behavior that the present.
- The third group of questions involves the honesty and integrity as part of the cooperation of doctors and Medical Representatives.

The reason for selecting these group of questions was the fact that during the last period there have been major changes in the Code of Ethics of Pharmaceutical Companies and it is essential to focus on new elements of it like morality, trust and honesty, since they are a part of significant evolution in the image of Medical Representatives and Pharmaceutical Companies.

To depict the value of the study high quality paper and photocopies were used.

## CHAPTER 4 FINDINGS

### 4.1 Findings

#### Results of primary reserach

All analysis was conducted using the statistical program SPSS 13 (Statistical Package for Social Sciences). This program has the ability to manage a vast volume of data and perform complicated calculations.

#### Research accuracy

Accuracy alpha evaluates internal consistency of data in a questionnaire, which means if data has the tendency to double count. Accuracy alpha is considered acceptable when the contributor alpha is about 70 or more. In our case the results of accuracy analysis alpha are noted in the chart bellow:

<b>Item-total Statistics</b>				
<b>Scale Mean if Item Deleted</b>	<b>Scale Variance if Item Deleted</b>	<b>Corrected Item-Total Correlation</b>	<b>Alpha if Item Deleted</b>	
The Medical Representatives that visit me don't lie	16,0671	25,8738	-0,2226	0,7569
The Medical Representatives that visit me are not totally honest when informing me	17,9396	16,0707	0,4957	0,518
The Medical Representatives that visit me are mostly interested in serving their interests	16,6913	17,3365	0,3697	0,5758
The Medical Representatives that visit me don't seem to care about my needs	18,0805	17,9124	0,4514	0,5454
My partners don't usually trust Medical Representatives	17,9933	14,8175	0,638	0,4497
The Medical Representatives that visit me are usually unreliable	18,9329	18,2252	0,5098	0,5325

N of Cases = 149 N of Items = 6  
**Alpha = 0,6245**

Item-total Statistics					
Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted	
The Medical Representatives that visit me often misrepresent scientific data about drugs	43,4595	157,461	0,4174	0,2867	0,881
The Medical Representatives that visit me often blame others for their mistakes	43,6689	148,781	0,6989	0,5496	0,8691
The Medical Representatives that visit me usually don't give accurate data about the side effects of drugs	43,0068	148,524	0,6039	0,4133	0,8727
The Medical Representatives that visit me usually take advantage of new and inexperienced doctors	43,5338	145,475	0,6913	0,5415	0,8683
The Medical Representatives that visit me usually don't do me favors so to feel obliged towards them	42,3986	169,343	0,0389	0,1437	0,8986
The Medical Representatives that visit me often promote drugs with a likelihood of increased side effects	43,4257	153,144	0,5443	0,3719	0,8756
The Medical Representatives that visit me usually exaggerate when presenting the benefits of a new drug	41,6284	151,541	0,4996	0,4209	0,8778
The Medical Representatives that visit me usually are not completely honest as for the sufficiency of quantities of drugs in the market	43,0405	151,196	0,5211	0,3556	0,8767
The Medical Representatives that visit me usually make bad remarks about their	43,1351	144,227	0,6755	0,5526	0,8688

competition					
The Medical Representatives that visit me usually are interested only for their own interests and not mine	42,723	149,372	0,5915	0,4529	0,8733
The Medical Representatives that visit me when asked usually reply even though they are not well familiar with the topic	43,0135	146,027	0,6357	0,5306	0,871
The Medical Representatives that visit me often give misleading information in case their competition is present	43,5676	145,757	0,7417	0,6448	0,8665
The Medical Representatives that visit me are usually pressuring me in order to ensure the prescription of their	42,2905	149,106	0,5578	0,422	0,8749
The Medical Representatives that visit me often make suggestions that contradict to the Code of Ethics of pharmaceutical companies	43,7635	149,774	0,6028	0,5334	0,8728
Reliability Coefficients 14 items					
<b>Alpha = 0,883 Standardized item alpha = 0,8839</b>					

As we can see from the charts above (which were produced from accuracy analysis using statistical package SPSS 13), accuracy alpha in the first case is 0,6245 and in the second case 0,883 – these figures are considered acceptable – which means that the accuracy of the scale is acceptable.

### **Variation analysis by one factor**

The analysis of the variation, or as usually called dispersal analysis is one of the most common statistical methods. Data experiment usually contains a great number of market variations. The variation analysis aims to determine the main variation source of a quantitative variable, as the variable amount that's due to each one of the different variables we are interested in. The rest of data variation is believed to be due to accidental factors and that's the reason it's

called error. The simplest version of variation analysis is the analysis by one factor, for example we are trying to examine a theory with this form:

H0 : There is no great difference caused by this factor  $\alpha$  or  $\alpha_j = 0$

Oppose to

H1 : There is a great difference caused by this factor  $\alpha$  or  $\alpha_j \neq 0$

In the following analysis, we'll show using the Anova through SPSS 13 program if there is great difference between the question groups.

I) First analysis refers to the question: I believe that the officials that provide Medical information are my valuable partners. Consequently we would like to examine the difference there is between the doctors understanding as far as the usefulness of M.R. is concerned.

H0 : There is no difference between doctors understanding the M.R. usefulness

Oppose to

H1 : There is a difference between doctors understanding the M.R. usefulness

First the chart of variation analysis is created through SPSS

<b>ANOVA</b>		<b>I consider the Medical Representatives useful partners</b>				
		<b>Sum</b>				
		<b>of</b>	<b>Mean</b>			
		<b>Squares</b>	<b>df</b>	<b>Square</b>	<b>F</b>	<b>Sig.</b>
Place of work	Between Groups	2,53	7	0,361	0,893	0,514
	Within Groups	57,107	141	0,405		
	Total	59,638	148			
Area of work	Between Groups	4,458	7	0,637	0,933	0,483
	Within Groups	96,24	141	0,683		
	Total	100,698	148			
Years of practice	Between Groups	5,962	7	0,852	1,218	0,297
	Within Groups	98,588	141	0,699		
	Total	104,55	148			
Practice abroad	Between Groups	1,895	7	0,271	1,311	0,249
	Within Groups	29,111	141	0,206		
	Total	31,007	148			
Age	Between Groups	4,294	7	0,613	0,98	0,448

	Within Groups	88,283	141	0,626		
	Total	92,577	148			
Gender	Between Groups	0,967	7	0,138	0,582	0,77
	Within Groups	33,463	141	0,237		
	Total	34,43	148			

When analyzing the results above, "sig." is bigger than 0,05 so we accept condition  $H_0$ .

II) The second analysis refers to the question: Generally speaking how would you characterize your relationship with the Medical Representatives that visit you? Therefore we want to examine if there is a difference in doctors perception as for the quality of their relationship with the Medical Representatives.

$H_0$  : There is no difference as for the quality of the relationship of the Medical Representatives that visit me  
versus

$H_1$  : There is a difference as for the quality of the relationship of the Medical Representatives that visit me .

First the variation analysis chart is produced from SPSS

<b>Generally speaking how would you characterize your relationship with the Medical Representatives that visit you?</b>						
<b>ANOVA</b>						
		<b>Sum</b>		<b>Mean</b>		
		<b>of</b>		<b>Square</b>	<b>F</b>	<b>Sig.</b>
		<b>Squares</b>	<b>df</b>			
Place of work	Between Groups	2,763	6	0,461	1,15	0,337
	Within Groups	56,874	142	0,401		
	Total	59,638	148			
Area of work	Between Groups	3,615	6	0,603	0,881	0,51
	Within Groups	97,083	142	0,684		
	Total	100,698	148			
Years of practice	Between Groups	8,433	6	1,406	2,077	0,06
	Within Groups	96,117	142	0,677		
	Total	104,55	148			

Practice abroad	Between Groups	1,521	6	0,254	1,221	0,299
	Within Groups	29,485	142	0,208		
	Total	31,007	148			
Age	Between Groups	6,981	6	1,163	1,93	0,08
	Within Groups	85,596	142	0,603		
	Total	92,577	148			
Gender	Between Groups	1,314	6	0,219	0,939	0,469
	Within Groups	33,115	142	0,233		
	Total	34,43	148			

When analyzing the results above, "sig." is bigger than 0,05 so we accept condition  $H_0$ .

III) The last analysis refers to the question: How would you characterize the calls of Medical Representatives? Therefore we want to examine if there is a difference in the doctors perception of Medical Representative's calls.

$H_0$  : There is no difference as for the quality of Medical Representative's calls.  
versus

$H_1$  : There is a difference as for the quality of Medical Representative's calls

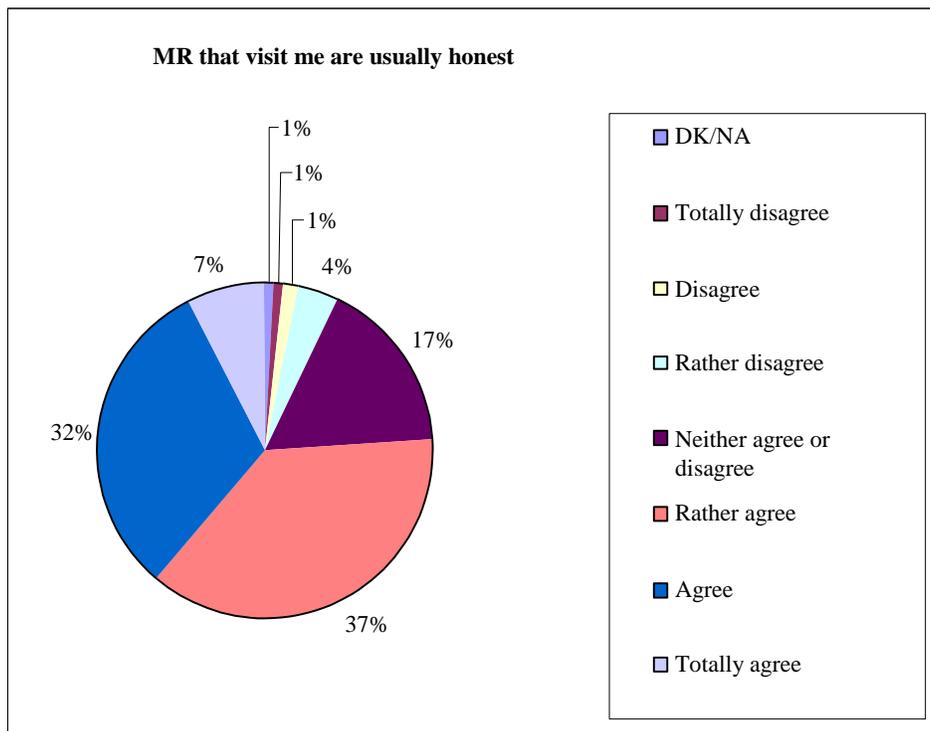
First the variation analysis chart is produced from SPSS

