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PERCEPTION OF RISK IN COSMETICS AND DRUGS

BY

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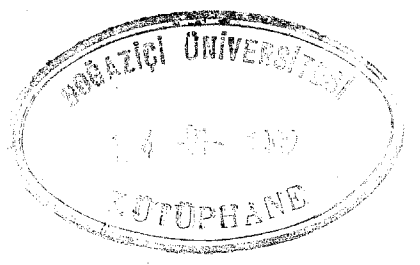
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Üniversite hayatım süresince bana çok emek veren değerli tez hocam Sayın Eser BORAK'ın teşviki ve ilgisi ile girip sürdürdüğüm iki senelik master programı boyunca, beni destekleyen Sayın Muzaffer BODUR ile diğer hocalarıma ve bu kitabın oluşturulmasında emeği geçen herkese teşekkürü bir borç bilirim.

PERCEPTION OF RISK IN COSMETICS AND DRUGS

The objective of this study is to analyze risk perception in cosmetics and drugs on the part of consumers and doctors. In the case of consumers, types of perceived losses and risk reduction methods for particular cosmetic products and the extent to which individuals perceived risk in drugs are discussed. Risk perception in prescribing drugs and related topics on drugs and drug choice are investigated as far as the doctors are concerned. Another objective of the study is to analyze any changes which may take place in perception of risk when a middleman functions so as to reduce perceived risk. 103 consumers and 96 doctors were given structured questionnaires. Paired t-tests, t-tests, frequency, and cross-tabulation analyses were conducted by use of SPSS (Statistical Program for Social Sciences) to analyze the hypotheses. The study is both empirical and descriptive, covering the literature review on the concept of perceived risk. Among the major findings, it may be pointed out that people in general perceive risk - mostly uncertainty risk - in buying cosmetic products. Besides, money loss is the most agreed upon type of loss when a cosmetic product turns out to be useless. The least favored risk reduction strategies for the chosen cosmetic products are expensive products and most advertised brands; the most favored are free sample, shopping experience, major brand, and word-of-mouth. Types and levels of risk are analyzed and discussed in case of new/on-the-market, prescribed/non-prescribed drugs when the illness is/is not serious. Doctors, too, perceive different levels of risk in different situations. The most frequently used source of information about a new drug is reported to be the detailman. However, in choosing drugs, meetings and conferences and foreign literature together with Turkish literature are the most frequently referred sources. With respect to the function of a middleman, it is found from this study that, according to the situation the individual is in, risk perception and the need for a middleman change. In the final section of the thesis, implications of the findings for marketers, consumers, drug producers, the state, and researchers are discussed.

KOZMETİK VE İLAÇLARDA RİSK ALGILANMASI

Bu çalışmanın amacı, tüketici ve doktorların kozmetik ürünlerde ve ilaçlarda risk algılamalarını analiz etmektir. Tüketicilerde, belirlenmiş kozmetik ürünler için algılanan kayıp tipleri ve risk azaltma metodları ile bireylerin ilaçlarda risk algılama boyutları ele alınmaktadır. Doktorlarda ise reçete yazımında risk algılanması ve ilaçlara ilişkin konular ile ilaç seçimi incelenmektedir. Çalışmanın bir diğer amacı da araya risk azaltmak amacı ile bir aracı girdiğinde risk algılanmasında herhangi bir değişiklik olup olmadığını ortaya çıkarmaktır. 103 tüketiciye ve 96 doktora planlanmış anketler verildi. Hipotezleri analiz edebilmek için SPSS (Statistical Program for Social Sciences) programı kullanılarak eşli t-testleri, t-testleri, frekans ve korelasyon analizleri yapıldı. Çalışma hem ampirik, hem de betimleyici özellikler taşımakta, risk algılanması ile ilgili literatür araştırmasını da içermektedir. Belli başlı bulgular arasında, kozmetik ürünlerin satın alınmasında insanların genellikle risk algıladıkları işaret edilebilir. Bu algılama en çok belirsizlik riski olarak ortaya çıkmaktadır. Bunun yanı sıra, kozmetik bir ürünün kullanılamaz çıkması durumunda en çok kabul edilen kayıp tipi para kaybıdır. Seçilen kozmetik ürünlerde en az onaylanan risk azaltma stratejileri pahalı ürün ve en çok reklamı yapılan marka, en çok onaylananlar ise numune alımı, kişisel alışveriş tecrübesi, tanınmış marka ve arkadaşların, dostların fikirleri olarak sıralanabilir. Yeni/bir süredir piyasada olan, reçeteli/reçetesiz satılabilen ve hastalık ciddi iken/ciddi değil iken kullanılan ilaçlarda algılanan risk tipleri ve dereceleri ele alınmış ve analiz edilmiştir. Doktorlar da değişik durumlarda, değişik derecelerde risk algılamaktadırlar. Yeni bir ilaç hakkında bilgi edinmek için en sık kullanılan kaynağın ilaç firmalarından gelen yetkililer (detailmen) olduğu görülmektedir. Ancak ilaç seçiminde toplantı ve konferanslar ve yabancı literatürle birlikte Türkçe literatür en sık başvuru kaynakları olarak görülmüştür. Bir aracının fonksiyonuna gelindiğinde ise, çalışmanın sonucuna dayanılarak, bireyin içinde bulunduğu duruma göre risk algılanmasının ve bir aracıya duyulan ihtiyacın değiştiği bulunmuştur. Tezin son bölümünde, bulguların pazarlamacılara, tüketicilere, ilaç üretenlere, devlete ve araştırmacılara yönelik yorumları tartışılmaktadır.

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INTRODUCTION

When individuals try to choose a product to purchase, they are confronted with a question like, "Will this be satisfactory or will it prove to be disappointing?" and this sense of risk is one of the main sources of their resistance to purchase a particular product. Yet, very few of them are conscious of the source of their reluctance or the nature of their choice processes. It was Raymond Bauer who first realized this and introduced in consumer behavior, a concept called "perceived risk" in 1960. According to him, perceived risk was a subjective phenomenon and an individual could respond to and deal with risk only as he perceived it subjectively; if he did not perceive it, he could not be influenced by it.

Later, Scott Cunningham conceptualized perceived risk in terms of two components: uncertainty and consequences. Uncertainty related to the way an individual set up his/her buying goals and consequences related to the quality and performance of the product and the ability of the product to fulfill the psychological and social needs of the individual. James Taylor explained that uncertainty about outcome could be reduced by acquiring and handling information; uncertainty about consequences could be reduced by reducing the amount at stake or put off. Donald Cox, further, argued that risk handling was, in large part, information handling. Increasing certainty was by far the most preferred means of handling perceived risk. Although it was impossible to persuade consumers not to see the risk involved in a situation, Ted Roselius tried to find out ways of dealing with risk.

This study is an attempt to find out about risk perception involved in the purchase of cosmetic products and drugs. Besides this attempt, the study is one of the few researches conducted on this classical theme of consumer behavior in Turkey. Types of losses and risk reduction strategies for specific cosmetic products and risk perception in using drugs were sought in case of final consumers. To be able to figure out doctors' perception of risk in choosing and prescribing drugs, they were also referred

to. Furthermore, it was the purpose of the study to figure out if a middleman could reduce risk perception in different buying situations.

At the end of the study, some implications for marketers and producers were pointed out since it is of vital importance for them to know about what to do to reduce shoppers' resistance in buying products and how to arrange the components of the marketing mix-product, price, place, and promotion.

The organization of the chapters is as follows:

Chapter I reviews conceptual and empirical studies related to risk perception; studies related to perceived risk on drug choice and adoption by doctors; and studies related to cosmetics.

Chapter II includes research design and methodology and findings of the study.

Chapter III consists of the interpretation of the findings and importance and implications of the study.

CHAPTER ONE

THEORETICAL BACKGROUND OF THE STUDY

A Review of Conceptual and Empirical Studies

Studies related to risk perception;

1. studies theorizing and conceptualizing risk;
2. studies related to risk handling mechanisms; and
3. studies related to personal influence on perceived risk

together with studies related to perceived risk in drug choice and adoption by doctors, and studies related to cosmetics will be presented in this chapter.

