INTENTION TO PURCHASE GENERIC DRUGS IN A YOUNG MARKET: PERCEIVED RISK, PRESCRIBERS AND EXPERIENCE

Rozano Suplet, Mercedes [1]

Gómez Suárez, Mónica [2]

Mónica Gómez is Associate Professor of Marketing at School of Economics and Business Administration, Universidad Autónoma de Madrid. Her research interests lie in retailing and consumer behaviour. Her work has appeared in a number of leading journals in marketing and retailing, including *International Journal of Market Research*, *European Journal of Marketing*, *Journal of Retailing and Consumer Services and International Journal of Retailing and Distribution Management*, among others. She has also published papers in numerous conference proceedings, such as the Society for Consumer Psychology (SCP), the European Marketing Academy Conference (EMAC) and the European Institute of Retailing and Services (EIRASS)

Mercedes Rozano is Assistant Professor of Marketing at School of Economics and Business Administration, Universidad Autónoma de Madrid. She has published various articles in Spanish leading journals related to store brands, internacional marketing and consumer behaviour, including *Distribución y Consumo, Cuadernos de Gestión, Alta Dirección, Revista Portuguesa de Marketing* and numerous papers in conference proceedings, such as AEDEM, EMAC and EMARK. She has just finished her doctoral dissertation about perceived risk in the generic drugs Spanish market.

[1] Department of Commercial Financing and Research, School of Business, Universidad Autónoma de Madrid, Assistant Professor, C/ Fco Tomás y Valiente, 5, 914973179, mercedes.rozano@uam.es.

[2] Department of Commercial Financing and Research, School of Business, Universidad Autónoma de Madrid, Professor, C/ Fco Tomás y Valiente, 5, 914974348, monica.gomez@uam.es.

SUMARY

This study analyzes the influence of perceived risk in the purchase process of generic drugs, taking into account the dimensions of risk, the role of prescribers and experience. This topic has not been studied sufficiently from a marketing point of view. Therefore, its study is of great academic and social value. Upon analyzing the literature, we propose a model that studies in depth the structure of causal relationships between the dimensions of risk, a series of external and internal variables relating to the individual and his/her purchase intentions. A survey of 560 individuals is carried out. The results of a structural equation modelling indicate that the consumer's global perception of risk and his/her personal experience are factors with a direct influence when it comes time to requesting generic drugs. Also, experience reduces the risk associated with the product (physical, performance and economic). The information provided by the prescribers positively influences the experience. However, the information provided by a physician slightly increases the consumer's perceived risk. The results obtained allow us to affirm that the agents involved in the market development of generic drugs should develop coordinated actions in order to reduce perceived risk.

KEY WORDS

Generic drugs, purchase intention, prescribers

1. Introduction

The interest in studying the role of generic products in the pharmaceutical market has increased steadily in the area of marketing, over the last two decades due to the fact that this sector has been one of the last to incorporate the "generic" product concept in comparison with other markets, such as that of mass markets (Yelkur, 2000).

Until now, studies of generic drugs (EFG[3]) have focused on researching attitudes towards generics (Lambert et al., 1980; Bearden and Mason, 1980; Turnbull and Parson, 1993; García et al., 2003), perception of these types of drugs (Bearden and Mason, 1978; Mason and Bearden, 1980; Tootelian et al., 1988; Hellerstein, 1998; Cyrill y Ng, 2006), the level of knowledge about generic drugs (Hassali et al., 2007), the purchase intention of generic drugs (González et al., 2003), the economic savings these drugs offer healthcare systems (Wechsler, 2001; Fisher and Avorn, 2003) and the impact of generic drugs on market prices (Frank and Salkever, 1992, 1997; Aronsson et al., 2001).

However, there are few studies that analyze how perceived risk influences consumer behavior when given the option to buy these types of drugs, especially when compared to the number of studies conducted within mass markets (Mason and Bearden, 1980).

Notwithstanding, we should take into account that the purchase of generic drugs exhibits certain differentiating characteristics when compared to the purchase of generic products sold in the mass market. They primarily affect the type of product, the purchase process and the role of the consumer in the decision-making process:

- Generally, drugs are considered products with a high inherent risk (Bettman, 1973; Dholakia, 2001) and pose a greater risk to health than mass market products (Oglethorpe and Monroe, 1994). This can affect the consumer's purchasing behavior and the substitution behavior of a brand name drug for a generic drug in the prescription provided by a physician or pharmacist (Carroll and Wolfgang, 1989). Therefore, perception of risk can be influenced by the idea that a generic drug is less efficacious than its brand name equivalent and the inherent risk of any drug.
- In the consumer purchase process of generic drugs, both the physician and the pharmacist play a key role as prescribers and experts (Gönül et al. 2001). These roles are taken into account by the consumer (Bonoma 1982), as well as the legal framework of the Spanish healthcare system (Law 29/2006, articles 77, 85 and 86).
- Contrary to the initial belief that the consumer does not play a relevant role in the purchase of drugs that require a prescription, we have found consumers that are better informed and who adopt an active role with their physician (Tizón, 2006). There are studies that show that consumers who request information from their physician are more likely to obtain a new prescription for both the drug in question and a new alternative drug (Kravitz et al., 2003; Mintzes et al. 2003).

After reviewing the literature on the subject, we can state that the majority of empirical studies of the perception of risk associated with generic drugs analyze the situation in mature markets (Bearden and Mason, 1978; Carroll et al.; 1986; Carroll and Wolfang, 1991). Only one study conducted in the Spanish market reflects the situation in young markets or markets in a growth stage (González et al., 2003). Among these studies, only the research of Bearden and Mason

[3] The acronym by which generic drugs are identified, and which stands for Generic Pharmaceutical Equivalent. The terms "generic drug" and EFG will be used indistinctly throughout the paper.

(1978) and González et al. (2003) conducts an analysis from the consumer's point of view, as these authors are the only ones who use a multi-item scale to measure perceived risk.

However, none of the previous studies take into account the contribution of Stone and Grønhaug (1993), which proves the existence of a causal relationship structure among the dimensions of risk in the perceived risk construct. The influence of internal and external variables on consumer behavior, such as a consumer's previous experience and the influence of prescribers, also has yet to be analyzed.

The lack of literature on these subjects leads us to propose a conceptual model that allows for the analysis of the causal relationship structure in the perceived risk construct, while simultaneously studying the influence of a series of variables: the influence of prescribers and experience on said construct and purchase intention.

The structure of this document is as follows: first, a literature review of perceived risk and its determinants will allow us to establish a conceptual model and a research hypothesis. Afterwards, the methodology applied is explained. Then the principal results obtained are addressed. The final section includes conclusions, implications, limitations and future research alternatives.

2. Literature Review and Conceptual Proposal

2.1. Evaluation of perceived risk and influencing variables

To define our conceptual framework, we must first focus on those studies that act as an antecedent and that arise primarily from research carried out in mass markets. Next, we must analyze the contributions made in the context of our subject of study: generic drugs.

Our interest in studying the concept of perceived risk is especially relevant in the area of marketing because of its link with consumer behavior (Dowling, 1986), Bauer (1960) being the first author to introduce this concept in the discipline. Considerable attention has been devoted to this research topic especially since the 1990's, when the first studies using multidimensional scales to measure the different dimensions of risk began to be published.

Stone and Grønhaug (1993, p. 42) were the first authors to define perceived risk as "*subjective expectations of loss; the more certain one is of this loin, the greater the risk perceived by the individua*l". This definition is later used in the majority of marketing discipline studies. Stone and Grønhaug (1993) propose multiple measures for each dimension of risk because "it is unlikely that a single indicator alone will capture the domain of a given risk dimension properly". The single indicator method was proposed by Jacoby and Kaplan (1972) and later used by Peter and Tarpey (1975), Peter and Ryan (1976), Bearden and Mason (1978) and Carroll et al. (1986). Additionally, the use of multiple indicators also allows the researcher to test the discriminant validity of the various risk dimensions.