How would you characterize the calls of Medical Representatives?							
ANOVA							
		Sum		Mean			
		of					
		Squares	df	Square	F		Sig.
Place of work	Between Groups	3,812	6	0,635	1,616	0,147	
	Within Groups	55,826	142	0,393			
	Total	59,638	148				
Area of work	Between Groups	4,072	6	0,679	0,997	0,43	
	Within Groups	96,626	142	0,68			
	Total	100,698	148				
Years of practice	Between Groups	5,927	6	0,988	1,422	0,21	
	Within Groups	98,623	142	0,695			
	Total	104,55	148				

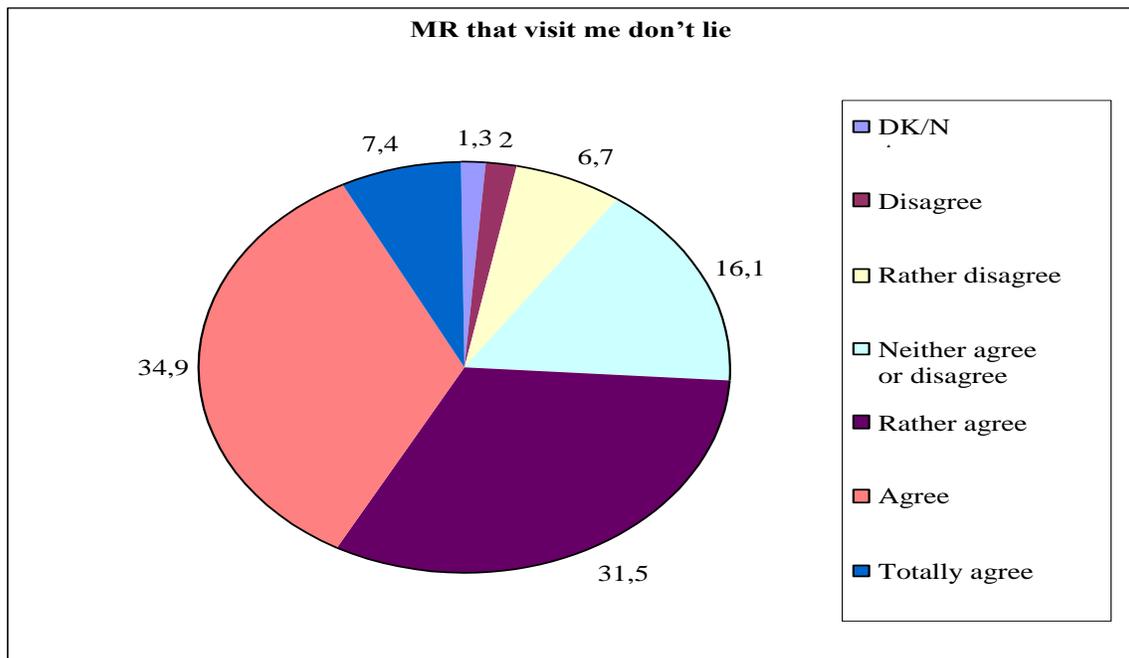
Practice abroad	Between Groups	1,128	6	0,188	0,893	0,502
	Within Groups	29,879	142	0,21		
	Total	31,007	148			
Age	Between Groups	4,745	6	0,791	1,279	0,271
	Within Groups	87,832	142	0,619		
	Total	92,577	148			
Gender	Between Groups	1,375	6	0,229	0,985	0,438
	Within Groups	33,054	142	0,233		
	Total	34,43	148			

When analyzing the results above, "sig." is bigger than 0,05 so we accept condition  $H_0$ .

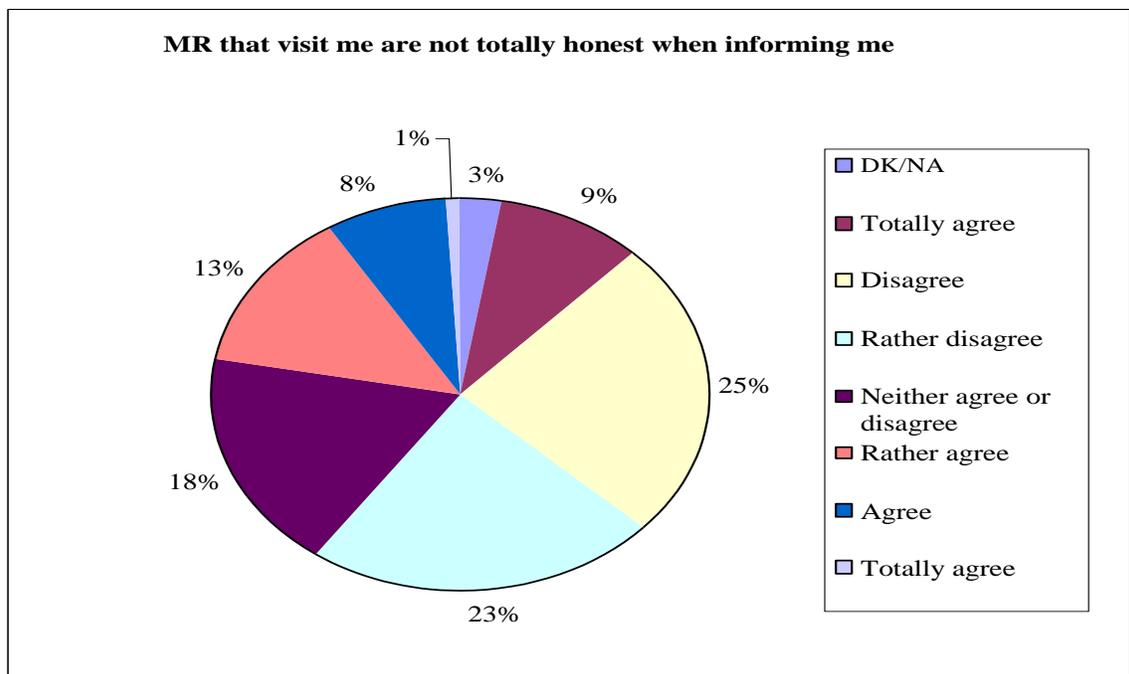
**The following analysis focuses on doctors' trust for Medical Representatives in relation to the visits.**



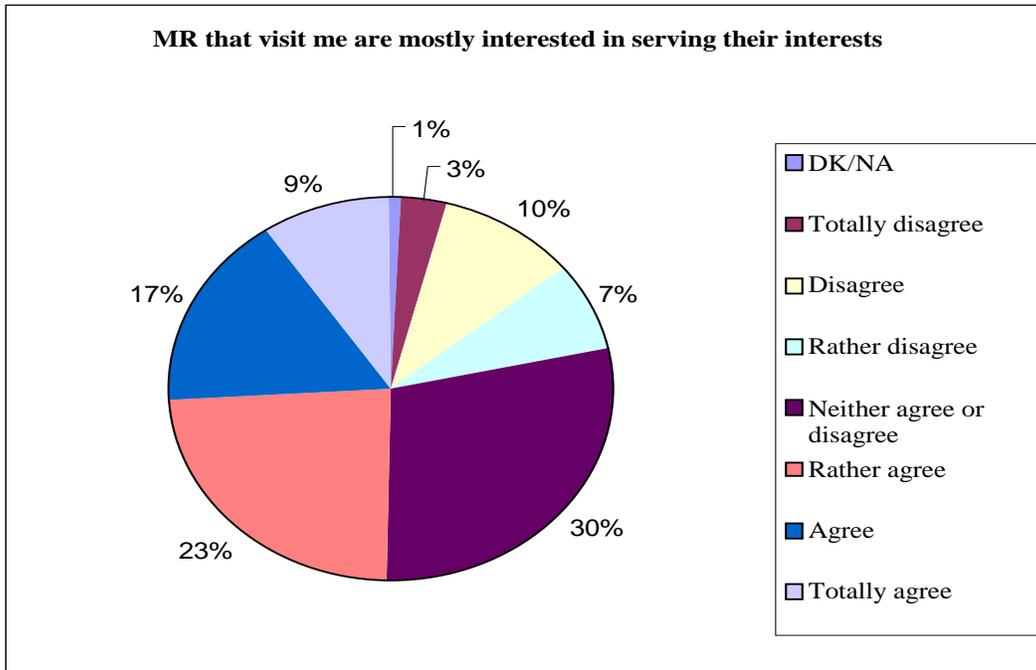
From 149 people asked the majority of the questioned (76% agrees that the Medical Representatives that visit them are usually honest).



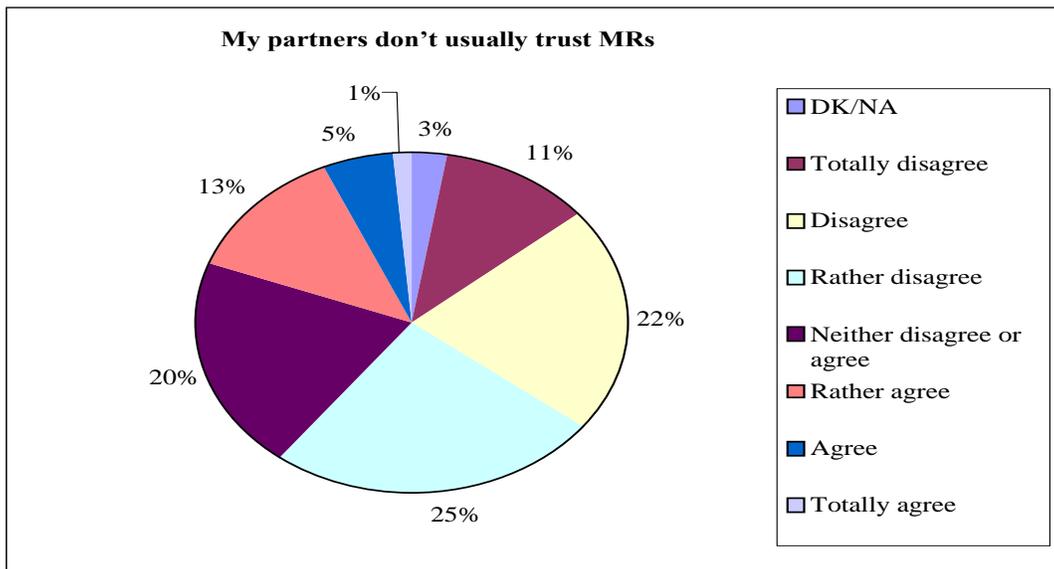
From 149 people asked the majority agrees that Medical Representatives don't lie during the visit.