1.1. Studies Related to Risk Perception

1.1.1. Studies Theorizing and Conceptualizing Risk

Perceived risk, one of the important topics in consumer behavior, was first introduced by Raymond Bauer in 1960. In his article titled "Consumer Behavior as Risk Taking",⁽¹⁾ he stated that 'consumer behavior involved risk in the sense that any action of a consumer would produce consequences which he could not anticipate with anything approximating certainty and some of which at least were likely to be unpleasant and that consumers characteristically developed decision strategies and ways of reducing risk that enabled them to act with relative confidence and ease in situations where their information was inadequate and the consequences of their actions were in some meaningful sense incalculable.' He further mentioned the relationship between perceived risk and brand loyalty, advertising, personal and group influence, and prepurchase

(1) Bauer, R.A., (1967).

deliberation and noted that reliance on some outside source for guidance, whether that outside source be the reputation of the manufacturer of product, an opinion leader or a reference group, was one of the main devices for reducing the risks involved in consumer purchase decisions. Besides these, according to him, perceived risk was a subjective phenomenon and an individual could respond to and deal with risk only as he perceived it subjectively; if he did not perceive it, he could not be influenced by it.

In writing his article, Bauer hoped that he would be able to stimulate "marketing men" so as to make them undertake studies related to perceived risk and it seems today that he has been quite successful in doing it.

The study by Donald Cox and Stuart Rich (1964) titled "Perceived Risk and Consumer Decision Making - The Case of Telephone Shopping"⁽²⁾ explored the effects of risk perceived by the consumer on the frequency and extent of telephone ordering of department and specialty store merchandise.

The authors mentioned in their study that the amount of risk perceived by a consumer was a function of the amount at stake in the purchase decision and the individual's feeling of subjective certainty that she would "win" or "lose" all or some of the amount at stake.

Coming to ways of reducing perceived risk, one could cite two methods: Something could be done by the consumer to increase the certainty of her prediction of the probable consequences of her decision or something could be done to reduce the amount at stake.

The first part of the project involved a study of the operations of 52 department and specialty stores in eight cities. The second part of the study was based on interviews conducted with women shoppers living in two cities.

It was found out that telephone shoppers were more likely to be women with a greater than average need for convenience in shopping. Possession of the means to shop, and to shop easily by phone was also an important determinant of telephone shopping. Having a charge account was still another factor contributing to its ease.

The means of obtaining information to reduce uncertainty in telephone shopping were quite limited. In general, the telephone shopper had to rely on past experience with an item or on newspaper advertising as information sources. Newspaper advertising

(2) Cox,D. and Rich,S., (1967).

performed two major functions with regard to telephone shopping: It served as a stimulus to purchase, and/or as an uncertainty - reducing source of information.

High perceived risk was likely to be a strong deterrent to purchasing an item by phone. The biggest single factor determining confidence in ordering particular types of merchandise by phone was the ability to identify the items by brand, size, or color. Confidence was also expressed in other types of merchandise where size, color, or fit did not matter; or where standard items or reorders were involved. These were, in fact, the types of items receiving low perceived risk ratings.

Besides these, it was emphasized in the study that the role of advertising in reducing risk should not be understated and that advertisements should be truthful and be written in a fashion so as to facilitate ordering by brand, size, color, or some identifying number. Some other factors that could be used for reducing the customer's sense of risk were better-informed telephone salesclerks, ability to talk to the selling department when desired, more accurate order filling, better packing and delivery, and reliable pick-up and return services in the event the wrong item was delivered.

In "The Major Dimensions of Perceived Risk"(3) Scott Cunningham (1967) conceptualized perceived risk in terms of two components: uncertainty and consequences. His study included questions designed to measure the perceived certainty of a given event happening and the consequences involved if the event should happen. Two questions were utilized: The certainty of an event happening was measured by the question: "Would you say that you are: very certain; usually certain; sometimes certain; or almost never certain that a brand of headache remedy (fabric softener, dry spaghetti) you have not tried will work as well as your present brand?" The consequences variable was measured by the question: "We all know that not all products work as well as others. Compared with other products, would you say that there is: a great deal of danger; some danger; not much danger; or no danger in trying a brand of headache remedy (fabric softener, dry spaghetti) you never used before?"

For each of the above product categories, information about perceived risk, brand loyalty behavior, product related discussion, and various descriptive data were collected.

Several patterns emerged from the examination of perceived risk in this study. It was shown that products could be ranked along a riskiness continuum as determined by

(3) Cunningham, S. (1967).

the percentage of users associating high or medium risk with a given product. Headache remedies were, on the average, perceived as most risky; fabric softeners as intermediate; and dry spaghetti as least risky.

The findings suggested that perceived risk was a product-specific phenomenon, and that the content and composition of perceived risk could best be understood in terms of the specific product category involved. It was also likely that the perception of risk was unique to each individual.

Differences in risk perception between buying by mail and buying from a store and/or salesman were investigated in an article by Homer Spence, James Engel, and Roger Blackwell (1970). The title of the article was "Perceived Risk in Mail Order and Retail Store Buying".(4)

The primary product investigated was a supplementary hospitalization insurance plan marketed through the mail and three hypotheses were studied:

- H1. There is significantly greater perceived risk in buying products by mail than in buying the same products from a salesman or in a retail store.
- H2. The difference in risk in buying by mail versus buying from a salesman or a retail store will be perceived to be significantly less by mail-order hospitalization insurance buyers than by equivalent groups of nonbuyers.
- H3. The difference in risk in buying hospitalization insurance by mail versus buying from a salesman will be significantly less among persons who have bought hospitalization insurance by mail than by equivalent groups of nonbuyers.

A quasi-experimental field study was designed and in-home interviews were completed with three groups of 100 respondents each. These interviews included a perceived risk rating scale, Brim's desire for certainty scale, and an interviewer-administered socio-economic questionnaire.

This study differed from the Cox and Rich study and others in that perceived risk was operationally defined as the amount of risk that a respondent said he saw in the purchase of a product in a specific buying situation. The level of perceived risk was compared in two different buying situations in this study rather than among different products.

(4) Spence, H.E., Engel, J.F., Blackwell, R.D. (1970). Cunningham, S. (1967).

Besides the hospitalization insurance plan, a cross-section of products was chosen to include a wide range of prices, uses, and durability.

Upon the completion of the study, the first hypothesis was confirmed by the data whereas the second and the third hypotheses were not.

Further analysis was undertaken to ascertain whether or not there were differences in risk perception among members of the various socioeconomic groupings. Data revealed a slightly inverse relationship between level of perceived risk and level of income. This was particularly true when a product was bought from a store or salesman. However, it did not hold when the same product was purchased by mail, reflecting less experience and hence less confidence with this type of purchasing. Similarly, the risk perceived in buying products in a store or through a salesman increased as the years of education increased, but there was little or no such pattern in purchase by mail, most probably due to the above reasoning.

Perceived risk and perceived error tolerance were the focus of attention in the study titled "Perceived Risk in New Product Trial by Elderly Consumers"(5) written by Leon Schiffman (1972).

The following hypotheses were tested to explore elderly consumers' risk policies:

- H1. Trial of a specific new product will vary inversely with the degree of perceived risk.
- H2. Trial of a specific new product will be greater for those who prefer an inclusion strategy than for those who prefer an exclusion strategy.
- H3. Trial of a group of new products within a broad product category introduced over a period of time will be greater for those who prefer an inclusion strategy than for those who prefer an exclusion strategy.

Respondents were the residents of a 12-story apartment house in New York who did their own shopping and cooking. Their average age was 74.

A new salt substitute not yet on the market was selected as the product. It was found out that the elderly identified two types of perceived risk for such a product: 1) Taste risk, that its taste would not be as good as regular salt and 2) health risk, that it would not be better for one's health than regular salt.

(5) Schiffman, L. (1972).

Coming to the findings, in the case of perceived taste risk and trial, the lower a respondent's perceived taste risk score, the more likely the household was to try the new product; or conversely, the higher the perceived taste risk score the more unlikely the household was to try. An even stronger inverse association between perceived health risk and trial of the new product was indicated. This association was consistent with both the health needs of the elderly consumer and the health benefits stressed in marketing of salt substitutes.

Besides these, perceived error tolerance was found to measure consistent consumer preference for either an inclusion or exclusion strategy. For marketing management, the perceived error tolerance variable might serve as a means of identifying consumer innovators who maintained a consistent risk strategy of inclusion for products within a given category.

Articles on telephone shopping and mail-order buying suggested that risk attached not only to what was acquired but also to how or where it was acquired. The study by Robert Hisrich, Donald Dornoff, and Jerome Kernan (1972), "Perceived Risk in Store Selection",⁽⁶⁾ focused on acquisition by relating perceived risk to retail store selection.

Carpeting, draperies, and furniture were selected as the products to be tested and personal interviews were conducted with 300 households.