On the other hand, past research primarily capture "probabilities" of the potential negative consequences and frequently apply a multiplicative model (probability of perceived consequences multiplied per importance of those consequences). Stone and Grønhaug (1993) use only one component: the subjective expectations of loss.

The use of a multi-item scale makes up for the shortcomings of the model described above, namely, 1) a minimal predictive capacity, 2) the limited cognitive capacity of the consumer (not an expert) to evaluate the probability that a particular event will occur and 3) the difficulty of a single indicator collecting that which comprises each risk dimension (Stone and Grønhaug, 1993). For all these reasons, this multi-item scale has been applyed by several authors in different field studies since its publication in 1993 (Stone and Mason, 1995; Dholakia, 2001; Gonzalez et al., 2003 and Laroche et al., 2004).

The process analyzed by Stone and Grønhaug (1993) was the purchase of a personal computer. They identified six risk dimensions: performance, physical, social, time, psychological and economic. They also found that two of these factors, the financial and the psychological risk, directly affect perceived risk and that the psychological dimension played an important mediating role for the other types of risk.

In addition to the contributions of the models used to quantify and evaluate perceived risk, literature about studies that analyze the influence of a series of variable factors in the evaluation of the consumer's perceived risk have also been found.

We analyzed information search behavior as a strategy for risk reduction (Perry and Hamm, 1969; Roselius, 1971; Grønhaug, 1972; Brown and Gentry, 1975; Woodside and Delozie, 1976; Dowling and Staeling, 1994; Oglethorpe and Monroe, 1994; Miltra et al., 1999; Conchar et al., 2004; Gallent and Cases, 2007), as a positive relationship exists between the use of information sources and perceived risk (Mourali et al., 2005). The greater the consumer's perceived risk, the more information he/she needs to reduce said risk.

The information used by the consumer comes from external and internal sources. The external information can come from: indirect or impersonal[4] and direct or personal[5] sources (Grønhaug, 1972; Brown and Gentry, 1975; Beatty and Smith, 1987, Mourali et al., 2005).

On the other hand, internal information is acquired by the consumer through knowledge or experience. This information is stored in memory and is the first source of information that the consumer refers to when facing a purchasing situation (Grønhaug, 1972; Rao and Farley, 1987, Park et al, 1994).

2.2. Perceived riks in the Generic Drug Market

The use, consumption and prescription of generic drugs can be influenced by the belief that they are less effective than their brand name equivalents (Hellerstein, 1988) and by the inherent risk associated with each type of drug (Tootelian et al., 1988; Carroll and Wolfgang, 1989). The empirical generic drug studies (Rozano et al., 2009) are mainly focused on attitudes towards generic drugs (Lambert et al., 1980; Turnbull and Parson, 1993; Gupta, 1996; García et al., 2003) and the perception of these drugs when compared to brand name drugs (Mason and Bearden, 1980; Tootelian et al., 1988; Hellerstein, 1998; Cyrill and Ng, 2006; Hassali et al., 2007).

There are few studies which analyse the perception of risk in generic drugs. Thus, Bearden and Mason (1978) and González et al. (2003) study the consumer's perception of risk as user and buyer, while Carroll et al. (1986) and Carroll and Wolfang (1991) examine the pharmacist and his role as prescriber. In their pionering study, González et al. (2003) measures perceived risk using the multi-attribute scale used by Stone and Grønhaug (1993). However, these authors only attempt to prove the validity and reliability of the scale via a confirmatory factorial analysis in which all of the dimensions are equally important.

Our conceptual proposal's contribution consists of keeping in mind the mediating role of psychological risk.Therefore, our conceptual proposal's contributions are:

- To consider the structure of causal relationships between the dimensions of risk analyzing the mediating role played by psychological risk.
- To include into the model, a series of external and internal variables relating to the individual and his/her purchase intentions.

[4] There is no direct contact between the emitter and receiver, and they are, therefore, either neutral sources or sources dominated by the market.

[5] This is contact between the emitter and the receiver, and they are sources dominated by the consumer.

2.3. Proposed model and hypotheses

As we mentioned in the introduction, the main objective of our research is to analyze the influence of different factors (external and internal) on the consumer and the construct of perceived risk and to determine the influence of the perception of risk and said factors on future behavior. Therefore, we propose a more complete model relating to the studies mentioned in the section above. The factors or variables taken into account are: the dimensions of risk, the overall perceived risk, the intention of requesting a generic drug from a physician or pharmacist, the external information provided by a physician or pharmacist and experience as a source of internal information.

2.2.1. Perceived risk construct

When formulating our hypothesis about perceived risk, we must take into account that it is a multidimensional construct and that the dimensions of risk have a positive relationship with overall perceived risk (Kaplan et al., 1974; Shimp and Bearden, 1982; Allen and Butler, 1993; Stone and Grønhaug, 1993; Agarwal and Teas, 2001; Dholakia, 2001; González et al., 2003; Laroche et al., 2004; Snoj et al., 2004; Lu et al., 2005). We follow the assertions of Stone and Grønhaug (1993) and Dholakia (2001), which state that psychological risk is the dimension with the greatest weight and direct influence on overall perceived risk.

Therefore, the hypothesis we have formulated regarding the relationship between these two dimensions is:

H1a: Psychological risk has a positive influence on overall perceived risk. The greater the psychological risk associated with the purchase of generic medication, the greater the overall perceived risk.

Upon considering that the consumer's perceived risk is subjective (Slovic, 1987; Mitchell, 1992; Stone and Grønhaug, 1993), in other words, it changes from one individual to another, and that its definition alludes to the feeling of uncertainty, discomfort and/or anxiety (Grónhaug, 1972; Conchar et al., 2004), we believe that all of the dimensions of risk are related to the psychological state of the individual.

The hypotheses we have formulated regarding the rest of the dimensions are:

H1b: Physical risk has a positive influence on psychological risk. The greater the physical risk associated with the purchase of generic drugs, the greater the psychological risk associated with said purchase.

H1c: Social risk has a positive influence on psychological risk. The greater the social risk associated with the purchase of generic drugs, the greater the psychological risk associated with said purchase.

H1d: Performance risk has a positive influence on psychological risk. The greater the function risk associated with the purchase of generic drugs, the greater the psychological risk associated with said purchase.

H1e: Financial risk has a positive influence on psychological risk. The greater the financial risk associated with the purchase of generic drugs, the greater the psychological risk associated with said purchase.

Lastly, we must take into account that the dimensions of risk with a direct influence on overall risk may vary depending on the type of product analyzed and the consumer segment considered in the study (Stone and Grønhaug, 1993). Specifically, physical risk is the dimension that most influences overall risk in the drugs category, because it is closely related

to health (Kaplan et al., 1974). This dimension reflects the consumer's preoccupation with the possible side effects and health risks associated with consumption, which can cause consumers to believe that generic drugs are less safe than their brand name equivalents (Bearden and Mason, 1978; Agrawal, 1995; González et al., 2003).

Taking this into account, the hypothesis regarding the direct relationship between physical and overall risk is:

H1f: Physical risk has a positive influence on overall perceived risk. The greater the physical risk associated with the purchase of generic drugs, the greater the overall perceived risk.

2.2.2. Request Intention

Intention is defined as a manifestation of the consumer's will in terms of effort and action in order to carry out a specific behavior (Ajzen, 1991[6]). Intention captures motivational aspects that influence the consumer's behavior, with a relationship existing between intention and future behavior (Armitage and Conner, 2001).

Risk is a variable determinant of purchase behavior (Gallent and Cases, 2007), and it has been used as predictor of such (Taylor, 1974; Pires et al., 2004), negatively influencing intention and future purchase behavior (Sitkin and Pablo, 1992; Sitkin and Weingart, 1995; Richardson et al, 1996; Drenan et al., 2006; González et al., 2003).