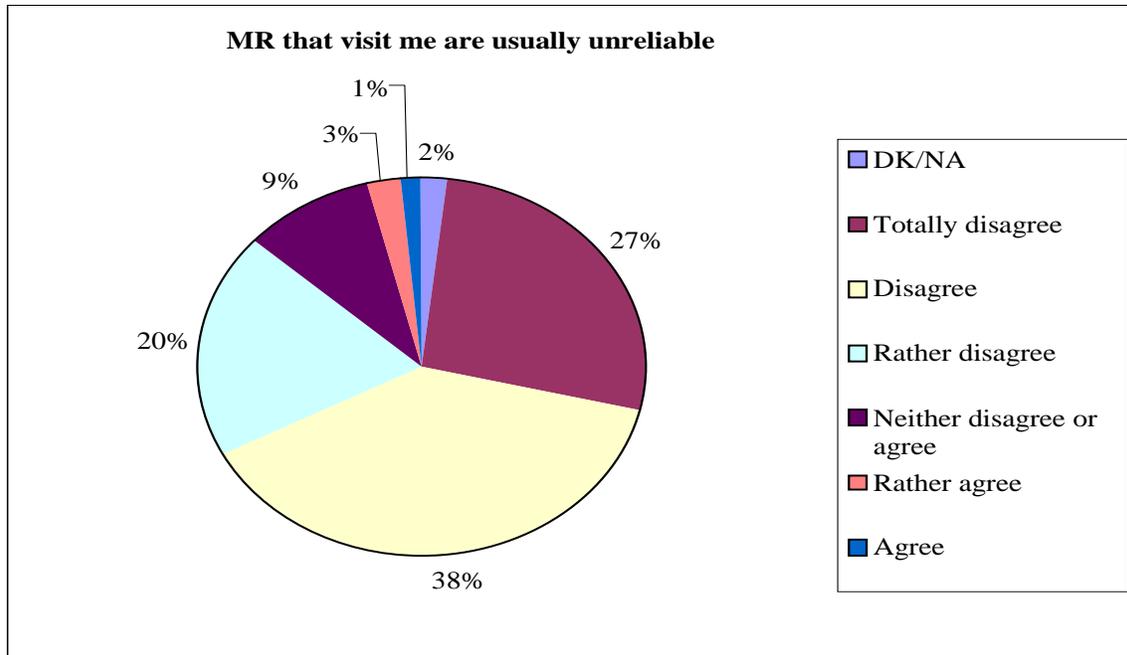
From 149 people asked the majority – 57%- does not agree that Medical Representatives that visit them are not totally honest when informing them



From 149 people asked the majority (49%) agreed that Medical Representatives are mostly interested in serving their own interests.

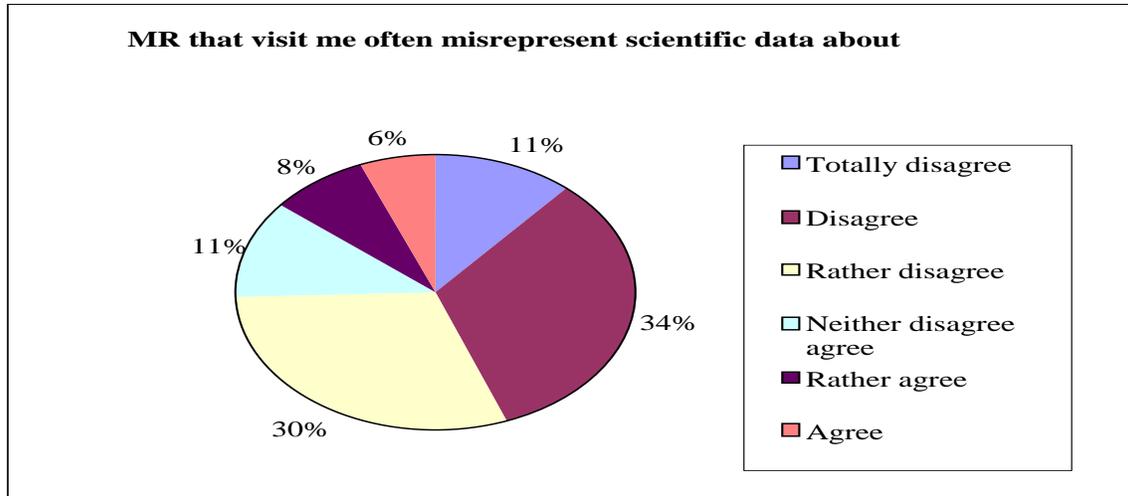


From 149 people asked the majority –58%– disagreed with the statement that their partners don't trust Medical Representatives

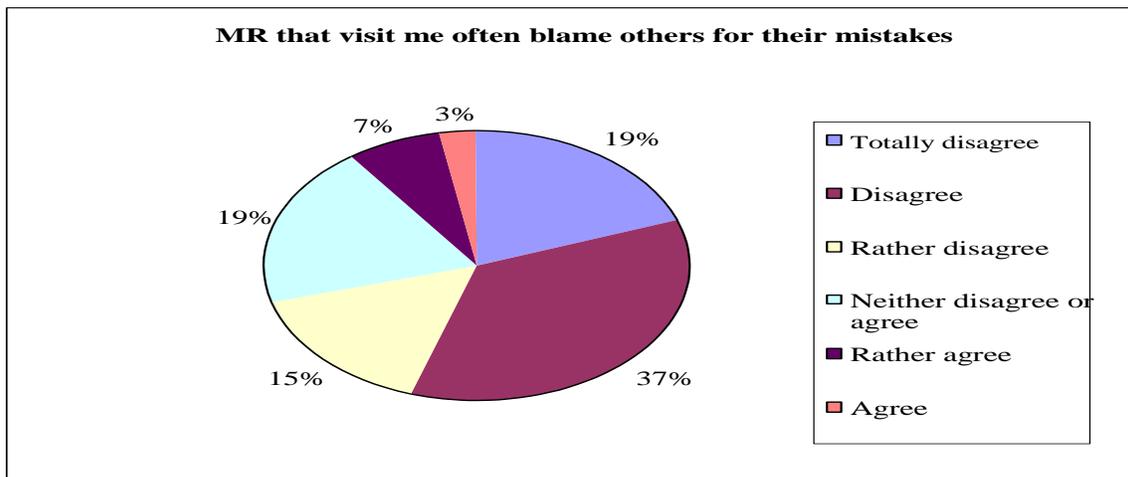


From 149 people asked the majority –85% - disagreed with the statement that Medical Representatives are usually unreliable.

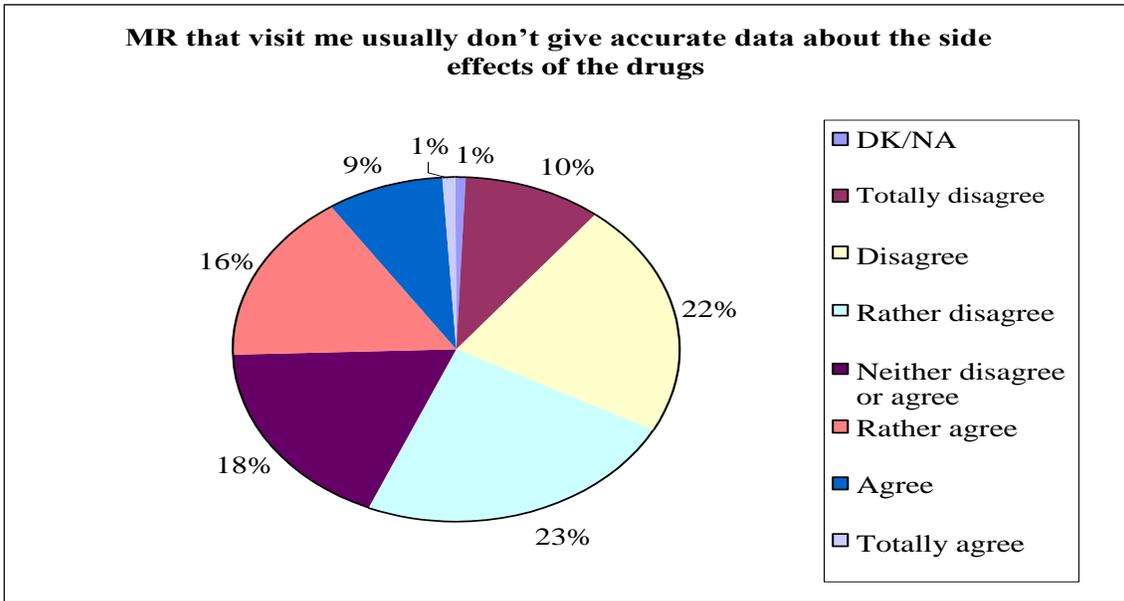
The following analysis focuses on Medical Representative's behavior when they visit a doctor .



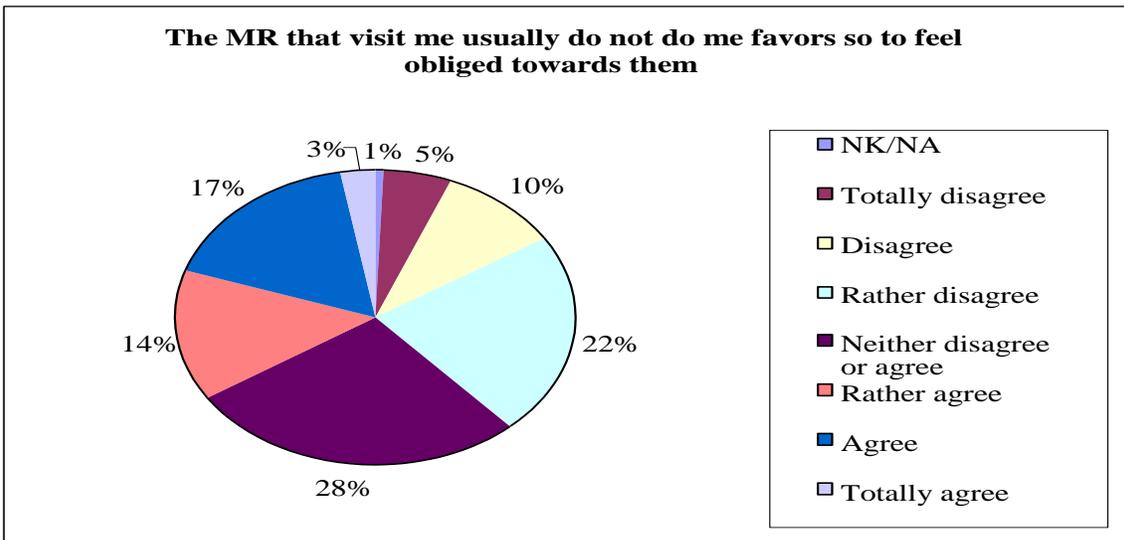
From 149 people asked the majority –75% - disagreed with the statement that the Medical Representatives that visit them often misrepresent and change scientific data about pharmaceutical drugs.