Relationships between a person's general self-confidence, specific self-confidence, information seeking, repeat patronage, and risk perception were tested for the above infrequently purchased goods and the following results were obtained:

The data suggested weak to moderate - though statistically significant relationships between risk and confidence and information seeking and risk. For each product studied, consumers' self-esteem and their self-assessed ability to choose a store in which to buy seemed to bear on how much risk they perceived. Similarly, the amount of perceived risk seemed to suggest the extent to which information seeking occurred. Except for carpeting, however, perceived risk did not relate significantly to repeat buying. Store choice for all products was perceived to be equivalently risky. Therefore, it was highly probable that perceived risk and store loyalty did not relate in any significant way. Furthermore, the relationships between general self-confidence and perceived risk were consistently weaker than those between specific self-confidence and perceived risk.

(6) Hisrich, R.D., Dornoff, R.J., Kernan, J.B., (1972).

James Bettman in his article titled "Perceived Risk and Its Components: A Model and Empirical Test"(7) (1973) separated risk into two slightly different constructs. A distinction was made between inherent risk and handled risk. Inherent risk was defined as the latent risk a product class held for a consumer-the innate degree of conflict the product class was able to arouse. Handled risk, on the other hand, was defined as the amount of conflict the product class was able to arouse when the buyer chose a brand from a product class in his usual buying situation.

The hypotheses of the study were as follows:

- H1. Inherent risk for a product class would increase with (a) variation in perceived product quality; (b) importance of the brand choice for a product class; and (c) the perceived price paid when a brand from the product class was purchased.
- H2. Inherent risk for a product class would decrease with (a) the size of the acceptable set of brands in terms of quality; (b) the mean level of quality for the product class.
- H3. Handled risk for a product class would (a) increase with inherent risk for that product class; and decrease with (b) amount of information about the product class in general; (c) usefulness of that information; (d) confidence with which the information was held; and (e) mean familiarity with specific brands in the product class.

Data were collected from 123 housewives at UCLA by way of questionnaires. Nine grocery products were included in the study being paper towels, dry spaghetti, furniture polish, toothpaste, beer, instant coffee, aspirin, margarine, and fabric softener.

The hypothesized models were empirically tested by measuring the necessary variables and using regression analyses and they were supported reasonably well by the data, except for the perceived price variable in the inherent risk models. For the inherent risk models, importance was the dominant variable, with percentage of acceptable brands being the variable relating to the goodness of the buyer's brand decision rule. For the handled risk models, inherent risk was the dominant variable, with information seen as a corrective variable.

(7) Bettman, J.R. (1973).

"The Role of Risk in Consumer Behavior"(8) was written by James Taylor (1974) and it constructed a comprehensive theory of risk taking in consumer behavior by specifying the principal concepts and the interrelationships between the concepts. Some of the research relevant to these concepts and interrelationships were presented in the article along with a suggestion by the author of how the theory might be tested and put to work in marketing decisions.

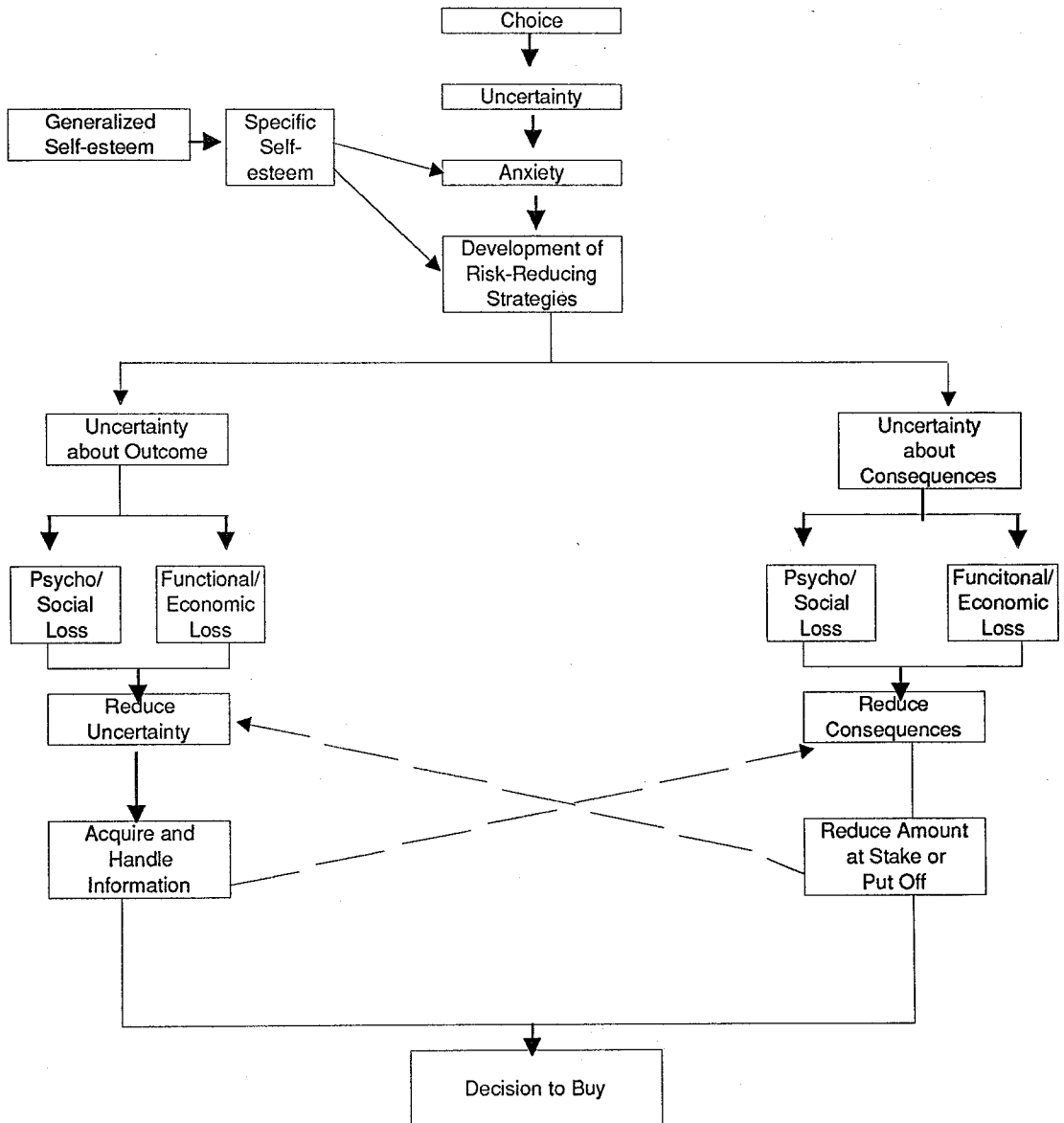
Definitions of four concepts were introduced in the article: choices, anxiety, self-esteem, and uncertainty/risk.

According to Fischer, Taylor said, awareness of the possibility of willful action brought with it an understanding of the fact of choice and the responsibility therefore ... Anxiety arose with this confrontation of freedom in that the agent who had to choose and who had no guarantee of the final outcome, had to bear the full responsibility of his choice, as well. Coopersmith's definition of self-esteem followed the above concepts: "Self-esteem refers to the evaluation which the individual makes and customarily maintains with regard to himself: it expresses an attitude of approval or disapproval, and indicates the extent to which the individual believes himself to be capable, significant, successful, and worthy. Taylor took self-esteem and generalized self-confidence as being interchangeable for purposes of his study. These, according to him, influenced consumer behavior in two ways: First, self-esteem contributed to the amount of anxiety that resulted from perceptions of the situation. Second, it was instrumental in selecting appropriate risk-reduction strategies. Risk and uncertainty were also used as equivalent concepts in the article and uncertainty about outcome was reduced by acquiring and handling information; uncertainty about consequences was reduced by reducing the amount at stake or put off.

The concept of risk taking in consumer behavior was further presented by the author as follows:

(8) Taylor, J.W., (1974).

Figure 1.1. Risk Taking in Consumer Behavior



Source: Taylor, J.W. (1974)

Besides these, according to Taylor, this theory of consumer behavior had two additional characteristics: First, it was fairly easy to put into operation and could be subjected to empirical validation. A general format for the implementation and empirical validation of the theory was also presented in the article: Measure self-confidence in relation to choice of the product category; measure perceived risk in product category choice; measure type of loss associated with product category; measure perceived risk in brand choice; measure preferences for various risk-reducing strategies; and measure the approximate size of groups of consumers with common characteristics in perception of risk, self-confidence, and preferred risk-reducing strategies for use in evaluating cost/effectiveness of various marketing programs. The second characteristic of the study was that it viewed the choice situation rather than the consumer, as the central issue. Therefore, empirical research needed to be "purchase" specific and it might be difficult to make generalizations from one study to the next.