In the study of generic drugs by González et al. (2003), perceived risk is shown to have a negative influence when the consumer requests a generic drug from a physician or pharmacist. The results of said study show that in the case of requests made to physicians, the only statistically significant dimension of risk is the psychological, while in the case of requests made to pharmacists, both the psychological and social dimensions are significant.

Therefore, the hypothesis we have formulated is based on the negative relationship between perceived risk and intention:

> ***H2: The evaluation of overall perceived risk has a negative influence on request intention. The greater the perceived risk, the less the intention to request a generic drug from a prescriber (physician or pharmacist).***

2.2.3. External Information: physician and pharmacist

When consumers perceive risk, they feel that the purchase decision is important and feel insecure about their own decision, using direct or personal information to reduce said risk (Grønhaug, 1972; Woodside and Delozier, 1976; Mourali et al., 2005). When purchasing a drug that requires specialized knowledge, it is important that consumers have access to information (Agrawal, 1995). In the case of generic drugs, the consumer uses information provided by physicians and/or pharmacists, taking into account their expert status (Bonoma 2001; Gallent and Cases, 2007; Venkataraman and Stremersch, 2007; Hassali et al., 2007) with the intention of reducing perceived risk (Gallent and Cases, 2007).

For these types of products, the consumer recognizes that his/her level of knowledge is far below (not like that of an expert) that of physicians and pharmacists (experts). Therefore, when a prescription made by a physician or pharmacist is used by a consumer as a strategy to reduce risk, a negative relationship exists between the knowledge acquired from the prescription and the perceived risk (Gallent and Cases, 2007).

Physicians are aware of their role as experts because, along with odontologists, they are the "only professionals with the ability to order a drug prescription" (article 77 of Law 29/2006)

[6] Cited in Calvo and Tudoran (2008, p.3).

and because they receive pharmaceutical information regularly from pharmaceutical laboratories via representatives who visit physicians (Gönul et al., 2001; Ministry of Health and Consumption, 2004, p. 15; Manchanda and Chintagunta, 2004; Venkataraman and Stremersch, 2007).

As drug experts, pharmacists are prepared to prevent, identify and resolve drug related problems, recommend treatments based on cost and advise consumers regarding their treatments (Hassali et al., 2007), recognizing the service they offer to the maintenance of overall health (Traverso et al., 2007).

Several studies suggest that pharmacists support the prescriptions of generic drugs generated by doctors (Cline and Mott, 2003; Hassali et al., 2007) and that consumers are open to discussing their health problems with them and accepting their recommendations (Suh et al. 2002).

Lastly, we must distinguish between the role played by physicians and that of pharmacists. A physician is the person who provides the prescription for the medication (Gönul et al., 2001; Ministry of Health and Consumption, 2004; Manchanda and Chintagunta, 2004; Venkataraman and Stremersch, 2007), while the pharmacist supports the physician's prescription and should, therefore, know that the consumer generally accepts his/her recommendations (Cline and Mott, 2003; Suh et al., 2002; Hassali et al., 2007).

The hypotheses regarding the relationships between information provided by physicians and pharmacists and overall perceived risk are:

> ***H3a: Information provided by a physician regarding generic drugs minimizes overall risk. The greater the amount of information, the less the consumer's perceived risk of generic drugs.***
>
> ***H3b: Information provided by a pharmacist regarding generic drugs minimizes overall risk. The greater the amount of information, the less the consumer's perceived risk of generic drugs.***

On the other hand, the information provided by experts influences the intention to request a generic medication. Therefore, the hypotheses regarding these relationships are:

> ***H3c: Information provided by a physician regarding generic drugs has a positive influence on the intention to request generic drugs. The greater the amount of information, the greater the intention to request generic drugs.***
>
> ***H3d: Information provided by pharmacists regarding generic drugs has a positive influence on the intention to request generic drugs. The greater the amount of information, the greater the intention to request generic drugs.***

2.2.4. Internal Information: experience

Experience is the first source of information that the consumer refers to when making a purchase decision (Grønhaug, 1972; Rao and Farley, 1987). Repetition in the purchase process, via use, purchase or simple evaluation, makes the product more familiar to the consumer (Pires et al., 2004) and reduces perceived risk (Grønhaug, 1972; Murphy and Laczniak, 1979; Kim, 2001; Laroche et al., 2003; Pires et al., 2004; Mourali et al, 2005). Previous purchases are a means of consumer training that diminish uncertainty surrounding the results of the product purchase and use (Alba and Hutchinson, 1987; Pires et al., 2004), increasing the probability that the consumer will buy the brands purchased in the past that possess the desired standard of safety (González et al., 2006).

When consumers have experience with the product category, the difference in the risk perceived between different products decreases. González et al. (2006) analyzed the

relationship between the perceived risk associated with a store brand, a national brand and experience in the product category. These authors determined that consumers with purchase experience in the category and who have tried products with a store brand perceive less risk in these products. However, consumers with little experience in the purchase of these products perceive greater risk in products with a store brand than those with a national brand. Also, Perry and Hamm (1969), Roselius (1971) and Mitchell (1993) believe that experience can influence in each dimension of risk.

The experience acquired by consuming various types of generic drugs affects the dimensions of risk related with their use, purchase and consumption, such as physical, performance and financial risk.

Therefore, the hypotheses regarding the influence of experience on specific dimensions of perceived risk are:

> ***H4a: Experience has a negative influence on physical risk. The less the consumer experience in the use of generic drugs, the greater the physical risk associated with these drugs.***
>
> ***H4b: Experience has a negative influence on performance risk. The less the consumer experience in the use of generic drugs, the greater the function risk associated with these drugs.***
>
> ***H4c: Experience has a negative influence on financial risk. The less the consumer experience in the use of generic drugs, the greater the financial risk associated with these drugs.***

Due to the fact that the consumer is recognized as a "non expert" when purchasing a generic drug, in addition to using his/her personal experience, he/she tends to search for external information provided by the prescribers as "expert" agents (Alba y Hutchinson, 1987; Park et al., 1994). This way, the knowledge that consumers acquire through experience is increased by the information garnered from the prescribers (physicians and pharmacists) by demonstrating the positive influence between acquired experience and the use of personal information that increases the consumer's knowledge (Mattila and Wirtz, 2002).

Therefore, our hypotheses regarding the physician information and pharmacist information (external information) variables and the experience (internal information) variable are:

> ***H4d: Information provided by a physician regarding generic drugs has a positive influence on the purchase experience of generic drugs. The greater the amount of information, the greater the experience of generic drug use.***
>
> ***H4e: Information provided by a pharmacist regarding generic drugs has a positive influence on the purchase experience of generic drugs. The greater the amount of information, the greater the experience of generic drug use.***

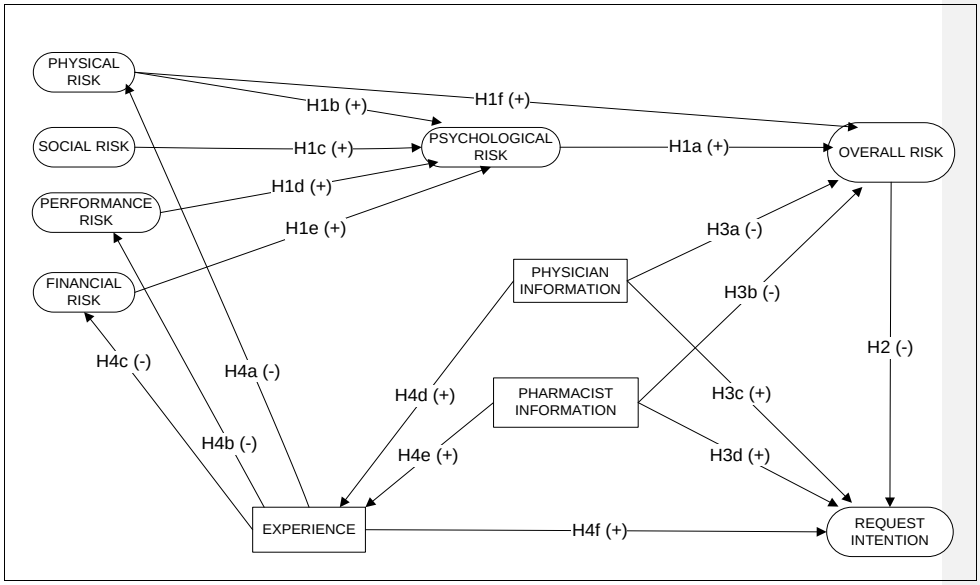
Lastly, the knowledge acquired by consumers through use or consumption of a product positively influences the purchase intention (Mitchell, 1993; Miyazaki, Fernández, 2001).