From 149 people asked the majority –71% - disagreed with the statement with the statement that Medical Representatives that visit them blame others for their mistakes.

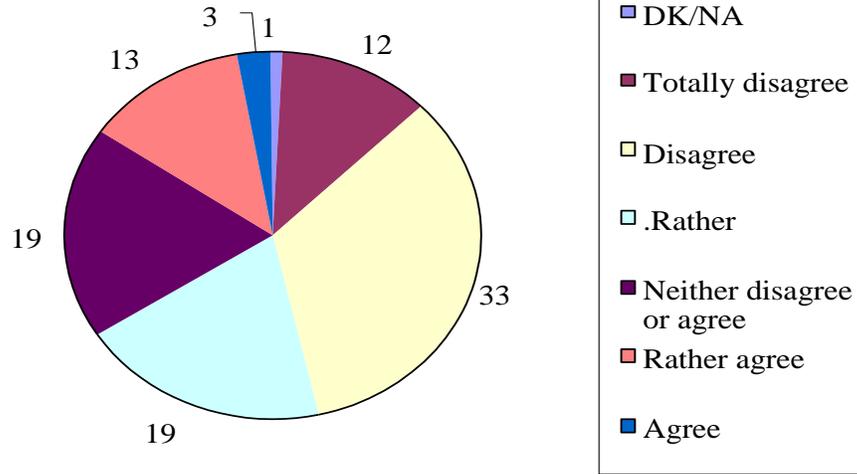


From 149 people asked the majority –55% - did not agree with the statement that Medical Representatives usually do not give accurate data about the side effects of the drugs.



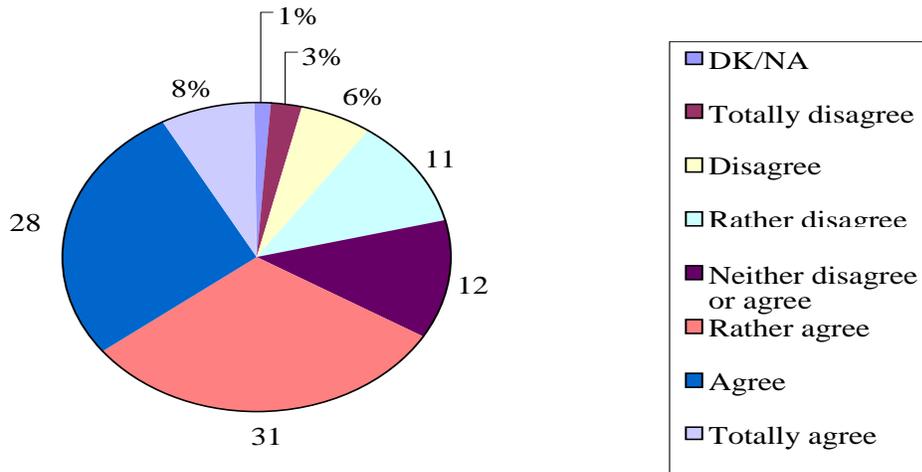
From 149 people asked the majority –37% - disagreed with the statement that Medical Representatives that visit them usually don't do them favors in order to make them feel obliged towards them.

**MR that visit me often promote drugs with a likelihood of increased side effects**

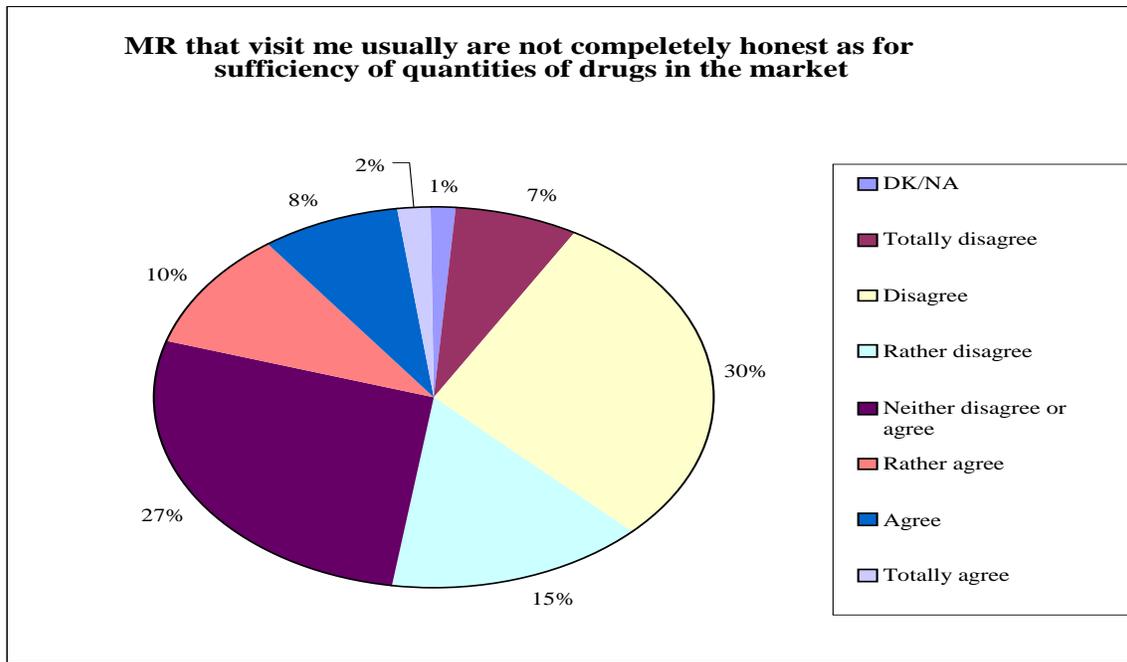


From 149 people asked the majority - 64% - disagreed that Medical Representatives promote drugs with who may have increased side effects.

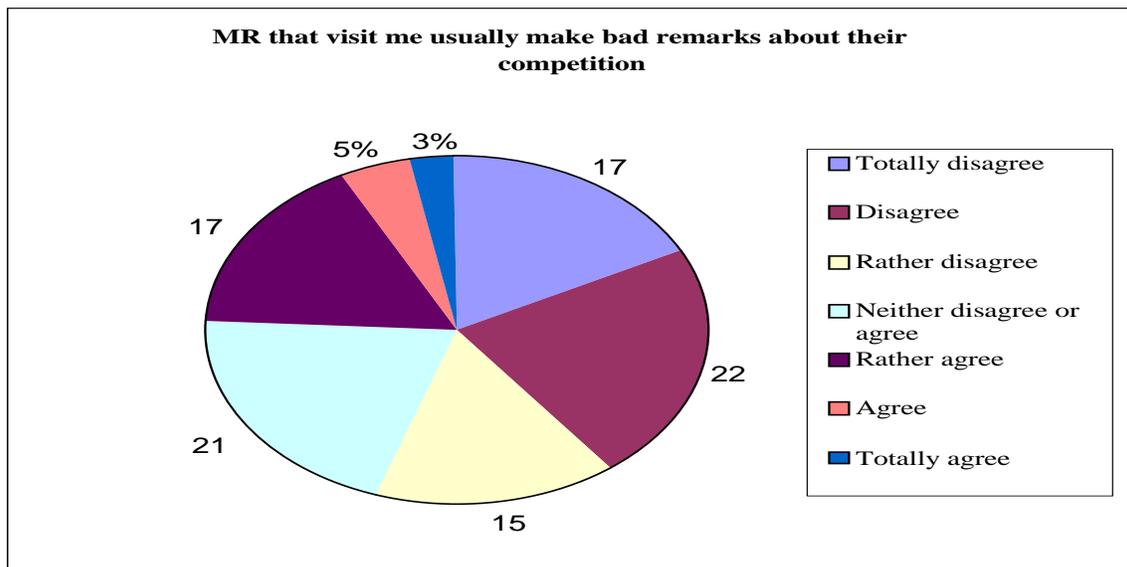
**MR that visit me usually exaggerate when presenting the benefits of a new drug**



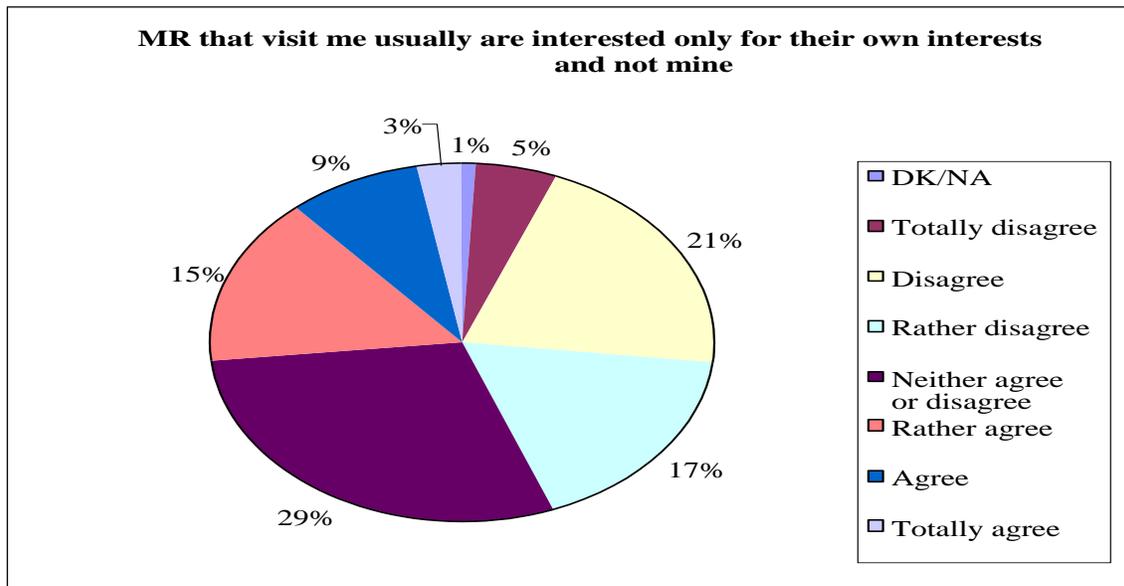
From 149 people asked, the majority -67% - agrees with the statement that Medical Representatives usually exaggerate when presenting the benefits of a new drug.