A study was conducted by Jacob Jacoby and Leon Kaplan in 1972 to determine the interrelationships among five types of consequences of perceived risk (performance, psychological, social, physical, and financial, and to determine their individual and collective relationship to overall performance.

"Components of Perceived Risk in Product Purchase: A Cross-Validation"(9) by Leon Kaplan, George Szybillo, and Jacob Jacoby (1974) was an article which reported the results of a second study undertaken two years later with different subjects that cross-validated the earlier findings by Jacoby and Kaplan.

104 subjects evaluated the performance, psychological, social, physical, financial, and overall perceived risk associated with the purchase of twelve products selected to cover a substantial portion of the overall perceived risk continuum. An assortment of health, recreational, and hygienic products, varying along an expensive-inexpensive dimension and including products bought for oneself and for others, highly visible and low-profile items, intimate and non-intimate products appropriate for both sexes were used. A questionnaire was developed for this purpose where each page examined one aspect of perceived risk (either overall perceived risk, or one of the five consequences) for one of the twelve products. Means, standard deviations, and the intercorelation matrix were determined for the variables, and stepwise multiple regression was used to compute the multiple correlations between the components of risk and overall perceived risk for all the product categories.

(9) Kaplan,L., Szybillo,G., and Jacoby,J. (1974).

The data indicated, as in the earlier study conducted by Jacoby and Kaplan(10) (1972), that overall perceived risk could be fairly well predicted with the above types of consequences(10). As before, it was found out that performance consequences were most predictive of overall perceived risk for most kinds of products. And again, as was found out earlier, similar types of products possessed similar risk-consequences hierarchies.

In "Information Integration in Consumer Risk Perception: A Comparison of Two Models of Component Conceptualization", (11) (1975) James Bettman's purpose was to provide (a) a comparison of different schema for specifying the components assumed to comprise overall perceived risk and (b) an examination of the multiplicative relationship assumed for combining the components.

Bettman noted that there were two main studies in the marketing literature that have developed schema for specifying the components of risk: Cunningham (1967) who specified these components as certainty and consequences, and Bettman (1973) who developed a model of risk which utilized as components the percentage of brands falling above an acceptable level of quality for a consumer and the importance of making a satisfactory brand choice within the product class. It is mentioned in the study that in most of the studies carried out, it had usually been assumed that the components were multiplied to arrive at an overall rating of risk.

In examining the two issues raised above, the experimental methodology developed by Anderson to study information integration was utilized. This approach was based upon presenting subjects pieces of information on risk components which were to be combined into an overall risk judgement. The subject's task was to judge the overall inherent risk in purchasing a brand in a particular product class after examining a risk profile for that product class. There were two separate sets of risk profiles, one utilizing the Bettman schema for specifying risk components; the other utilizing the Cunningham schema.

60 undergraduate students were given questionnaires with half of them receiving the Bettman task and half receiving the Cunningham task. Results indicated that the theoretically expected combination rule, multiplication of components, was not upheld for either model.

(10) Jacoby, J., Kaplan, L., (1972)

(11) Bettman, J.R., (1975).

The Bettman model, although graphically displaying a diverging fan (multiplicative combination), showed a significant residual interaction after the bilinear portion of the interaction was removed. The Cunningham model showed a converging graphical pattern opposite to that expected, supporting a differential weighted averaging model. The development of a theoretical basis for models of consumer risk perception was proposed as a necessary step for future research.

In "An Investigation of Perceived Risk at the Brand Level"⁽¹²⁾ by Paul Peter and Michael Ryan (1976), perceived risk was conceptualized in terms of expected negative utility associated with automobile brand preferences. There were four basic assumptions involved in the conceptual framework:

1. Products and brands had no value to the consumer other than the services they performed. However, the services were not confined to financial or performance variables but also might include social, psychological, convenience, safety, and any other consumer-relevant dimensions.
2. At the moment of purchase, the consumer made a "rational" decision based on his expectations of services offered by the product and brand. In addition, the notion of rationality was confined to the individual consumer and had no necessary relationship to objective economic criteria or any criteria other than the consumer's subjective expectations.
3. Brands in the product class had consumer-perceivable differences and these differences were salient to the consumer.
4. In this initial framework, it was assumed that consumers were risk-averse and selected brands on the basis of minimizing expected loss.

It was proposed in this study that the primary behavior determinant was not the expected value of consequences of purchase, but the utility of the expected outcomes. Probability of loss was used as the explanatory variable and importance of loss was used as a segmentation variable; it was expected that probability of loss would predict brand preference more strongly for market segments viewing losses as highly important. Six facets of risk (financial, performance, physical, psychological, social, and time risks) were employed in the study.

(12) Peter, J.P. and Ryan, M.J. (1976).

The research was exploratory, hence, data were collected from a convenience sample of 217 business administration students. 210 usable questionnaires were obtained. The product in question was automobiles. Of the 210 questionnaires, 108 covered compact cars and 102 covered intermediate cars. This procedure was used to test the consistency of results across samples, brands of automobiles, and classes of automobiles. Brand preference was operationalized with a single seven-point item for each brand, on which subjects compared the brand being scored to all other brands in the study on a least preferred to most preferred basis.

The findings showed that consumers who were highly risk averse viewed products and brands more in terms of potential losses than did those who were less risk averse. Data supported the notion that importance of a loss might operate on a saliency basis. That is, perceived risk might be a predictor of brand preference only for market segments that perceived it as important. Besides these, the results suggested that probability of loss was in fact a handled risk phenomenon and that importance of loss was an inherent risk phenomenon. Support was shown for the notion that importance of losses might be more useful as a segmentation variable than as a component of a multiplicative perceived risk model.

Peter Bloch and Marsha Richins in their study titled "A Theoretical Model for the Study of Product Importance Perceptions"(13) (1983), first reviewed relevant literature on the topic of product importance and related concepts including the classification of goods, perceived risk, product involvement, purchase importance and task involvement. Following this review, a conceptual framework for the analysis of product importance was presented, and implications for consumer behavior theories and for marketing management were discussed.

Many definitions were provided in the article which, in turn, helped in constructing the paradigm in Figure 2.2:

"Situational involvement is the degree of involvement evoked by a particular situation such as a purchase occasion and is influenced by product attributes (including product cost, product complexity and similarity among choice alternatives) as well as situational variables (primarily whether the product will be used in the presence of others). Thus, situational involvement appears to result from perceived risk.

Enduring involvement is the ongoing concern with a product the individual brings

(13) Bloch, P.H., Richins, M.L. (1983).

into the purchase situation. It is a function of past experience with the product and the strength of values to which the product is relevant.

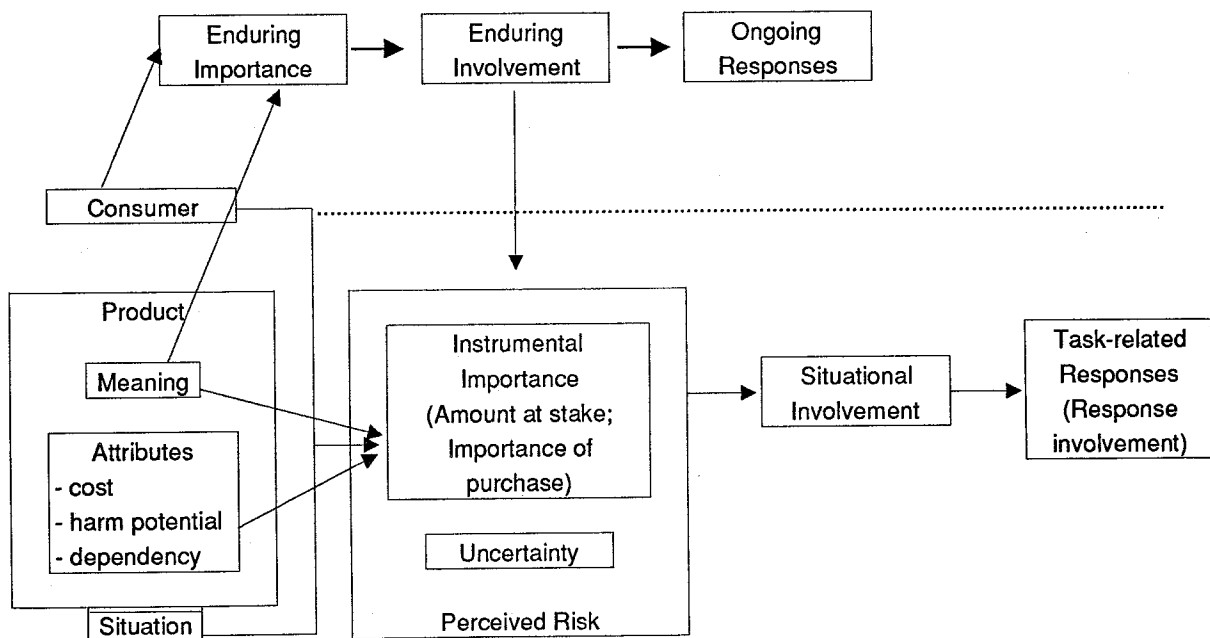
Response involvement represents the complexity or extensiveness of consumer decision making and thus refers to the consequences of the inner state of being involved.