Therefore, the hypothesis regarding the relationship between experience and prescriber request intention is:

> ***H4f: Experience has a positive influence on the purchase request. The greater the consumer experience of generic drug use, the greater the intention to request a generic drug from a prescriber (physician or pharmacist).***

Figure 1 includes the proposed structural model and their respective hypotheses.

Figure 1. Proposed Model



3. Methodology

Data from a personal survey administered at health centers and pharmacies to 560 individuals over the age of 18, that were familiar with generic drugs, were used to tackle the proposed objective. Prior to the surveying, a qualitative study was conducted. It allowed broaching the initial problem with the subject of study from the perspective of the different agents involved in the sector. The qualitative study consisted of four extensive interviews with professionals from the Public Health System and a Delphi study conducted among pharmaceutical retailers. This information then facilitated the design of the personal survey used to collect the data for the quantitative analysis.

Out of the 560 surveys carried out, 542 were valid. Convenience sampling was employed, with a proportional distribution amongst the population of three urban centers in northern Spain. In order to obtain an aleatory sample of respondents, surveying was held at different times of the day and different days of the week at each health center and pharmacy.

The sample was made up of 43.17 % men and 56.83 % women. Almost 50% of the group is under the age of 40. 82% of the respondents had a household income under 2,400 € per month. Of the respondents, 52.12% did not take part in any kind of remunerated activity, the majority of who were students (18.48 %) and housewives (16.82 %). Among those respondents that had a job, the largest percentage worked for a second or third party (29.02%) as opposed to being self-employed. Finally, with regard to the level of education, nearly 30% had a university degree, while 70 % only had a primary or secondary education or less.

The variables come from various types of primary scales. Examples of variables with a metric scale (intervals) are risk dimensions, external information sources and purchase intention (future physician or pharmacist request for generic drugs). The consumer experience in generic drug consumption is measured by 4 items that correspond to the types of mass market EFGs, with a nominal scale (YES/NO). Later a variable summary called “experience” was created. It is an observable variable that was developed based on the sum of the responses to

questions relating to four types of consumed EFGs (analgesics, anti-inflammatories, antibiotics and antihypertensives). It has a metric scale from 0 to 4 (0 = no generic; 4 = four types of generics).

As for the variables that measure perceived risk, multi-attribute scales described in the literature section were used. All respondents stated their degree of agreement according to a seven-point Likert type scale for all the items that are shown in Table 3. Three items have been used for each of the variables to measure every dimension of risk and the overall perceived risk. Initially, the time dimension was included in the survey. However, the pretest results advised eliminating that dimension. In order to do so, we took into account Stone and Grønhaug's (1993, pp. 42) statement that "although risk dimensions should account for a substantial fraction of the criterion variable, a particular dimension, however, may or not may a statistically significant contribution".

4. Results

In order to observe the importance of each dimension and the connections between the different types of risk that precede psychological and overall risk, we conducted various types of analysis. With regard to the interrelationships between risk dimensions, a confirmatory factor analysis (CFA) was conducted with the 12 items that represent the four dimensions of risk (physical, performance, financial and social). However, before using this method, it was necessary to conduct several previous analyses.

First, we checked for the existence of homogeneity in the standard deviations of the variables because it is advisable not to use variables with a lot of variability or others with very little variability within a model. In this case, the conditions are fulfilled, as can be seen in Table 3. Next, we carried out a test of normality and the existing correlations between the variables were revised, demonstrating that the variables in the model fulfil the necessary requirements for their use.

The last three columns of Table 3 present the means, standard deviations and variation coefficients assigned by the respondents to each of the items of all types of risk, including overall risk. Although all scoring was low (no score was greater than the measurement scale's midpoint, which is 4), the highest levels of perceived risk correspond to the safety and dependability of generics drugs (items that measure performance risk), which obtained a mean of 2.67 for the three items. They are followed by the side-effects of the drug and the possible physical harm caused by consumption (items that measure physical risk), with a mean of 2.70. However, these components present a greater standard deviation and greater variation coefficient, since there is a greater degree of disagreement amongst respondents.

The three items that correspond to social risk received very low scores (an overall mean of 1.42 for the three items corresponding to this dimension). These results coincided with those obtained in previous studies (Bearden and Mason, 1978; Carroll et al., 1986; 1991; González et al., 2003). Physical and performance risk reflect a preoccupation with possible side-effects and the possibility that generics drugs may be less efficacious and safe than their brand name equivalent (Bearden and Mason, 1978; Carroll et al., 1986; 1991; Agrawal, 1995). Psychological and financial risk had means of 2.00 and 2.20 respectively for the three items that measure them, just slightly less than performance and physical risk but higher than social risk. Finally, overall risk also received very low scores (the mean for the three items was 1.77).

Table 3. Valuation of perceived risk.

Tabla con formato

TYPES OF RISK	ITEM	DESCRIPTION	Attributes		
			Average	Typ.Dev.	VC
Performance	ac121	1. Worried that the generic drug isn't safe or trustworthy	3,103	2,146	1,446
	ac122	2. Think it is very probable that the results are not those expected (of the drug)	2,551	1,713	1,489
	ac123	3. Worried it won't provide the benefits promised	2,648	1,806	1,466
Financial	ac124	4. Think it's not a good way to spend money	2,292	1,721	1,331
	ac125	5. Worried that it is not a good purchase because it is more expensive than the other brands available	1,971	1,565	1,259
	ac126	6. Worried that the generic drug won't be worth the money spent on the purchase	2,350	1,731	1,358
Physical	ac127	7. Worried about the side-effects that the drug can cause in you or a member of your family	3,035	2,182	1,391
	ac128	8. Believe that consumption can endanger health	2,253	1,642	1,372
	ac129	9. Worried about the possible physical harm that can come from consumption	2,811	1,959	1,435
Psychological	ac1210	10. Feel uncomfortable purchasing these products	2,115	1,631	1,297
	ac1211	11. Feel worry caused by doubts about purchasing the product	2,054	1,466	1,401
	ac1212	12. Believe it is imprudent to buy generic drug	1,839	1,382	1,330
Social	ac1213	13. Worried that family members and friends think you skimp on drugs	1,436	1,117	1,285
	ac1214	14. Think that it will worsen the way family members and friends think of you	1,374	0,931	1,476
	qc1215	15. Worried that people whose opinion you value will consider you irresponsible	1,459	1,067	1,368
Overall	ac126	16. You will experience a general or overall loss	1,809	1,369	1,322
	ac1217	17. Think you will make a mistake	1,805	1,370	1,318
	qc1218	18. Think this purchase will cause you problems	1,722	1,300	1,324

The general model proposed consists of seven latent variables (all of the dimensions of risk and the request intention) and three observable variables (the three sources of information: experience, physician and pharmacist). Each latent variable makes up a series of reflex variables, twenty overall (eighteen for the different types of risk and two for the request). All of the observable variables have a metric scale (of intervals or reason). In this case, in order to apply structural equation models, we used the maximum-likelihood estimation, as it complies with the normality hypothesis.