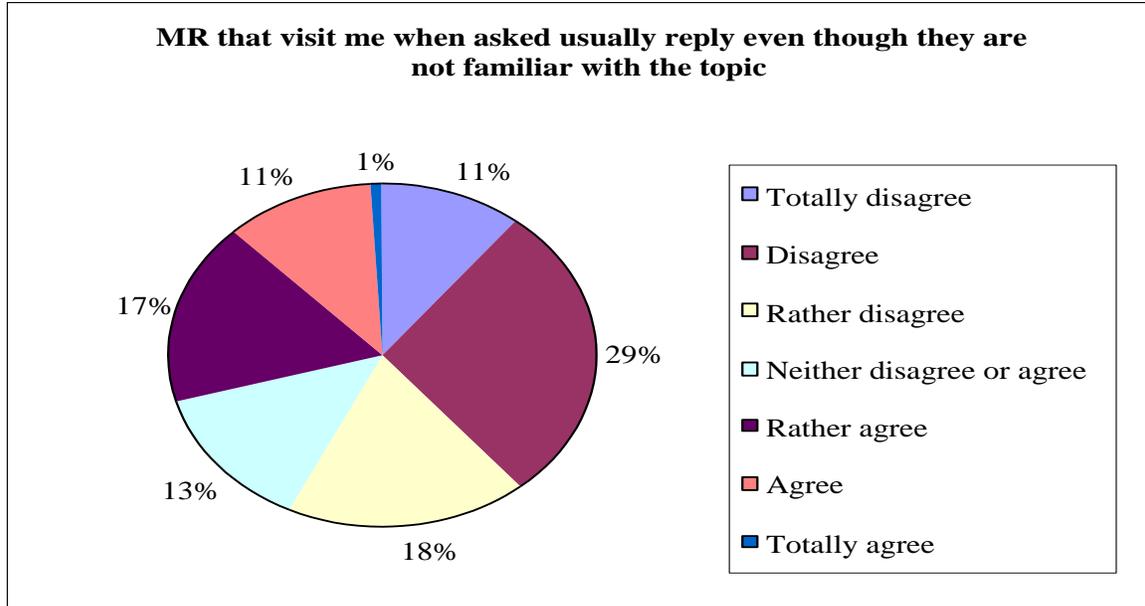
From 149 people asked, the majority –52%- disagreed with the statement that Medical Representatives that visit them usually are not completely honest as for the sufficiency of the quantities of some drugs in the market.



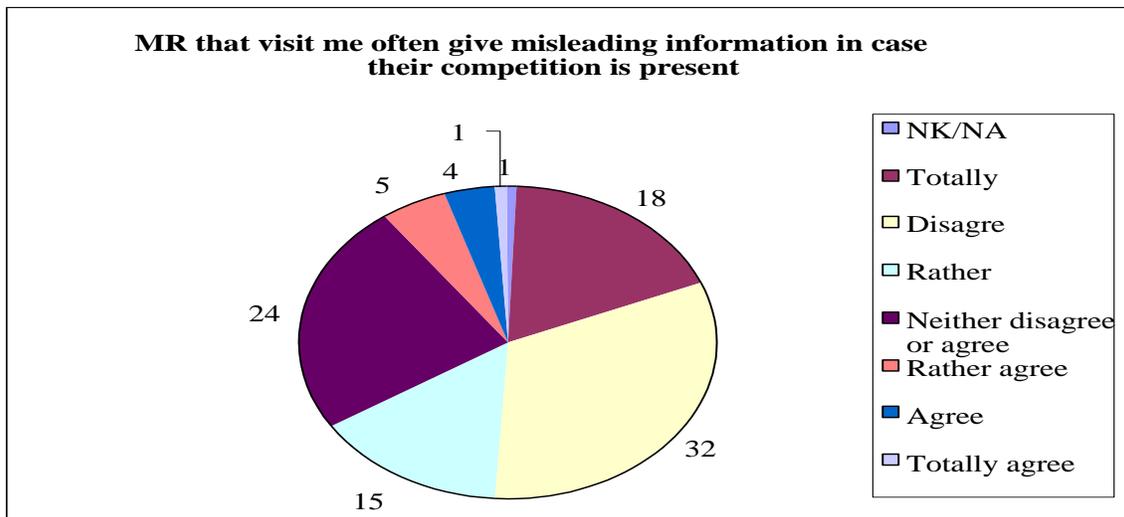
From 149 people asked, the majority - 54% - disagreed with the statement that Medical Representatives that visit them usually make negative comments for their competition.



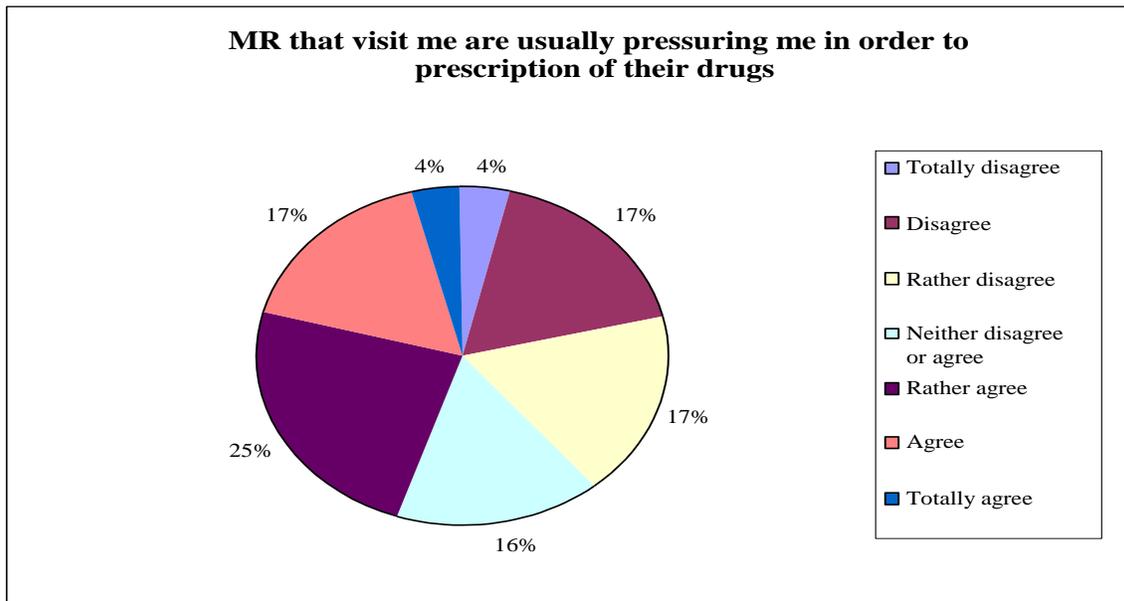
From 149 people asked the majority - 43% - disagreed that Medical Representatives are usually only interested in their own interests and not theirs.



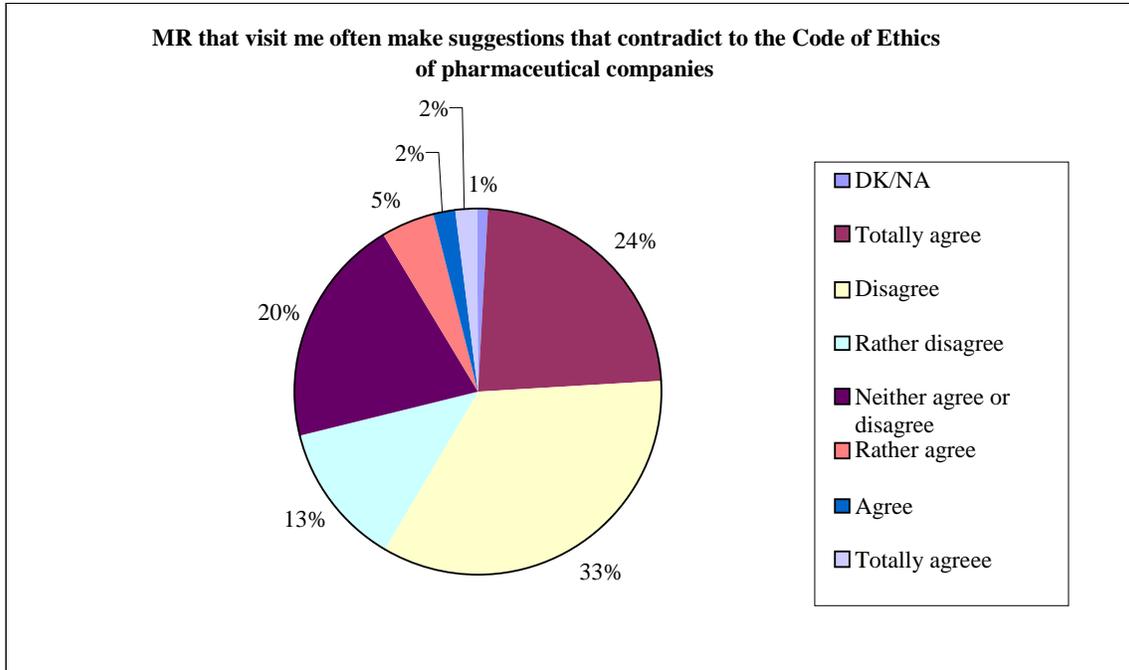
From 149 people asked the majority - 58% - disagreed with the statement that Medical Representatives that visit them usually reply even when not familiar with the topic.



From 149 people asked the majority—65% - did not agree with the statement that Medical Representatives that visit them give misleading information in case their competition is present during the visit.

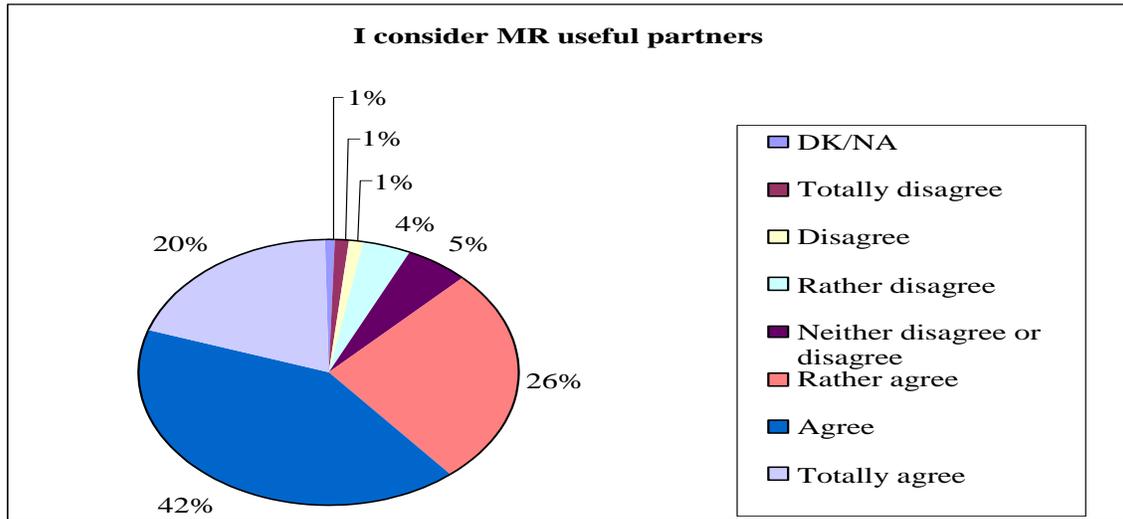


From 149 people asked the majority -46%- agreed that with the statement that Medical Representatives that visit them are usually very persuasive in order to ensure prescribing of the drugs they promote.