Perceived product importance is the extent to which a consumer links a product to salient enduring or situation-specific goals.

Instrumental importance is a temporary perception of product importance based on the consumer's desire to obtain particular extrinsic goals that may derive from the purchase and/or usage of the product.

Enduring importance is a long-term, cross-situational perception of product importance based on the strength of the product's relationship to central needs and values.

Figure 1.2. Relationships among Product Importance and Other Constructs



Source: Bloch, P.H., Richins, M.L., (1983).

Sources of importance perceptions are represented at the left of the figure. Enduring importance and related concepts are shown above the dotted line. Reading

from left to right, product meaning and consumer characteristics influence long-term perceptions of product importance. Enduring importance perceptions are then translated into lasting feelings of involvement or interest in the product class. Product involvement motivates attitudinal and behavioral responses that are independent of purchase decision making and are called ongoing responses. Constructs pertaining to instrumental importance are shown below the dotted line. Here consumer, product, and situational variables create perceptions of instrumental importance. Instrumental importance and uncertainty are the two components of perceived risk, and the perception of risk leads to temporary feelings of involvement with the product class or the purchase task. Both components of perceived risk must be greater than zero for involvement to be experienced. Even in purchase situations where the stakes are high, a consumer may be relatively uninvolved if the favorableness of the purchase outcome is felt to be assured. These temporary feelings of involvement have been termed situational involvement or task involvement. Finally, this involvement leads to task related attitudinal and behavioral responses, namely, response involvement."

1.1.2. Studies Related to Risk Handling Mechanisms

The focus of the article titled "Risk Handling in Consumer Behavior - an Intensive Study of Two Cases"(14) by Donald Cox (1967) has been on identifying and describing the risk reducing strategies of two consumers. The main objective of the study was to determine the conditions under which the consumers tried to reduce perceived risk by "reducing the amount at stake", and the conditions under which they chose the strategy of "increasing their feelings of certainty". A second objective was to determine the specific strategies used in order to reduce perceived risk. Thirdly, the important factors that determined the selection of risk reducing strategies were tried to be understood.

The following hypotheses have been generated as a result of this study:

- H1. Perceived risk (a function of uncertainty and the consequences [psychological as well as functional and economic] of buying situations) is an important variable in consumer decision making.
- H2. When the level of perceived risk is more than is tolerable, the consumer will take steps to reduce risk to a tolerable level.

(14) Cox.D.F. (1967)

- H3. Usually these steps involve attempts to increase certainty rather than reduce the amount at stake or the seriousness of the consequences.
- H4. Consumers develop characteristic styles of reducing uncertainty. These risk handling styles are a function of: Dominant personality and buying goals; cognitive needs and styles; degree of buying maturity and experience.
- H5. Among the strategies used to reduce perceived risk are: Reliance on past experience and/or the experience of others; information seeking; taking precautionary measures; choice avoidance; goal avoidance; delegation of buying responsibility to others who are competent.

Above all, it was found out that risk handling was, in large part, information handling. Increasing certainty was by far the most preferred means of handling perceived risk. In most cases this involved information processing through receiving or seeking and evaluating new information or through referring to and evaluating already stored information (past experience).

The study by Scott Cunningham titled "Perceived Risk and Brand Loyalty"⁽¹⁵⁾ (1967) examined the relationship between perceived risk and brand purchasing behavior in the hopes of improving the understanding of the reasons for brand loyalty or brand commitment both in terms of behavior with regard to existing products and also in relation to reactions to new products.

As Bauer suggested, brand loyalty is one way in which consumers can reduce, control, or avoid the risk perceived in purchasing an untried brand.

The issue of concern in this study was the extent to which brand loyalty or commitment seemed to be a function of perceived risk.

The principal measure of brand commitment used was an index derived from the responses to two questions:

- Do you regularly switch around or buy the same brand of headache remedy (fabric softener, dry spaghetti)? and
- What would you do if your present brand of headache remedy (fabric softener, dry spaghetti) was out of stock-buy another brand, go to another store, or wait until the next trip?

(15) Cunningham, S. (1967).

Those classified as high in perceived brand commitment were those claiming to buy regularly the same brand and who would also go to another store or wait until the next trip if they were unable to obtain their present brand.

There was one clear conclusion to this study: Perceived risk was positively related to perceived brand commitment. Apparently, loyalty to one brand was a method of risk reduction. Furthermore, the more serious or dangerous the perceived consequences, the higher the probability of brand commitment. Those high-medium in perceived risk should be less likely to switch brands for reasons such as price, need for variety or curiosity; rather they should be more likely to switch in search of a brand that worked better. As was anticipated, the examination of brand commitment and demographic variables with a perceived risk control did not produce any noteworthy relationships.

"If we know something about the nature and amount of risk perceived by the consumer, it will help us understand and predict how and why she acquires, transmits, and processes information while solving problems associated with consumer decision making" said Donald Cox in his article "Risk Taking and Information Handling in Consumer Behavior"(16) (1967)

Information acquisition, information transmission, and information processing were the three categories he explained in his multidimensional model.

Information acquisition - The amount and nature of perceived risk will define consumer information needs, and consumers will seek out sources, types, and amounts of information that seem most likely to satisfy their particular information needs. Three basic information sources are available to the consumer: 1) Marketer dominated communication channels (the product, pricing, packaging, promotion, advertising); 2) Consumer dominated communication channels (word of mouth); 3) Neutral information sources (Consumer Reports, articles).

Information processing - Whether information is acquired voluntarily or involuntarily, consumers take the initiative in processing information. In some way they evaluate information they have acquired, decide what information to utilize (respond to), what information not to use, what information to store in memory, and what to forget.

Information transmission - Consumers do not always keep the information they

(16) Cox.D.F. (1967)

have acquired and processed to themselves. Sometimes they share it with other consumers through a process known as "interpersonal communications" or, more commonly, "word of mouth advertising".

In sum, the concept of information handling argued that consumers would often take the initiative in the acquisition and transmission of information; that they would decide what and how much information they would acquire, and from what sources. The concept further argued that consumers "always" took the initiative in information processing; that in some way they decided how to evaluate information, whether to utilize a piece of information and for how long to store different kinds of information. By and large, this was not viewed as a random or involuntary process.

Ted Roselius's article is titled "Consumer Rankings of Risk Reduction Methods"(17) (1971). According to Roselius, buyers often faced the dilemma of wanting to purchase a product, and yet they hesitated to buy because it involved taking the risk of suffering some type of loss. In such a situation where an individual was confronted with risk perception, one of four different strategies of risk resolution could be pursued.

1. Risk perception could be reduced by either decreasing the probability that the purchase would fail, or by reducing the severity of real or imagined loss suffered if the purchase failed;
2. He could shift from one type of perceived loss to one for which he had more tolerance;
3. He could postpone the purchase, in which case he would be shifting from one general risk type to another;
4. He could make the purchase and absorb the unresolved risk.

The research provided a context within which a wide variety of risk relievers could be viewed simultaneously. This was achieved by having subjects evaluate eleven risk relievers on the basis of how helpful they were for reducing the threat of various kinds of loss.

Data were derived from responses of 472 housewives to a written questionnaire. Attitude toward the eleven risk relievers (endorsements, brand loyalty, major brand image, private testing, store image, free sample, money-back guarantee, government testing, shopping, expensive model, and word-of-mouth) was measured on

(17) Roselius, T. (1971).

a five-point scale: almost always helpful, usually helpful, sometimes helpful, rarely helpful, almost never helpful; and analyzed across four kinds of loss: time, hazard, ego, and money loss.

The net favorable percentage statistic was used to rank the risk relievers for each of the above mentioned losses.

The following were the major findings: Brand loyalty and major brand image evoked the most consistently favorable response and were ranked one and two for all types of loss. Store image, shopping, free sample, word of mouth, and government testing generally evoked a "neutral" or "slightly favorable" response, for all categories except for hazard loss. Endorsements, money-back guarantees, and private testing typically evoked a "slightly unfavorable" response, or "neutral" at best. Buying the most expensive model to relieve risk was consistently the least favored strategy.