This superior second-order factorial model includes the constructs of risk and the rest of the factors and variables (external sources of information -physician and pharmacist-, experience and request) that make up the rest of the hypotheses.

The causal analysis has been conducted with the statistical program Amos 7.0. The amplitude of the sample obtained in this study allows us to work with enough cases per estimated parameter, as this sample with no missing values has a size of 514, on top of the five cases for each variable mentioned in the literature (Joreskog and Sorbom, 1984). Previously, we should question whether we are dealing with reflective or formative constructs. Based on previous studies mentioned in the literature, each of the risk dimensions are reflective constructs that configure the different items, making the items manifestations of the construct.

The procedure is conducted in the two phases proposed by Anderson and Gerbin (1988). First, we analyze the goodness of the psychometric properties of the measurement instrument used through the CFA. Once the measurement instrument's goodness is accepted, the instrument is modified to include the structural relationships proposed theoretically, using a Structural Equations or Covariance Structure Model (MEC) to analyze it.

The evaluation of the model fit involved several steps. First, we verify that there are no parameter estimations that could be considered contradictory, such as negative error or insignificant variances, nor standardized parameters greater than 0.95 (Hair et al., 1998). Second, we carry out successive estimations with which we attempt to increase the goodness of fit upon incorporating correlations among detected errors, while observing the modification index (MI). Finally, the CMIN/DF ratio, indicated by the relationship between chi-square and the degrees of freedom, must have a value between 1.5 and 2, within the accepted limits.

Table 6 shows the results of the confirmatory factor analysis (CFA) for the whole model. All of the estimators and the significance of each of the observable variables that make up the different latent constructs are significant to 1%. The measurement of the goodness of fit shows that we have found an excellent fit with an insignificant Chi-square. The sensitivity of Chi-square to sample size for the evaluation of a measurement model is determined through structural equations, and in this case we had a fairly large simple, so obtaining an insignificant statistic bodes well for the model's fit. As for the rest of the fit indicators used, all of the typical fit indices surpassed the recommended values. The ratio between this statistic and its degrees of freedom is between 1 and 2. The GFI and the AGFI surpasses the 0.9 value recommended by Jöreskog and Sörbom (1993) and the RMSEA is much less than 0.8, signaling a good fit (Hair et al., 1998).

On the other hand, the estimated model demonstrates its reliability, convergent and discriminant validity. Table 6 includes reliability measurements and scale validity. The composite reliability coefficients is above the 0.7 recommended value (Bagozzi and Yi, 1988), Cronbach's alpha is above the 0.7 value recommended by Nunnally and Bernstein (1995) in every case, and the AVE (average variance extracted) is higher than 0.5 (Fornell and Larcker, 1981).

The convergent validity was cross-referenced by determining that all of the standardized lambda parameters are positive, significant and higher than 0.6 (Anderson and Gerbing, 1988). Therefore the variance and the t-student are significant for each of the parameters. For the discriminant validity, the item/dimension correlations matrix do not exceed the unit. Therefore, we continue with the method proposed by Anderson and Gerbing (1988), which consisted of estimating the trust interval of the correlation coefficients between the six dimensions of risk, in order to prove that it don't include the unit. Chi-Square differences between the whole model and a restricted model (RM, assigning 1 to the covariance between the two constructs with the greatest correlation) are also tested. The model fits is significantly worse for the RM. Therefore, we believe that the measurement scale has gone beyond the dimensionality, validity and reliability requirements.

The parameters of the standardized lambda coefficients (Li), which measure the relationship between latent variables and factors, fulfilled the criteria of being significant (Bagozzi and Yi, 1988) and are structured as explained in the exploratory factor analysis (PCA). Correlations also existed between the latent factors, all of which are significant.

Tabla con formato

Table 6. Results of the Confirmatory Factor Analysis (CFA)

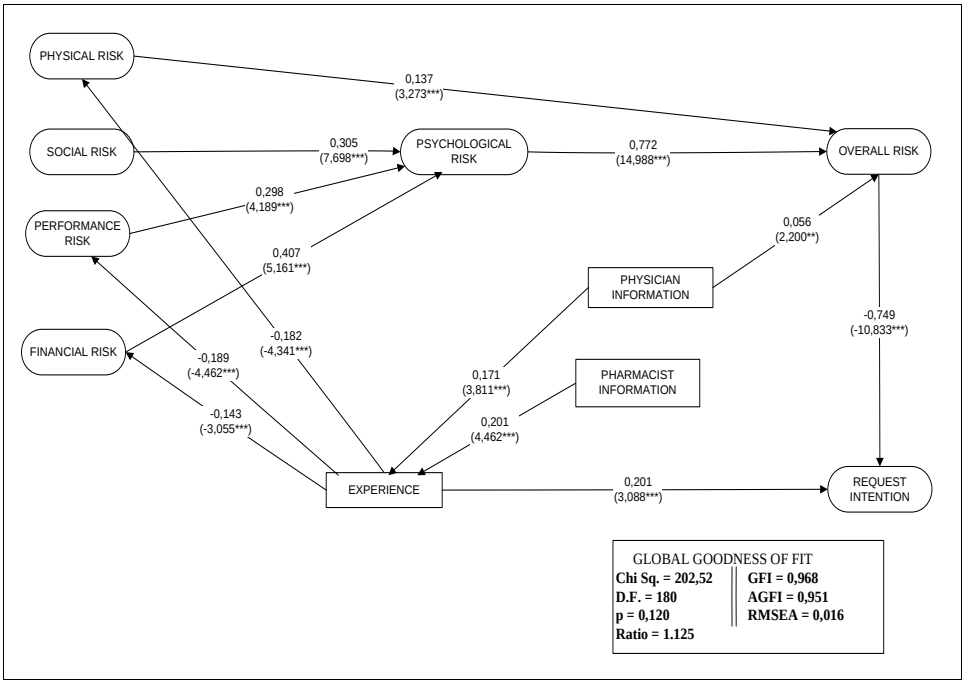
CONSTRUCT	ITEM	Stand. Loading Li	Error Variance	Reliability				Converg. Validity
			1-R2	Indicator reliab. R2	Composite reliab.	Alpha Cronbach	Variance Extracted (AVE)	Student-t
Performance	Ac122	0,918	0,157	0,843	0,886	0,874	0,724	-
	Ac121	0,744	0,446	0,554				21,294***
	Ac123	0,88	0,226	0,774				28,89***
Financial	Ac124	0,736	0,458	0,542	0,720	0,759	0,731	15,044***
	Ac125	0,543	0,705	0,295				13,233***
	Ac126	0,749	0,439	0,561				-
Physical	Ac127	0,895	0,199	0,801	0,948	0,877	0,875	25,834***
	Ac128	0,949	0,099	0,901				20,375***
	Ac129	0,934	0,128	0,872				-
Social	ac1213	0,869	0,245	0,755	0,859	0,862	0,825	-
	ac1214	0,782	0,388	0,612				19,757***
	ac1215	0,803	0,355	0,645				20,297***
Psychological	ac1210	0,864	0,254	0,746	0,903	0,810	0,755	-
	ac1211	0,888	0,211	0,789				26,459***
	ac1212	0,855	0,269	0,731				24,57***
Overall	ac1216	0,906	0,179	0,821	0,932	0,932	0,820	-
	ac1217	0,928	0,139	0,861				34,452***
	ac1218	0,882	0,222	0,778				30,356***
Request intention	fut9	0,832	0,308	0,692	0,808	0,804	0,678	-
	fut10	0,815	0,336	0,664				11,08***
						Average Weights		0,839***

Note: *** p<0.001 significant level

Global Goodness of Fit							Discrim. Validity		
Chi-Sq	D.F.	p -value	Ratio	GFI	AGFI	RMSEA	Conf. Interval (Li+SE^2, Li-SE^2)	Chi RM	
166,43	169	0,541	0,985	0,985	0,956	0,000		Chi= 187,8	gl = 170
							0,089 0,561	p =	0,17
								Ratio =	1,105

The covariance structure model appears in Figure 3.