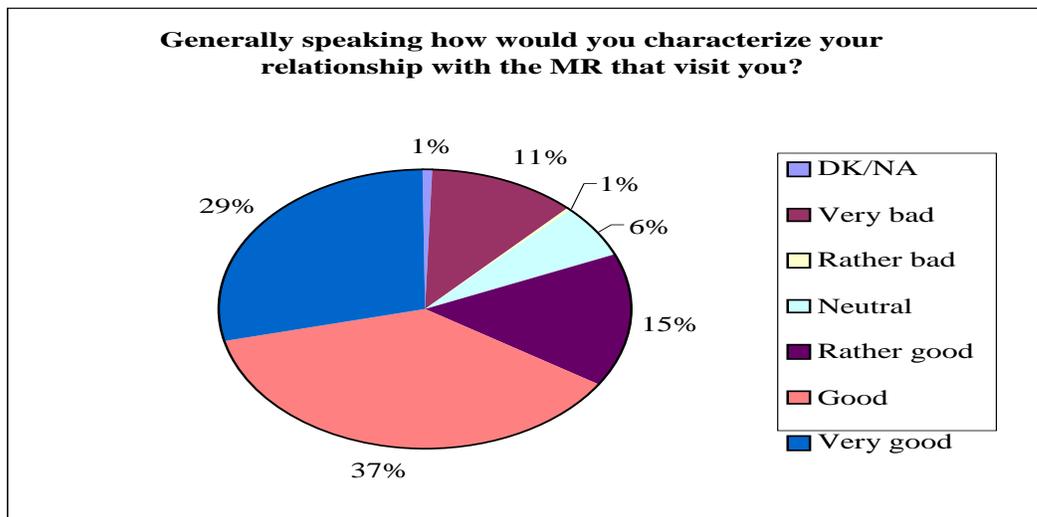


From 149 people asked, the majority -70%- disagreed that Medical Representatives disagreed with the statement that Medical Representatives that visit them often make suggestions that are not in line with the Code of Ethics of the pharmaceutical companies.

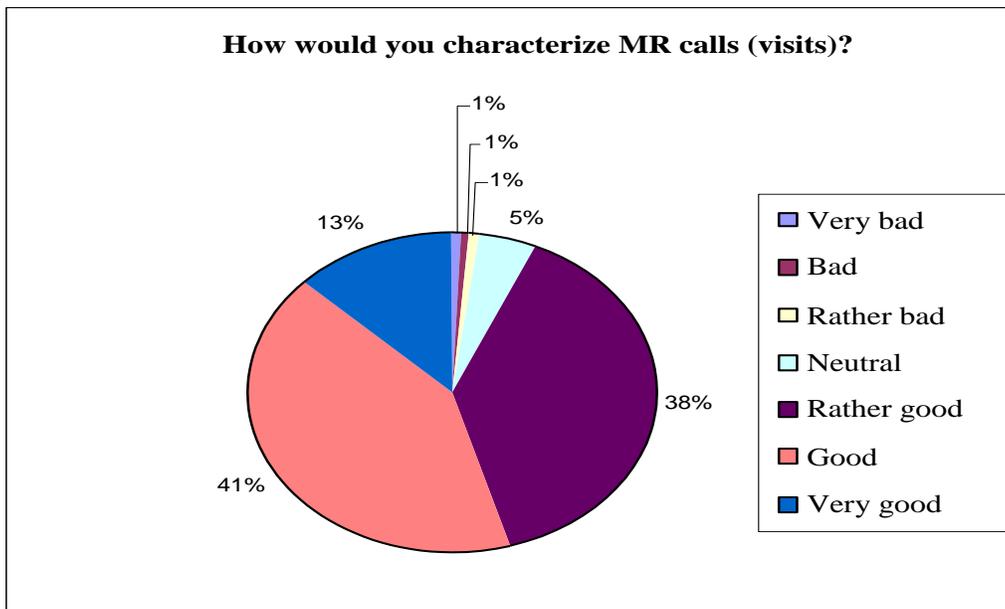
The following analysis describes the cooperation and relationship of Medical Representatives with the doctors as well as the quality of the visits they accept



From 149 people asked -88%- agreed that Medical Representatives are useful partners.



From 149 people asked, the majority -52% - characterized as good their relationship with the Medical Representatives that visit them.



From 149 people asked the 92% -characterize as positive Medical Representative's calls

#### **4.2 Comparison of research findings with the aims of the assignment**

Based on the study's aim the following conclusion are drawn:

The primary goal of this assignment was the research of the relative effect of the Medical Representatives in building company image, as well as investigating doctor's perception of Medical Representatives. Based on the theoretical models of Fobrun (1990) and Stewart (2004) that were presented, the parameters that are critical for defining company identity and the importance of Medical Representatives in building it, were identified. What is more, the three most important factors that impact doctor's perception (morality, trust and honesty) were evaluated.

In order to further understand the function of pharmaceutical companies as well as the pharmaceutical market, there was a presentation of the pharmaceutical company the author works for as well as an analysis of the political, financial, structural and competitive environment of pharmaceutical market.

Each study must be supported by bibliography and scientific data, in order for its arguments to be established.

The review of theoretical data was a major goal of this assignment. For the reasons mentioned before there was a large analysis of as many as possible theoretical approaches about company reputation with many data from international bibliography. At this point, company reputation was identified as an important company immaterial asset.

- ☞ In the methodology chapter the basic research methods were indicated. These methods are mentioned in the bibliography as well as in the primary research method used.
- ☞ The analysis of the research findings provided clear evidence about the perception of doctors for a company's image based on their perception of Medical Representatives.
- ☞ Finally in the conclusions chapter there was an analysis of the elements pharmaceutical companies must focus on in order to improve its image and as a consequence its reputation.

## **CHAPTER 5 CONCLUSIONS, SUGGESTIONS**

### **5.1 Conclusion**

Medical information is at the moment the most accurate and at the same time expensive way for the pharmaceutical companies to communicate with their most important clients, the doctors. It has been proven that Medical Representatives are considered to be the third in importance characteristic element of a pharmaceutical company and there is a large extent of association of company identity and the identity of the sales force. Some of the largest pharmaceutical companies are ranked based on their company image, the performance of their sales force and their other capacities as perceived by the doctors.

Handling company reputation from pharmaceutical companies is a multilevel fight in an extremely competitive environment. A positive company reputation is a priceless asset for every company because it offers a viable competitive advantage. From the targets set by pharmaceutical companies the major is the development of new products so as to increase market share. The second most pursued target is the increase in marketed products in existing markets and the least of these targets is the expansion in new markets abroad.

In order to achieve these targets a series of strategic moves are being considered and used. These moves have to do with production, development, handling immaterial corporate assets and more specifically attracting, maintaining, developing and promoting employees through creating an attractive working environment and organizational flexibility for the company.

After analyzing the findings of the primary research we reached to the following conclusions for Medical Representatives as a factor of creating company image in the Pharmaceutical Market and to the doctors.

- ⇒ For the total of the participating doctors and having as trust as a basic criterion, the biggest percentage (about 75%) agreed that indeed they trust the Medical Representatives when they visit them, basing their trust

on credibility and honesty, with no false statements and with the main target of the visit to be serving doctor's interests aiming at the benefit of the patients.

- ⇒ In the second level of questions and having as a primary topic Moral behavior of Medical Representatives the biggest percentage (76%) of participants agreed that the Medical Representatives show moral behavior, which means they do not alter scientific facts, provide accurate information about side effects of drugs, do not promote drugs with increased probability of side effects and do not exaggerate about the benefits of their products, don't make unethical remarks about their competition, retain a high business level, avoid giving vague information for matters they don't know, are very persistent when asking for prescriptions and don't do favors, so that the doctors will feel obligated towards them and last but not least not make suggestions that are against the Code of Ethics.
- ⇒ In the final level of questions that was researched, the usefulness of doctors cooperation with Medical Representatives the majority of the doctors (88%) agreed that Medical Representatives are useful partners for them, having built at the same time good, interpersonal and business relationships with them, (total percent 81%), basing their answers on the good visits, total percent of answers 92%

Special emphasis should be given to the long-term persistence of pharmaceutical companies to hiring people with diplomas from Universities related to health studies in order to better serve the Medical community. Large amounts are invested for this and there is also a high cost of scientific training. By investing in this sort of training pharmaceutical companies wish to offer Medical Representatives an extensive scientific knowledge, not only for the drugs they represent, but also for the therapeutic areas these drugs are a part of so as to:

- ✓ Fully understand the complicated mechanism of action of the drugs, even in patients that have co morbidity with other medical conditions

- ✓ Have such a high scientific level of knowledge so to make brief but complete informing statements about the drugs and be able to back up their arguments with solid scientific facts
- ✓ Be able to answer all questions but also be able to make interesting questions about doctor's clinical experience or alternative treatment therapies that minimize the chances of adverse events emerging.

As a conclusion Medical Representatives offer doctors new and important information so that doctors think of them as useful partners and accept their scientific value.

Medical Representatives don't sell, but offer priceless information services and for that they must have all the necessary scientific reports and training, so as to transmit knowledge and be a part of the success for their company. Medical information requires interpersonal contact as part of the transactional communication. So the need for transmitting knowledge caused the need for the profession of Medical Representatives. And it is this need that will retain it in the changing environment of pharmaceutical market.

Therefore much attention must be given when shaping the characteristics, attitude and qualities of sales force. They are a determinant factor of building a positive, strong company image.

## **5.2 Direction for further research**

As noted earlier every study must be focused on its aims and targets. However, as the research proceeds and as bibliography is being reviewed, new areas for further research and evaluation emerge, areas that decamp from the primary aim of the study.

The focus of the study was to present the facts and conditions of the pharmaceutical market. However, the same facts and conditions are valid not only for Greece, but also for Europe and worldwide. Governments are placing pressure on decreases in health expenditures, due to the fact that this has little political cost, while there is information that pharmaceutical companies result

with huge profits and therefore can reduce prices. Financial decline will lead to even more demanding customers who will ask for even cheaper drugs.

Adding to the rest, insurance organizations and hospitals, major customers of drugs, demand bigger participation in the decisions for drug use and finance. The basic function of Medical Representatives (sharing information with the doctors, reinforcing relationships with them and influencing their prescribing attitude) could be distributed to other channels. Doctors seem to strengthen their relationships with other customer elements (directors, hospital and other organizations executives, etc) and they will affect how doctors see pharmaceutical companies. Some doctors will no longer be interested in contacting with Medical Representatives but will prefer to use technological means to contact the pharmaceutical company. Moreover, there may be doctors that will make it impossible for building a relationship through Medical Representatives visits.