It was found that buyers preferred some relievers to others depending upon the kind of loss involved, and that the attitude toward relievers could differ between different types of buyers. It was revealed, also, that there were certain relievers which could be defined as special-purpose risk relievers since they had a different impact according to the buying situation, the kind of loss perceived, and the type of buyer involved. These relievers were major brand image, store image, free sample, word of mouth, and government testing. Major brand image and word of mouth were useful except for hazard loss, store image was equally helpful for all types of losses, free sample was more useful for relief of ego loss, yet less helpful for relief of hazard loss, and government testing was especially helpful for relief of hazard loss than for other loss types. The remaining relievers (brand loyalty, private testing, shopping, endorsements, expensive models, and money-back guarantees) did not evoke a significantly different response when each was compared across kinds of loss. Besides, there was not a significant difference in response between high perceivers and other buyers with respect to the helpfulness of these relievers for any kind of loss. Therefore, these have been defined as general-purpose risk relievers.

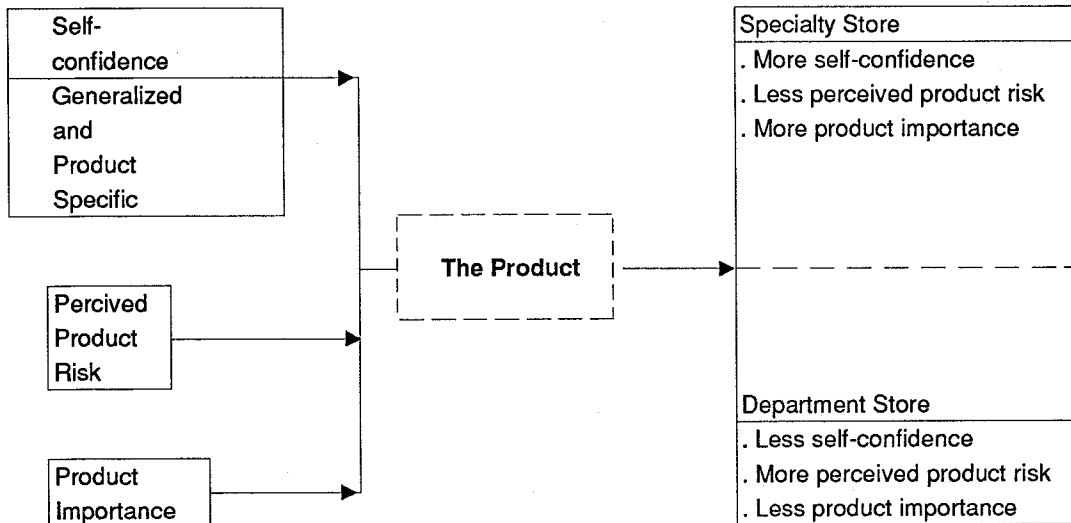
Joseph Dash, Leon Schiffman, and Conrad Berenson (1976) designed a research titled "Risk and Personality-Related Dimensions of Store Choice"(18) to investigate how self-confidence, perceived product risk, and product importance — three risk perception variables — affected store choice for two groups of shoppers: those who

(18) Dash,J.F., Schiffmann,L.G., Berenson,C., (1976)

purchased audio equipment from a specialty store and those who purchased similar products from a department store.

The below paradigm shows this relationship:

Figure 1.3. Risk Perception Store Choice Paradigm



Source: Dash,J.F., Schiffmann,L.G., Berenson,C., (1976)

The data base consisted of 424 questionnaires where the names and addresses of potential respondents were obtained from cash and credit sales records maintained by two retail organizations.

Four hypotheses were set out in the beginning, each of which was supported upon the completion of the study:

- H1. Those shoppers who purchased audio equipment from a specialty store would have more generalized self-confidence than those who purchased similar merchandise from a department store.
- H2. Those who purchased from the specialty store would possess more product-specific self-confidence than those who purchased from the department store.
- H3. Specialty store customers would perceive less product risk than department store customers.

H4. Specialty store customers would consider the product area to be more important than department store customers.

An examination of the underlying component of perceived risk revealed that the specialty store shoppers were certain than the department store shoppers that their product choice would prove satisfactory. However, the consequence component suggested that the specialty store shoppers considered an error in product selection to be more serious than did members of the department store group. The study also indicated that the two self confidence variables (generalized and product specific) were positively related and were reciprocals of perceived product risk.

The article titled "A Cross-National Study of Perceived Risk"(19) by Robert Hoover, Robert Green, and Joel Saegert (1978) tried to answer whether perceived risk had the same effect on consumers in a foreign country (Mexico) as in the United States.

The study had two objectives:

- To test the levels of perceived risk associated with three common consumer products (bath soap, toothpaste, and instant coffee),
- To determine the extent of similarity of the brand loyalty/perceived risk relationship in the two countries.

Two types of questions were asked to upper-middle and upper class females selected from Houston, Texas, and Monterrey, Mexico, 106 interviews from Houston, and 116 interviews from Monterrey were available for use.

The measure of perceived risk employed in the study was adopted from the two four-point Likert-type scales used by Cunningham, one providing a measure of the consequences of trying a new brand of a product and the other providing a measure of the certainty that the consequences would occur:

- Would you say that there is (a great deal, some, not much, no) danger in trying a brand of (the product) you have never used before?
- Would you say that you are (very, sometimes, seldom, never) certain that a brand of (the product) you have not tried before will work as well as your present brand?

(19) Hoover, R.J., Green, R.T., Saegert, J. (1978).

Chi-square analysis was used to test for differences in perceived risk levels between the two samples. For each product, the number of respondents in each risk category was compared.

A 2x7 analysis of variance was used to test for national differences in brand loyalty, the existence of an overall relationship between brand loyalty and perceived risk, and national differences in the relationship between brand loyalty and perceived risk.

In all three cases, significant differences were found to exist between the two samples. In each case, the Mexican sample indicated lower levels of perceived risk than the US sample. Brand loyalty, on the other hand, was generally higher in Mexico than in the United States. There were also differences in the Perceived risk/brand loyalty relationship between the two samples for two of the three products. Significant interaction was found for bath soap and instant coffee, only.

The findings of this study suggested that among the members of the two samples, an overall relationship existed between perceived risk and brand loyalty, while the perceived risk/brand loyalty relationship for convenience goods did not have the same shape in the two nations.

It may be concluded from the foregoing that when entering foreign markets, marketers should be aware that each country owns unique characteristics may they be social, cultural, or economic. Hence, a strategy applicable in one country may be totally ineffective in another country.

It was the objective of "The Effect of Self Confidence and Anxiety on Information Seeking in Consumer Risk Reduction"(20) written by William Locander and Peter Hermann (1979) to examine the individual difference variables and their relationship to seeking information from varied sources. Based on Taylor's theory, the hypotheses tested were:

- H1. General self-confidence would not be related significantly to the information-seeking measures.
- H2. Specific self-confidence would be related significantly to the tendency to reduce risk by information seeking.
- H3. The general self-confidence X specific self confidence interaction will be related significantly to information seeking.

(20) Locander, W., Hermann, P., (1979).

H4. Trait anxiety will be a significant effect for explaining information seeking.

Five types of information sources from which the consumer could seek information to satisfy a particular need were outlined by Andreasen (1968) and used in this study:

1. Impersonal advocate: reading magazine or newspaper ads, listening to radio commercials, viewing TV commercials, or looking at point-of-purchase displays.
2. Impersonal independent: checking with Consumer Reports or finding a technical report on the product.
3. Personal advocate: asking sales clerk's or store manager's opinion.
4. Personal independent: trying to remember what brand a friend or neighbor uses, asking opinions of family members or close friends, asking the opinion of a neighbor.
5. Direct observation/Experience: asking for a product demonstration, relying on past personal experience, trying the product before buying, or reading the information on the package.

A sample of 466 adults from a suburb of Houston, Texas were contacted; 365 usable questionnaires were returned. By use of a multivariate method to analyze the three variables under consideration (anxiety, generalized self-confidence, specific self-confidence), it was possible to test the hypotheses simultaneously.

The first hypothesis was accepted because no significant general self-confidence effects were found.

The second hypothesis was also accepted because the specific self confidence variable had a significant impact on the tendency to seek information for all five products (paper towels, aftershave/cologne, toaster, lawn mower, and stereo) tested.

Because only two of five (paper towels and aftershave/cologne) general self-confidence X specific self-confidence interaction terms were significant, the third hypothesis was rejected.

In case of the fourth hypothesis, anxiety proved to be important only for one product, after shave cologne, in information seeking behavior.