FIGURE 3. Results of the covariance structure model



Note: *** p<0.001 significant level

The verification of the hypothesis is conducted with an analysis of each of the standardized coefficients and its level of significance. We should note that four of the proposed hypotheses could not be verified: those relating to the relationship between physical and psychological risk, the relationship between information provided by a physician or pharmacist and request intention and that of pharmacist provided information as moderator of overall risk.

With regards to the sign, all of the relationships obtained were expected except the one referring to the relationship between information about generic drugs provided by a physician and overall risk, which in the formulated hypothesis was negative but our results were positive.

A detailed analysis of the results obtained in the estimation model allows us to establish that psychological risk (λ = 0,772), physical risk (λ = 0,137) and physician provided information (λ = 0,056) positively and directly influence overall risk. The weight of these three variables is very different, with psychological risk presenting the greatest influence, followed by physical risk and with a minimal influence from physician provided information.

Additionally, psychological risk influences financial (λ = 0,407), social (λ = 0,305) and performance (λ = 0,298) risk. The risks associated with product consumption are negatively and directly influenced by experience. Therefore, the more experience a consumer has with the purchase of generic drugs, the more his/her performance (λ = -0,189), physical (λ = -0,182) and financial (λ = -0,143) risk will decrease.

Experience changes based on the information provided by a pharmacist (λ = 0,201) and a physician (λ = 0,171). This variable has a direct and positive influence on request intention (λ = 0,201).

However, overall risk has the greatest influence on the intention to request generic drugs, so that when general perceived risk is high, the intention to buy is much lower (λ = -0,749).

5. Conclusions

Very little research has been conducted on the influence of perceived risk in the use and consumption of generics drugs (Mason and Bearden, 1980). Some of them has showed that there is a negative influence of perceived risk in purchasing (Sitkin y Pablo, 1992; Sitkin y Weingart, 1995; Richardson et al, 1996; Drenan et al., 2006; González et al., 2003). However, the studies in young markets, such as the Spanish market in which the market share is less than del 10%, are practically non-existent (EGA, 2006). Therefore, our study makes an interesting contribution to the understanding of the relationships between risk factors and other set of variables related to consumer behaviour.

We believe that if the consumer feels doubtful, insecure or preoccupied because he/she believes the purchase and consumption of generic drugs could have undesired consequences, it becomes one more barrier to the expansion of the market and the acceptance of this type of drug. Upon cross-referencing the proposed hypotheses of our conceptual proposal, we have confirmed that the greater the consumer's apprehension when buying these drugs, his/her doubt regarding the correctness of the decision, the lack of prudency (psychological risk), the greater the overall perceived risk. This perception also increases when the belief is greater that generic drugs provoke side effects, physical harm and are harmful to overall health (physical risk).

When studying the variables that influence the consumer's intention to request a generic medication, we found that the greater the perceived risk, the less the intention to request said drugs, an effect that is lessened by the positive effect of experience. It is important to note the important role of the consumer's previous experience, as it not only positively influences intention but also reduces perceived risk associated with the dimensions related with the use/consumption of generic drugs (performance, financial and physical).

Information provided by a physician and pharmacist increases the consumer's experience acquired knowledge by positively and directly influencing it. When said information comes from a pharmacist, there is no effect on the consumer's perceived risk. When it comes from a physician, there is an influence but not the kind expected, meaning that the information provided by a physician increases (slightly) doubt and uncertainty regarding medication.

This last result is one of the most relevant, as the references in the literature show that the information used by the consumer and that comes from external sources reduces perceived risk (Grønhaug, 1972; Woodside and Delozier, 1976; Mourali et al., 2005; Gallent and Cases, 2007). However, we believe that the results of our study could be due to the fact that the consumer did not evaluate all aspects of risk before receiving expert information (physician). This is the same conclusion reached by Allen and Butler (1993) in their study of blood donation.

As patients have an ever more active role in choosing the drugs they purchase, and the prescribers play a key role in influencing the decision of the consumer, the government must develop coordinated actions that act upon the three agents. Both the information that is directly aimed at consumers and that is provided to prescribers (as a source of expert information that influences the consumer) should indicate the safety and efficacy of generic drugs. This will increase consumer trust and his/her predisposition to purchase and consume these drugs.

This study has great social interest, as the consumption of generic drugs is beneficial to both the patient interested in paying less for a drug and to the government when it comes to cutting public spending on pharmaceuticals. Although generics drugs offer savings of 25% and 50% in drugs expenditure, in 2008 the generics drugs market in Spain made up only 7.2% of the overall pharmaceutical market value and 16.3% in volume, a much lower share than the European average, which is about 30% and 35% respectively (AESEG, 2008; Nielsen, 2008). Therefore, it is important to continue conducting studies on this market that promote the advantages of generic drugs and increase consumer and patient consumption.

The main limitation of this work is that we have only analyzed the consumers' point of view. In order to have a more complete analyses, we could study the role of the physicians and pharmacists in the decision-making process, and their opinion, level of understanding and prescription behavior. It would also be desirable to extend the geographical area of study. In future works, other variables that allow consumer classification based on long-term treatments, if they are polymedicated individuals, if they suffer from serious illnesses, etc., should be included in the analysis. Lastly, even though the objective of the study was to explain the purchase intention based on a series of variables that cannot be obtained through a survey, a future line of investigation will be to analyze panel data that allows us to study real consumption of these medications.

References

AESEG, Informe: "*Genéricos en España", 2008*. http://www.aeseg.es/D_P_AESEG.pdf, Fecha de consulta: 05-06-2009.

Alba, J. and Hutchinson, J. "Dimensions of consumer expertise", *Journal of Consumer Research*, Vol. 13 (mar), nº 4, 1987, pp. 411-454.

Allen, J.; and Butler, D. "Assessing the effects of donor knowledge and perceived risk on intentions to donate blood", *Journal of Health Care Marketing*, Vol. 13, nº 3, 1993, pp. 26-33.

Agrawal, M. "Warning labels: The role of expertise and perceived risk in pharmaceutical purchase behaviour", *Health Marketing Quarterly*, Vol. 13, nº 2, 1995, pp. 99-115.

Agarwal, S. and Teas, R. "Perceived value: Mediating Role of perceived risk", *The Journal of Marketing Theory and Practice*, Vol. 9, nº 4, 2001, pp.1-14.

Anderson J.C. and Gerbing D.W. "Structural Equation Modelling in Practice: a Review and Recommended Two-Step Approach". *Psychological Bulletin*, vol. 103, nº 3, 1998, pp. 411-423.

Armitage C. and Conner, M. "Efficacy of the Theory of Planned Behaviour: A meta-analytic review", *British Journal of Social Psychology*, nº 40, 2001, pp. 471-499.

Aronsson, T.; Bergman, M. and Rudholm, N. "The impact of generic drug competition on brand name market-shares- Evidence from micro data", *Review of Industrial Organization*, Vol. 19, nº 4 (december), 2001, pp. 425-435.

Bagozzi R.P. and Yi Y. "On the Evaluation of Structural Equation Models". *Journal of the Academy of Marketing Science*, Vol. 16, nº 1, (spring), 1988, pp. 74-94.

Bauer R.A. *Consumer Behavior as Risk Taking*, in Cox, D.F. (Ed), *Risk Taking and Information Handling in Consumer Behavior*, division of Resesarch, Graduate School of Business Administration, Harvard University, Boston, 1967.

Bearden W. and Mason J. "Determinants of physician and pharmacits support of generic drugs", *Journal of Consumer Research*, Vol. 7 (sept), 1980, pp. 121-130.

Beatty, S. and Smith, S. "External search effort: An investigation across several product categories", *Journal of Consumer Research*, Vol. 14, nº 1, 1987, pp. 83-95.