A recent research in the USA that was completed in February 2005 showed that 55% of doctors will provide Medical Representatives even fewer time and only 3% will increase it. Also, Pan European researches show that the next 5 to 10 years the major Decision Maker of drug policy will be insurance organizations and hospitals.

The issues raised from the above facts are:

- If someone else decides, should I continue to visit the doctor?
- What will be the new role of Medical Representatives in order to be useful?
- What will be the attitude and dealing of the emerging problems from the pharmaceutical companies towards the Medical Representatives?
- What must be the characteristics of the modern Medical Representative?;
- How strategic is Medical Representative today? Comparative data are not defined by him and at the same time he is part of a situation where strategy is defined by the company.

- Must companies show social responsibility? Should business social responsibility be related to financial politics of the pharmaceutical companies?
- How do pharmaceutical companies executives feel about the environment that constantly changes and transforms in the drug market?

The proportion that used to exist between the increase of Medical Representatives and sales is no longer valid. Sales are beginning to reach their higher limit and that generates thoughts and questions if the profitability of the sales departments is indeed the one expected. After the implementation of the Code of Ethics the environment is changing.

Even though pharmaceutical companies are dealing with a lot of challenges there is good news too, mostly about the fact that the efficiency of the sales force is no longer a result of Medical Representative's productivity. On the contrary, efficiency starts from clinical trials and can reach to preparing a successful launch. On the other hand it is supported by the Continuing Medical Education (CME) of doctors, technological support teams, etc. The background for future success in sales and customer loyalty are based on CME and communication centers. For this reason the scenario that must be considered as a future factor for success is: higher performance with smaller sales teams.

We must also point out that Medical Representatives are the foundation of all successful companies, not only in Greece, but also in Europe and the USA. Also, it is one of the most expensive investments. However strange it may seem the mean cost of a medical representative, including bonus, car, etc is more than €60.000 and this is little compared to UK or USA, where the cost is more than €120.000. Moreover, when a medical representative leaves this costs the company about €185.000, which includes the hiring and training cost and the lost productivity time.

So there is much talk about where the productivity of the sales force is still highly related to training, values and the companies vision.

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# APPENDIX

- Questionnaire
- Results of the study
- Research accuracy
- Variation analysis by one factor

## **Questionnaire**

Hello. My name is Athanasios Pastogiannis. I work in the pharmaceutical company Pfizer Hellas and I am the District Manager of CNS. Parallel to my work I do an MBA in International Hellenic University. We are conducting a research with another student, Christos Dionysatos, for the medical representatives and how they are a factor of building company reputation. Also the research focuses on how doctor's perception of medical representatives and a pharmaceutical company shapes.

Bellow you will find a questionnaire that would really help if you could take some time and fill it out. In this way we will collect data that will help our research. Your contribution to our assignment will help its success.

We would like to thank you in advance and guarantee the confidentiality of your answers. The questionnaire is anonymous. Please answer all questions with honesty and after some thought.

Thank you for your cooperation.

Yours truly,

Athanasios Pastogiannis

Christos Dionysatos

## **Questionnaire**

Dear Doctor,

The questionnaire aims at evaluating the importance of the Medical Representative's Team in shaping a company image, as well as your perception for Medical Representatives of Pharmaceutical Companies.

**Demographic information**

		<b>Pathology</b>	<b>Neurology</b>	<b>Psychiatry</b>
<b>Speciality</b>		<input type="text"/>	<input type="text"/>	<input type="text"/>
		<b>Private office</b>	<b>Public</b>	<b>Private clinic</b>
<b>Place of work</b>	<b>or</b>	<input type="text"/>	<input type="text"/>	<input type="text"/>

How much do you agree or disagree with each of the following phrases:

**(Cycle a number for each answer according to the following scale)**

1. Totally disagree 2. Disagree 3. Rather disagree 4. Neither agree or disagree  
 5. Rather agree 6. Agree 7. Totally agree

1.1	The Medical Representatives that visit me are usually honest	1	2	3	4	5	6	7
1.2	The Medical Representatives that visit me don't lie	1	2	3	4	5	6	7
1.3	The Medical Representatives that visit me are not totally honest when informing me	1	2	3	4	5	6	7
1.4	The Medical Representatives that visit me are mostly interested in serving their interests	1	2	3	4	5	6	7
1.5	The Medical Representatives that visit me don't seem to care about my needs	1	2	3	4	5	6	7
1.6	My partners don't usually trust Medical Representatives	1	2	3	4	5	6	7
1.7	The Medical Representatives that visit me are usually unreliable	1	2	3	4	5	6	7

2.1	The Medical Representatives that visit me often misrepresent scientific data about drugs	1	2	3	4	5	6	7
2.2	The Medical Representatives that visit me often blame others for their mistakes	1	2	3	4	5	6	7
2.3	The Medical Representatives that visit me usually don't give accurate data about the side effects of drugs	1	2	3	4	5	6	7
2.4	The Medical Representatives that visit me usually take advantage of new and inexperienced doctors	1	2	3	4	5	6	7
2.5	The Medical Representatives that visit me usually don't do me favors so to feel obliged towards them	1	2	3	4	5	6	7
2.6	The Medical Representatives that visit me often promote drugs with a likelihood of increased side effects	1	2	3	4	5	6	7
2.7	The Medical Representatives that visit me usually exaggerate when presenting the benefits of a new drug	1	2	3	4	5	6	7
2.8	The Medical Representatives that visit me usually are not completely honest as for the sufficiency of quantities of drugs in the market	1	2	3	4	5	6	7
2.9	The Medical Representatives that visit me usually make bad remarks about their competition	1	2	3	4	5	6	7
2.10	The Medical Representatives that visit me usually are interested only for their own interests and not mine	1	2	3	4	5	6	7
2.11	The Medical Representatives that visit me when asked usually reply even though they are not well familiar with the topic	1	2	3	4	5	6	7
2.12	The Medical Representatives that visit me often give misleading information in case their competition is present	1	2	3	4	5	6	7
2.13	The Medical Representatives that visit me are usually pressuring me in order to ensure the prescription of their	1	2	3	4	5	6	7
2.14	The Medical Representatives that visit me often make suggestions that contradict to the Code of Ethics of	1	2	3	4	5	6	7

pharmaceutical companies							
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**How much do you agree or disagree with the phrase bellow that concerns your collaboration with the Medical Representatives of pharmaceutical companies that visit you?**

3.1	I consider the Medical Representatives useful partners	1	2	3	4	5	6	7
-----	--	---	---	---	---	---	---	---

3.2.	<b>Generally speaking how would you characterize your relationship with the Medical Representatives that visit you?</b> <i>(Cycle a number in every answer according to the following scale)</i> 1. Very bad 2. Bad 3. I think bad 4. Neutral 5. I think good 6. Good 7. Very good	1	2	3	4	5	6	7
------	---	---	---	---	---	---	---	---

3.3	<b>How would you characterize the calls of Medical Representatives?</b> <i>(Cycle a number in every answer according to the following scale)</i> 1. Very annoying 2. Annoying 3. I think annoying 4. With no interest 5. I think useful 6. Useful 7. Very useful	1	2	3	4	5	6	7
-----	---	---	---	---	---	---	---	---

	Athens	Patras	Heralkeion	Ioannina
<b>4. Area of work</b>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	<b>Less than 10</b>	<b>10-15</b>	<b>More than 15</b>	
	_____	_____	_____	

**5. How many years have you been practicing this medical profession?**

**6. Have you practiced medicine abroad?**

**YES**

**NO**

**Bellow 40**

**41-55**

**55-  
50**

**Over 60**

**Age**

**Male**

**Fenale**

**Sex**

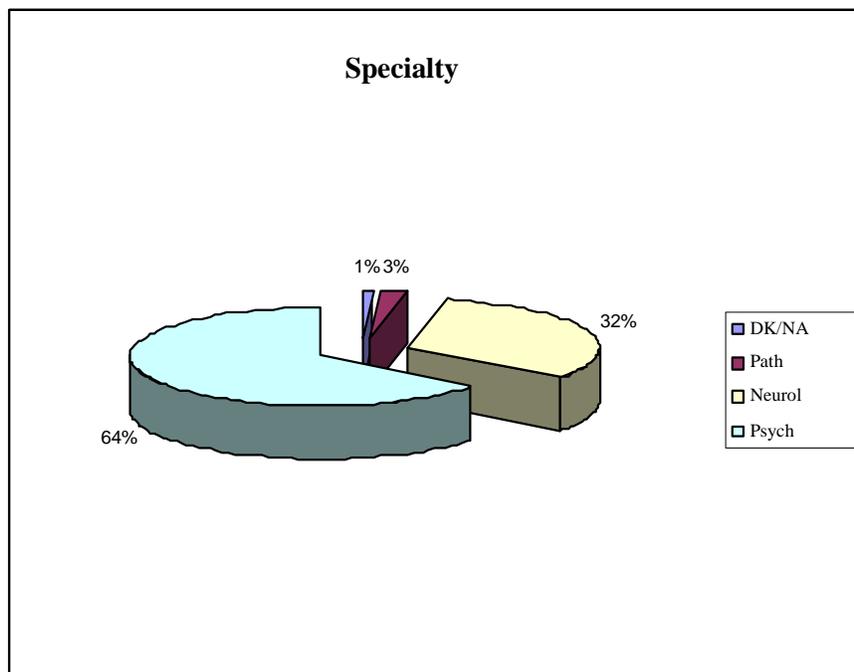
## Results of the study

### Results of primary reserach

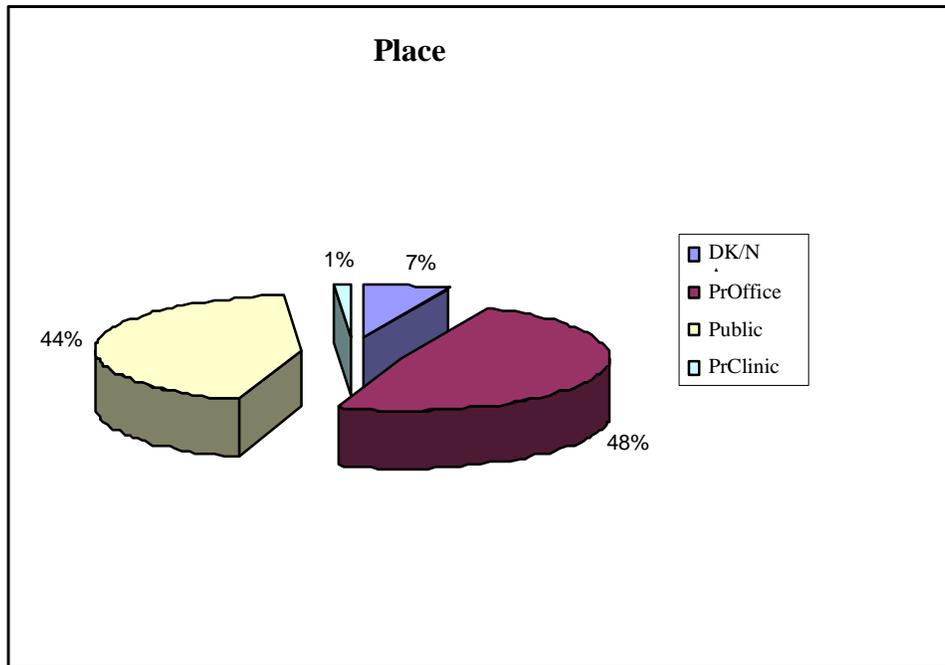
All analysis was conducted using the statistical program SPSS 13 (Statistical Package for Social Sciences). This program has the ability to manage a vast volume of data and perform complicated calculations.