Robert Settle and Pamela Alreck in their article titled "Reducing Buyers' Sense of Risk"(21) (1989) distinguished among five types of risk buyers faced when they made a purchase decision: monetary, functional, physical, social, and psychological. The amount of each kind of risk buyers perceived depended on both the characteristics of the buyer and the type of product or service under consideration. And what worked to reduce one kind of risk might be completely ineffective for another type.

Table 1.1. illustrates types of buyers most sensitive and goods most subject to the different types of risk mentioned above.

Table 1.1. The Five Forms of Buyer Risk

Type of Risk	Buyers Most Sensitive To It	Goods Most Subject To It
Monetary	Risk capital consists of money and property. Those with relatively little income and wealth are most vulnerable.	High-ticket items that require a substantial expenditure are most subject to this form of risk
Functional	Risk capital consists of alternate means of performing the function or meeting the need. Practical consumers are most sensitive.	Products or services whose purchase and use requires the buyer's exclusive commitment and precludes redundancy.
Physical	Risk capital consists of physical vigor, health, and vitality. Those who are elderly, frail, or in ill health are most vulnerable.	Mechanical or electrical goods such as vehicles; flammables; drugs and medical treatment; food and beverages.
Social	Risk capital consists of affiliations and status. Those lacking respect or attractiveness to peers are most sensitive.	Socially visible or symbolic goods such as clothes, jewelry, cars, homes, or sports equipment are most subject to it.
Psychological	Risk capital consists of self-esteem and self-confidence. Those who are insecure and uncertain are most	sensitive. Expensive personal luxuries that may engender guilt; durables

Source: Settle,R.B., Alreck,P.L. (1989)

The article titled "The Perceived Risk-Brand Loyalty Relationship: An International Perspective"(22) (1990) provided a cross-national testing of the established relationship between perceived risk and brand loyalty. It showed that although the concepts of perceived risk and brand loyalty existed outside of the U.S.A., the magnitude of each varied by country and by product. Bronislaw Verhage, Uğur Yavaş, Robert Green, and Eser Borak from different countries contributed to this cross-national research.

In each country (USA, Mexico, Netherlands, Turkey, Thailand, and Saudi Arabia), upper-middle income women residing in major urban centers were selected as the target, and samples were drawn from this population. A total of 781 usable questionnaires were collected. Purchase histories and measures of risk were collected for bath soap and toothpaste. Brand loyalty was measured according to the proportion of purchase histories and measures of risk were collected for bath soap and toothpaste. Brand loyalty was measured according to the proportion of purchases method where the measure determines brand loyalty scores on the basis of a person's purchase history for a particular product. The perceived risk measure employed in the study was adopted from the two four-point Likert type scales first conducted by Cunningham:

- Would you say that there is a (great deal, some, not much, no) danger in trying a brand of (the product) you have never tried before?
- Would you say that a brand of (the product) that you have never tried before would be (always, almost always, sometimes, almost never) as good as the one you are currently using?

Data analysis proceeded in several steps. First, one-way analysis of variance was performed for the country means on brand loyalty and perceived risk for the two products. It was found out that the level of risk perception and brand loyalty varied across countries for both products. Then, countries were rank ordered on each concept for both products. For bath soap, Mexico, the country with the lowest perceived risk mean, had the highest loyalty score. Thailand was high in risk, but low in loyalty, Turkey was low in both risk and loyalty. The USA and the Netherlands were high in both. For toothpaste, Mexico, having the lowest perceived risk mean, had the highest loyalty score. Thailand was high in risk, but low in loyalty. Turkey was low in both risk and loyalty. The USA was high in both. For bath soap, it appeared that high perceived risk levels might not lead to

(22) Verhage,B.J., Yavaş,U., Green,R.T., Borak,E., (1990).

high brand loyalty, at least in many countries. For toothpaste, however, this relationship was significant for four of the six countries: the U.S.A., the Netherlands, Turkey, and Saudi Arabia. This meant that high perceived risk levels might lead to high brand loyalty.

Data from this study provided evidence that, individually, the concepts of perceived risk and brand loyalty existed outside of the US with magnitudes varying by country and by product. However, brand loyalty was not the major mechanism for reducing perceived risk outside the U.S.: Although, a positive relationship was found between these two concepts in the U.S., this was not true for other countries meaning that consumers in other countries might develop brand loyalty patterns not to reduce risk but simply out of habit.

1.1.3. Studies Related to Personal Influence on Perceived Risk

Johan Arndt in his article "Word of Mouth Advertising"⁽²³⁾ (1967) defined word of mouth advertising as oral, person-to-person communication between a perceived noncommercial communicator and a receiver concerning a brand, a product, or a service offered for sale. He further stated that word of mouth seemed to be a frequently used risk-reduction device, and that such a source of information was particularly sought for in situations characterized by high uncertainty.

In still another article titled "Word of Mouth Advertising and Perceived Risk"⁽²⁴⁾ (1968), Arndt studied the relation between word of mouth advertising and perceived risk.

The respondents were composed of housewives and a total of 449 interviews were completed by the end of the survey. Each wife was mailed a 55 ¢ coupon and a letter from the manufacturer inviting her to buy a new regular coffee, "Perky". The coupons had to be redeemed within 16 days and were given numbers to identify the buyers. Upon the completion of the allowed period, a 30-minute structured interview was conducted with each respondent. Afterwards, respondents were classified into four adopter categories (pioneers, early adopters, late adopters, non-adopters), using the relative time of the first purchase as the classification criterion. Perceived risk levels of the sample was measured by Cunningham's risk measure and on the basis of their total

(23) Arndt, J., (1967).

(24) Arndt, J., (1968).

risk scores, the respondents were classified into three groups: high, medium, and low in perceived risk.

It was hypothesized that the high-risk group would be particularly likely to report having received comments about Perky. However, data did not support this hypothesis. Similarly, no differences between the high-and low-risk perceivers were found for number of comments received. As a group, high-risk perceivers were more likely than those low in perceived risk to be brand loyal and less likely to be interested in adopting Perky.

Since brand loyalty was found to be strongly correlated negatively with acceptance of Perky, it was hypothesized that those high in perceived risk would be less likely to buy Perky than would the low-risk perceivers. This hypothesis was supported by the findings. Moreover, the buyers who were high in perceived risk were more likely to have postponed the purchase until near the end of the period.

Another hypothesis was that the impact of word of mouth would be stronger for the high-risk perceivers than for those low in perceived risk. This hypothesis was also supported. High-risk perceivers were particularly affected by the kind of word of mouth. They appeared to pay much more attention to what they heard, particularly negative information. Furthermore, information seeking was found to be important to those high in perceived risk. They were more likely to seek information and were more likely to respond to information they have sought.

A third hypothesis which was supported by the data was that the low-risk perceivers would be more likely to give advice about Perky than would the respondents high in perceived risk. Thus, it was particularly the high-risk perceivers who seemed to make an effort to reduce risk by means of word of mouth. The low-risk perceivers, on the other hand, were on the giving end in the word-of-mouth process. Word of mouth seemed to flow from the low to the high-risk perceivers.

Michael Perry and Curtis Hamm (1969) in their article titled "Canonical Analysis of Relations Between Socioeconomic Risk and Personal Influence in Purchase Decisions"⁽²⁵⁾ tested the hypothesis stating that the higher the socioeconomic risk involved in a particular purchase decision, the greater the importance of personal influence, as compared with other sources of influence.

(25) Perry, M., Hamm, C.B., (1969).

A sample of 101 male students in the Oklahoma State University was selected and given a questionnaire asking them to rate the socioeconomic risk and interpersonal influence in 25 purchasing decisions. There were two parts to the questionnaire. In the first part, the respondents were asked to rate, separately, the significance of social risk and that of economic risk for each decision where social significance was taken to refer to how the purchase decision would affect the opinion other people held of the individual and economic significance was taken to refer to how the purchase would affect the individual's ability to make other purchases. In the second part, respondents were given instructions so as to place a friend rather than themselves in the answers they gave to the questions. This was to be able to get a more objective evaluation of their decision processes.

Canonical analysis was used to study the above mentioned relation between socioeconomic risk and personal influence and as a result, the beginning hypothesis was supported. Although the canonical correlation between the two concepts was found most of the time to be insignificant, in the cases in which the correlation was significant (color TV), the social risk contributed more than the economic risk.

There was an important implication of this study to marketers: Promotional strategies in a high-risk purchase situation should try to reach the consumers through personal channels (opinion leaders, word-of-mouth), rather than general media. Besides, the social benefits of the purchase should be emphasized more than the economic ones.