Bettman J. "Perceived risk and its components: a model and empirical test", *Journal of Marketing Research*, Vol. X (mayo), 1973, pp. 184-190.

Bonoma T. "Major sales: who really does the buying?", *Harvard Business Review*, nº 60, 1982, pp. 111-119.

Brown T.L. and Gentry J.W. "Analysis of risk and risk reduction strategies", *Journal Academy of Marketing Science*, Vol. 3, nº 2, 1975, pp. 148-160.

Calvo, D. and Tudoran, A. "*Factores determinantes de la intención de consumo de un nuevo producto: actitud, norma social y control percibido*", XX Encuentro de Profesores Universitarios de Marketing, Septiembre, 2008, pp. 1-13.

Carroll N.V., Siridhara C. and Fincham J.E. "Perceived risks and Pharmacits´generic substitution behaviour", *Journal of Consumer Affairs*, Vol. 20, nº 1, 1986, pp. 36-47.

Carroll N.V. and Wolfang A. "Inherent risk and market acceptance of generic drug products", *Journal of Health Care Marketing*, Vol. 9, nº 4, 1989, pp. 48-51.

Cline, R. and Mott, D. "Demand for a Medicare prescription drug benefit: Exploring consumer preferences under a managed competition framework", *Inquiry-Excellus Health Plan*, Vol. 40 (Summer), nº 2, 2003, pp. 169-183.

Cyrill de Run E. and NG M. "Patented and generic pharmaceutical drugs: perception and prescription", *International Journal of Business and Society*, Vol. 7, nº 2, 2006, pp. 55-78.

Conchar M.P., Zinkhan G.M., Peters C. and Olavarrieta S. "An integrated Framework for the conceptualization of consumer´ perceived-risk processing", *Journal of the Academy of Marketing Science*, Vol. 32, nº 4, 2004, pp. 418-436.

Dholakia U. "A motivational process model of product involvement and consumer risk perception", *Journal of Marketing*, Vol. 35, nº 11-12, 2001, pp. 1340-1360.

Dowling G. "Perceived Risk: The concept and Its Measurement", *Psycology & Marketing*, Vol. 3, nº 3, 1986, pp. 193-210.

Dowling, G. and Staelin, R. "A model of perceived risk and intended risk-handling activity", *Journal of Consumer Research*, Vol. 21 (June), 1994, pp. 119-134.

Drennan J., Sullivan G. and Previte J. "Privacy, risk, perception and expert online behavior: An exploratory study of Household End Users", *Journal of Organizational and End User Computing*, Vol. 18, nº 1, 2006, pp. 1-22.

European Generic Medicines Association (EGA), *Generic Medicines in Europe. The role of generic medicines in Europe*, 2006, in http://www.egagenerics.com/gen-geneurope.htm.

Fisher, M. and Avorn, J. "Economic Consecuences of underuse of generic drugs: evidence from medicaid and implications for prescription drug benefit plans", *Health Service Research*, Vol. 38, nº 4 (August), 2003, pp. 1051-1064.

Forner C. and Lacker D. "Evaluationg structural equations models with unobservable variables and measurement error", *Journal of Marketing Research*, 18, 1981, pp.39-50.

Frank, R. and Salkever, D. "Pricing, patent loss and the market for pharmaceuticals", *Southern Economic Journal*, Vol. 59, nº 2, 1992, pp.165-179.

Gallent C. and Cases A. "Le rôle du risque percu et de l'expérience dans l'áchat de vin en ligne", *Decisions Marketing*, nº 45, 2007, pp. 59-74.

García A. J., Martos F.K., Leiva F. and Sánchez F. "Genéricos: ¿buenos o malos?. Conocimientos y actitudes de los médicos ante los medicamentos genéricos", *Gaceta Sanitaria*, Vol. 17, nº 2, 2003, pp. 144-149.

Gönul F.F., Carter F., Petrova E. and Srinivasan K. "Promotion of prescription drugs and its impact on physicians` choice behaviour", *Journal of Marketing*, Vol. 65, nº 3, 2001, pp. 79-90.

González S., González C. and Díaz A.M. "Intención de compra de medicamentos genéricos por parte de los usuarios de Asturias", *Revista Española de Salud*, Vol. 77, nº 6, 2003, pp. 691-699.

González C., Díaz A.M. and Trespalacios J.A. "Antecedents of the difference in perceived risk between store brands and national brands", *European Journal of Marketing*, Vol. 40, nº 1-2, 2006, pp. 61-82.

Grønhaug K. "Risk indicators, perceived risk and consumer´s choice of information sources", *Swedish Journal of Economics*, nº 2, 1972, pp. 246-262.

Gupta P. B. "Survey of pharmacist: impact of the generic drug scandal and implications for marketing generic drugs", *Health Marketing Quarterly*, Vol. 13, nº 3, 1996, pp. 109-120.

Hair J.F. JR., Anderson R.E., Tatham R.L. and Black W.C. *Multivariate Data Analysis*. New Jersey: Prentice Hall International, 1998.

Hassali M.A., Kong D.C. and Steward K. "Knowledge and perceptions of recent pharmacy graduates about generic medicines", *Pharmacy Education*, Vol. 7, nº 1, 2007, pp. 89-95.

Hellerstein J. "The importance of the physician in the generic versus trade-name prescription decision", *The Rand Journal of Economics*, Vol. 29, nº 1, 1998, pp. 108-136.

Jacoby J. and Kaplan L. "*The Components of Perceived Risk*", Proceedings of the Third Annual Conference of the Association for Consumer Research, 1972, pp. 382-393.

Jöreskog K.G. and Sörbom D. *LISREL VI: Analysis of linear structure relationships by the method of maximun likelihood*, Chicago: National Educational Resources, 1984.

Kaplan L. B., Szybillo G.J. and Jacoby J. "Components of perceived risk in product purchase", *Journal of applied Psychology*, Vol. 59, nº 3, 1974, pp. 287-291.

Kim, I. "*Investigating effect of consumers' perceived risk on purchase intention in internet Shopping*", Tesis Doctoral, Purdue University, Indiana, EE.UU. 2001.

Kravitz, R.; Bell, R.; Azari, R.; Kelly-Reif, S.; Krupat,E. and Thom, D. "Direct Observation of Requests for Clinical Services in Office Practice", *Archives of Internal Medicines*, Vol. 163, nº 14, 2003, pp. 1663-1681.

Lambert Z.V., Doering P. L., Goldstein E. and McCormick W.C. "Predispositions toward Generic Drug acceptance", *Journal of Consumer Research*, Vol 7, nº 1, 1980, pp. 14-23.

Laroche M., Mc Dougall G.H., Bergeron, J. and Yang Z. "Exploring how intangibility affects perceived risk", *Journal of Service Research*, Vol. 4, nº 4, 2004, pp. 373-389.

LEY 29/2006 de 26 de julio, "Garantías y Uso Racional de los Medicamentos y Productos Sanitarios". BOE nº 178, pp. 28147.

Lu, H.; Hsu, C. and Hsu, H. "An empirical study of the effect of perceived risk upon intention to use online applications", *Information Management & Computer Security*, Vol. 13, nº 2, 2005, pp. 106-120.

Manchanda, P. and Chintagunta, P. "Responsiveness of physician prescription behaviour to salesforce effort: An individual level analysis", *Marketing Letters*, Vol. 15, nº 2-3, 2004, pp. 120-145.

Mason, J. and Bearden W. "Generic Drugs: consumer, pharmacist and physician perceptions of the issues", *The Journal of Consumer affairs*, Vol. 14, nº 1, 1980, pp. 193-206.

Mattila, A. and Wirtz, J. "The impact of knowledge types on the consumer search process", *International Journal of Service Industry Management*, Vol. 13, nº 3, 2002, pp. 214-230.

Miltra, K.; Reiss, M. and Capella, L. "An examination of perceived risk, information search and behavioral intentions in search, experience and credence services", *The Journal of Services Marketing*, Vol. 13, nº 3, 1999, pp. 208-228.