### Results and analysis

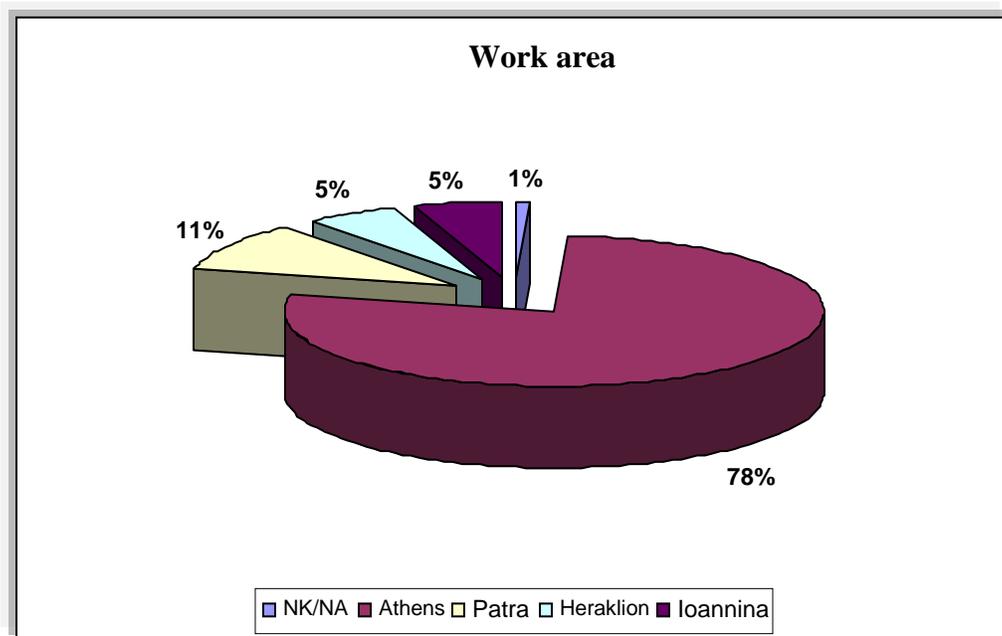
The sample of the research will be described first, by analyzing the specialty of the participants, the place of work and the work area, the years they have been practicing the medical profession and whether they have practiced it abroad, as well as the gender and the age of the participants.



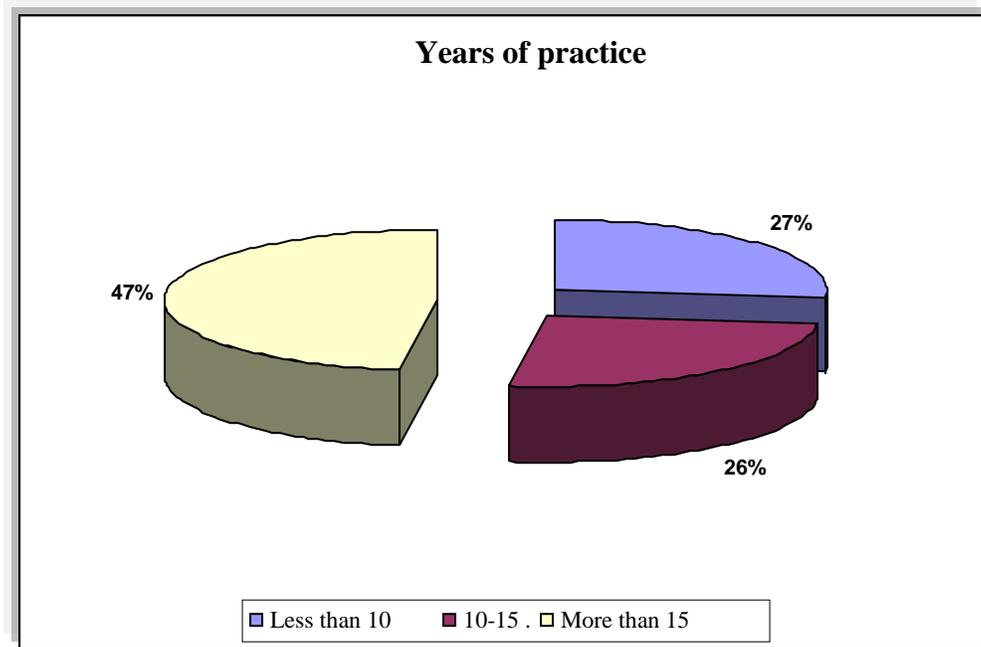
From 149 people asked, 96 were psychiatrists and represent 64,4% of the total, 48 were neurologists and represent 32,2% of the total, 4 represent 2,7% of the total and 1% did not answer.



From 149 people asked, 72 work in a private office and represent 48,3% of the total, 65 work in public hospitals etc and represent 43,6% of the total, 2 work in private clinics and are 1,3% of the total and 10 did not answer.



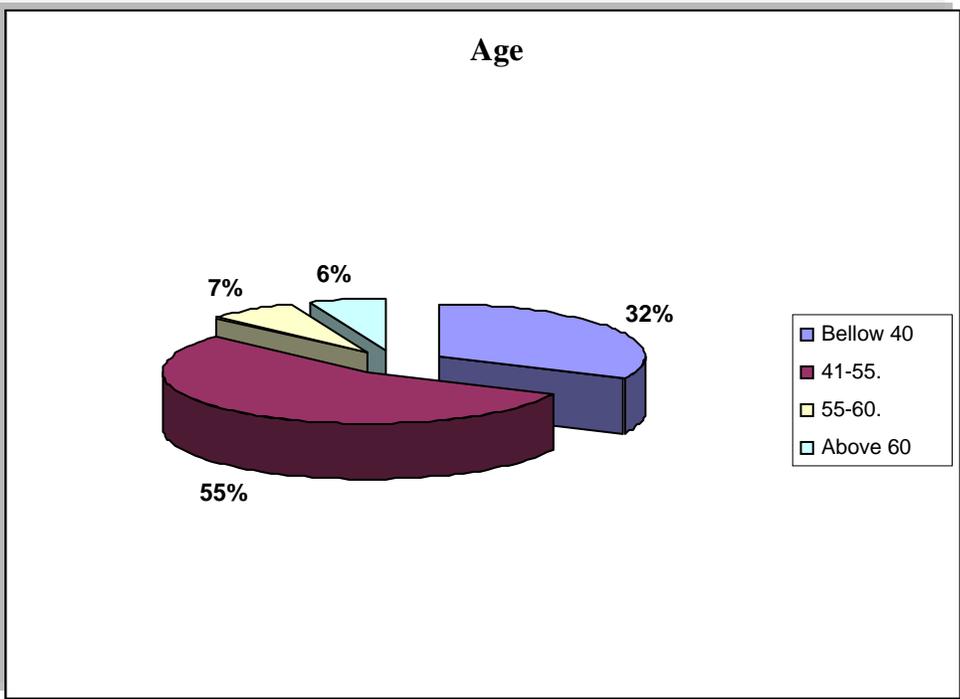
From 149 people asked 116 work in Athens and represent 77,9% of the total, 16 work in Patra and represent 10,7% of total, 8 work in Heraklion and represent 5,4% of total, 8 work in Ioannina and represent 5,4% of total and 1 did not answer.



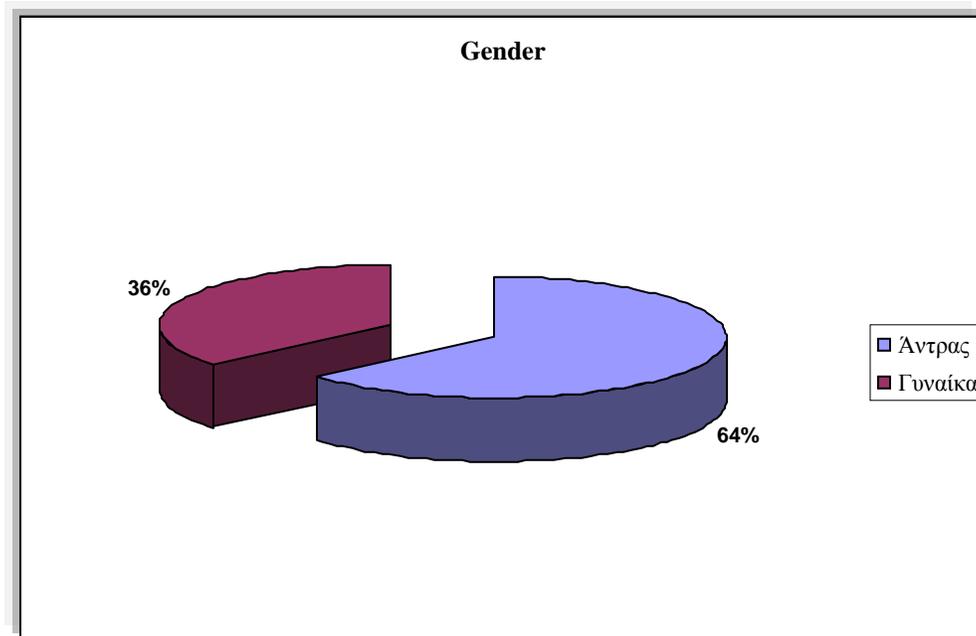
From 149 people asked 71 have been practicing more than 15 years and represent 47,7% of the total, 38 have been practicing for 10-15 years and represent 25,5% of the total, 40 have been practicing less than 10 years and represent 26,8% of the total.



From 149 people asked 105 have not practiced medicine abroad and represent 70,5% of the total, while 44 have practiced medicine abroad and represent 29,5% of the total.



From 149 people asked 81 are 41-55 years old and represent 54,4% of the total, 48 are bellow 40 and represent 32,2% of the total, 11 are 55-60 year sold and represent 7,4% of the total and 9 are above 60 and represent 6% of the total.



From 149 people asked 95 are men and represent 63,8% and 54 are women and represent 36,2% of the total.