MINISTERIO DE SANIDAD Y CONSUMO, "*Plan estratégico de Política Farmacéutica para el Sistema Nacional de Salud Español. Por un uso racional del medicamento*", 23 de noviembre, 2004. Disponible en:

http://www.msc.es/gabinetePrensa/notaPrensa/pdf/ PlanEstrategicoPoliticaFarmaceutica.pdf

Mintzes, B.; Barer, M.; Kravitz, R.; Basset, K.; Lexchin, J.; Kazanjian, A.; Evans, R.; Pan, R. and Marion, S. "How does direct-to-consumer advertising (DTCA) affect prescribing?. A survey in primary care environments with and without legal DTCA", *Canadian Medical Association*, Vol. 169, nº 5, 2003, pp. 421-425.

Mitchell, V. "Understanding consumer's behaviours: Can perceived risk theory help", *Management Decision*, Vol. 30, nº 3, 1992, pp. 26-31.

Mitchell V. "A role for consumer risk perceptions in grocery retailing", *British Food Journal*, Vol. 100, nº 4, 1998, pp. 171-188.

Miyazaki A. and Fernandez A. "Consumer perceptions of privacy and security risk for Online Shopping", *Journal of Consumer Affairs*, Vol. 35, nº 1, 2001, pp. 27-44.

Moulins J. "Risque perçu et fidélités à la marque: une analyse exploratoire", *Revue Française du Marketing*, nº 199, 4/5, 2004, pp. 87-107.

Mourali M., Laroche M. and Pons F. "Antecedents of consumer relative preference for interpersonal information sources in pre-purchase search", *Journal of Consumer Behavior*, Vol. 4, nº 5, 2005, pp. 307-318.

Murphy, P.E. and Laczniak, G.R. "Generic supermarket items: A product and consumer analysis", *Journal of Retailing*, Vol. 55, nº 2 (Summer), 1979, pp. 3-14.

Nielsen Report, *Evolución del sector de los genéricos*, 2008.

Nunnally J.C. and Bernstein I.H. *Teoría Psicométrica*. México: McGraw-Hill/Interamericana de México, S.A. de C.V., 1995.)

Ogletorpe J. and Monroe K. "Determinants of perceived health and safety risks of selected hazardous products and activities", *Journal of Consumer Affairs*, Vol. 28, nº 2, 1994, pp. 326-346.

Park, C.; Mothersbaugh, D. and Feick, L. "Consumer knowledge assement", *Journal of Consumer Research*, Vol. 21 (June), nº 1, 1994, pp. 71-82.

Perry, M. and Hamm, C. "Canonical analysis of relations between socioeconomic risk and personal influences in purchase decisions", *Journal of Marketing Research*, Vol. 6, nº 3, 1969, pp. 351-354.

Peter J.P. and Ryan M.J. "An investigation of perceived risk at the brand level", *Journal of Marketing Research*, Vol. 13, 1976, pp. 184-188.

Peter J.P. and Tarpey L.X. "A Comparative Analysis of Three Consumer Decision Strategies", *Journal of Consumer Research*, Vol. 2, nº 1, 1975, pp. 29-36.

Perry, M. and Hamm, C. "Canonical analysis of relations between socioeconomic risk and personal influences in purchase decisions", *Journal of Marketing Research*, Vol. 6, nº 3, 1969, pp. 351-354.

Pires G., Stanton J. and Eckford A. "Influences on the perceived risk of purchasing online", *Journal of Consumer Behavior*, Vol. 4, nº 2, 2004, pp. 118-131.

Rao S. and Farley J.U. "Effects of environmental perceptions and cognitive complexy on search and information processing", *Psycology & Marketing*, Vol. 4, nº 4, 1987. pp. 287-302.

Richardson, P.; Jain, A. and Dick, A. "Household Store Brand Proneness: A Framework", *Journal of Retailing*, Vol. 72, nº 2, 1996, pp. 159-185.

Roselius, T. "Consumer ranking of risk reduction methods", *Journal of Marketing*, Vol. 35, nº 1, 1971, pp. 56-61.

Rozano, M.; Gómez, M. and Díaz, A.M. "*Customer perceptions of the perceived risk in generic drugs: The Spanish market*", 8th International Congress of the Association of Public and Nonprofit Marketing, Valencia, 2009.

Shimp, T. and Bearden, W. "Warranty and Other Extrinsic Cue Effects on Consumers' Risk Perceptions", *Journal of Consumer Research*, Vol. 9, nº 1, 1982, pp. 38-47.

Simoens S. and De Coster S. "Sustaining Generic Medicines Markets in Europe", *Research Centre for Pharmaceutical Care and Pharmaco-economics, University of Leuven* (April), 2006 in www.egagenerics.com/doc/simoens-report_2006-04.pdf. Fecha de consulta: 05-06-2009.

Sitkin, S. and Pablo, A. "Reconceptualizing the Determinants of Risk Behavior Academy of Management", *The Academy of Management Review*, Vol. 17, nº 1 (Jan), 1992, pp. 9-38.

Sitking, S. and Weingart, L. "Determinants of risky decision-making behaviour: a test of the mediating role of risk perceptions and propensity", *Academy of Management Journal*, Vol. 38 (Dec), nº 6, 1995, pp. 1573-1592.

Slovic, P. “Perception of risk”, *Science*, Vol. 236, nº 4799, 1987, pp. 280-285.

Snoj, B.; Pisnik, K. and Mumel, D. “The relationships among perceived quality, perceived risk and perceived product value“, *The Journal of Product and Brand Management*, Vol. 3, nº 3, 2004, pp. 156-167.

Stone R.N. and Grønhaug K. “Perceived risk: Further considerations for the marketing discipline”, *European Journal of Marketing*, Vol. 27, nº 3, 1993, pp . 39-50.

Suh, D.; Greenberg, M.; Schneider, D. and Colaizzi, J. “Pharmacist's perceptions of healthy people goals in economically stressed citie”, *Academic Research Library*, Vol. 27, nº 2, 2002, pp. 133-150.

Taylor, J. “The role of Risk in Consumer Behavior”, *Journal of Marketing*, Vol. 38, nº 2, 1974, pp. 54-60.

Tizón, M. “Médico y paciente. Una relación mejorable”, *Revista Pacientes* (Fundación Farmaindustria), nº 6 (diciembre), 2006, pp. 8-13.

Tootelian D.H., Gaedeke R.M. and Schlacter J. “Branded versus generic prescription drugs: perception of risk, efficacy, safety and value”, *Journal of Health Care Marketing*, Vol. 8, nº 3, 1988, pp. 26-29.

Traverso, M.; Salamano, M.; Botta, C.; Colautti, M.; Palchick, V. and Pérez, B. “Questionnaire to assess patient satisfaction with pharmaceutical care in Spanish language”, *International Journal for quality in Health Care*, Vol. 19, nº 4, 2007, pp. 217-224.

Turnbull P. and Parson N. “Generic prescribing in general medical practice: An attitudinal study of general practitioners”, *Marketing Intelligence & Planning*, Vol. 11, nº 4, 1993, pp. 30-40.

Venkataraman S. and Stremersch, S. “The debate on influencing doctors` decisions: Are drug characteristics the missing link?”, *Management Science*,Vol. 53, nº 11, 2007, pp. 1688-1701.

Wechsler, J. “How much money do generics save?”, *Pharmaceutical Executive*, Vol. 22, nº 3, 2001, p. 29.

Woodside A.G. and Delozier M.W. “Effects of word of mouth advertising on consumer risk taking”, *Journal of Advertising*, Vol. 5, nº 4, 1976, pp. 12-19.

Yelkur R. “Consumer perceptions of generic products: a Mexican study”, *Journal of Products & Brand Management*, Vol. 9, nº 7, 2000, pp. 446-456.