"Informal Group Influence on Risk Taking"(26) by Arch Woodside (1972) was composed of the following hypotheses concerning shifts in willingness to take risks:

- H1. Consumers, acting as a group, are more willing to choose riskier and potentially more beneficial product alternatives after group discussion than before such discussions.
- H2. Consumers acting individually after group discussion, are more willing to choose riskier and potentially more beneficial product alternatives than before such discussion.

There were fifty-six housewives interested in taking part in the experiment. A consumer risk-taking instrument was developed to determine perceived risk levels for specific purchase situations. It contained eight hypothetical situations, each of which

(26) Woodside,A., (1972).

presented two courses of action, one action being riskier but potentially more rewarding than the other. The consumer in the hypothetical situation faced the dilemma of choosing. Product categories included in the study were automatic washing machines, automobiles, instant coffee, cameras, wall coverings, electric food mixers, winter coats, and steam irons. Ten groups of housewives participated in before and after discussions, usually in groups of six. They answered the risk-taking instrument three times. Before discussing the product situations, they completed the instrument individually, then the housewives discussed each situation and reached agreement as a group on the choice of answers provided.

Comparison of housewives' prediscussion and consensual decisions showed a significant increase in willingness to take risk; hence, the first hypothesis was supported.

For the second hypothesis, it was found out that for all subjects, there was a significant shift toward greater risk taking. However, while for younger housewives, the previous shift observed on a consensual basis held on an individual postdiscussion basis, the older housewives did not show an individual postdiscussion shift toward risk. That is, older housewives perceived higher risk in making decisions after group discussion than before.

There was also a control group which was given the test instrument during sessions one week apart. No discussions took place among these subjects. Their scores produced a nonsignificant shift in risk taking after the one-week period. This finding would not support the hypothesis that the observed shift toward risk taking was the result of having greater time to think about the product situations.

1.2. Studies Related to Perceived Risk in Drug Choice and Adoption by Doctors

Raymond Bauer, in his article "Risk Handling in Drug Adoption: The Role of Company Preference"(27) (1961), stated that the physician, making a choice of prescription drugs, was a typical consumer. "A new drug presented something of a threat to both the patient and the doctor. It might, for example, have unforeseen deleterious side effects. Apart from his primary professional concern for his patient, the doctor wanted to "avoid trouble". Thus, it was not unusual for doctors to express concern that some new practice or drug might cause them personal embarrassment.

(27) Bauer,R., (1967).

One might assume from this that the 'conservative' and 'professional' course of action would be to go slow in adopting new drugs, and particularly to be wary of commercial sources of information. But a new drug might also offer the doctor the chance to treat a group of his patients more effectively than he has had before. Furthermore, like any professional man, he would take pride in feeling up to date."

It was found out that, the promotional activities of the pharmaceutical companies were mainly threefold: detail men (usually men with pharmaceutical or other technical backgrounds) who acted mainly as missionary salesmen, advertisements in medical journals, and direct-mail pieces. This combined arrangement had the advantage of being generally speedy, free, and accessible, sometimes to the point where it was even difficult to avoid exposure.

Bauer mentioned a study by Coleman, Menzel, and Katz (1959) in which it was shown that professional influences played a more important role in situations of increased indeterminacy. Doctors were more likely to rely on the judgment of professional associates in situations "where the physiology of the illness was not well understood and the treatment was subject to much trial and error." Indeterminacy was only one aspect of risk, however; magnitude of the consequences was also a dimension to be considered. It was found that the doctors were increasingly likely to cite professional over commercial sources as the severity of the disease increased.

It was concluded in the study that in all probability the physician would, on the average, prefer to get his knowledge from sources within the profession rather than from commercial sources such as the drug firms. However, data also indicated strongly that physicians assigned an important role to the trust they put in individual firms and their representatives, as well. Considering the complexity of the decisions the doctor had to make and the overwhelming amount of information potentially available to him, it was scarcely any wonder that, he should pay attention to the credibility of his sources.

Raymond Bauer and Lawrence Wortzel, in their study titled "Doctor's Choice: The Physician and His Sources of Information About Drugs"(28) (1967) demonstrated that the advertising and promotion of drugs by and through commercial channels and the dissemination of scientific information by and through noncommercial channels both served useful functions for the physician. Exactly which sources of information would be preferred in a given instance was determined by certain aspects of the specific situation.

(28) Bauer, R., Wortzel, L., (1967).

The authors, in their article, mentioned some studies which were conducted to reveal physicians' views of commercial sources of information about drugs: The first study was conducted in 1951 by Caplow (1952) who analyzed a sample of 129 practicing physicians in the Midwest. The study dealt with physicians' attitudes toward different sources of information, both commercial and professional. In case of commercial channels of communication, Caplow's data indicated that physicians were favorably disposed toward these channels and had indeed found them useful. Turning to "scientific" (noncommercial) sources of information, personal contacts with other physicians and reading journal articles were both weighted as being of about the same value by the physicians. Unfortunately, Caplow's study had some limitations: The sample was both small and geographically unrepresentative. Besides, "distinctions were not made between influences on awareness and on prescribing nor was there a distinction made between information about new vs. existing products. Finally, the study offered no measure of the relative importance of commercial and noncommercial sources of information. In spite of these limitations, this study did establish the working hypothesis, subsequently confirmed by many other investigators, that physicians regarded commercial sources of information as valuable."

Next study mentioned by Bauer and Wortzel was conducted by Ben Gaffin and Associates (1959) for the American Medical Association in order to have an understanding of how physicians found out about new drugs. This study was conducted using a national, representative cross-sectional sample of 1,001 practicing physicians. The results showed that commercial sources (detail men, journal ads, direct mail and samples) received 147 mentions per 100 doctors while noncommercial sources, including a few too minor to appear, received only 96 mentions. Among the first four sources mentioned (detailmen, journal papers and articles, medical journal advertisements, and direct mail), three of them were commercial ones.

"Further support for the Gaffin findings was offered in a study conducted about the same time by Ferber and Wales (1958) using a sample of physicians practicing in Chicago. In this study, the physicians were asked where they first heard about pharmaceutical products they had recently adopted as well as "where else" they had heard about them". Data indicated that doctors relied on commercial sources to make them 'aware' of new drugs, but awareness and usage were not synonymous. It was Bauer's and Wortzel's proposition that information offered by non-commercial, purely scientific sources did not necessarily induce awareness and that awareness, no matter what its source, did not necessarily induce trial.

"Do physicians actually prescribe indiscriminately everything they hear about? If they discriminate in their prescribing habits, how and under what circumstances is discrimination effected?" To answer the above questions, a survey among 182 midwestern practicing physicians was conducted by Caplow and Raymond (1954). It was found that ethical pharmaceutical products were normally adopted in response to the combined stimulus of several forms of advertising or communication. Data also revealed that commercial sources predominated.

In the Ferber and Wales study (1958) a comparison of the sources leading to awareness and those influencing trial was made and it was seen that the relationship was not one to one implying that the attention-getting source and the convincing source were not always the same.

Bauer and Wortzel mentioned two other observations based on the foregoing: "1) Physicians vary in their preferred sources of information (not everyone chose detail men, or journals, for example); 2) Certain characteristics of the drug in question and of the disease for which it is prescribed, will affect the amount of information a physician demands before prescribing a drug. Similarly, these characteristics will affect the source a physician goes to for information, for not all sources contain the same amount of facts (an advertisement vs. a journal article, for instance), nor will the same information be weighted equally regardless of its source. In other words, the preferred source of information varies with the riskiness of the disease or drug.

In the overview of this study by Bauer and Wortzel, the authors repeated once again that "as the severity of the illness increased, and as the treatment became less well understood, more information was needed before prescribing, and that was when professional sources came into play due to two reasons: the amount provided by commercial sources might be insufficient; and its trustworthiness might, at that level of risk, be somewhat suspect".

James Coleman, Elihu Katz, and Herbert Menzel in their book titled "Medical Innovation: A Diffusion Study"(29) (1966) pictured the processes through which an innovation in society came to be accepted and used. The report concerned doctors in four small cities and their adoption of a new drug into their practices. The authors gave a systematic and quantitative assessment of the communications structure that carried this innovation into and through the local medical community, which served as a crucial factor

(29) Coleman, J., Katz, E., Menzel, H., (1966).

between the producer and the consumer, that is the pharmaceutical house and the patient. Doctors' dilemmas in adopting a new drug, the problems of coping with the patient's attitudes and of too much information, the diffusion of the new drug, portrait of the innovator, networks of social and professional relations, their integration and effect on drug adoption, a snowball or contagion process of drug adoption, and interpersonal networks and the flow of influence were examined in the many chapters of the book.

Joseph Precker in his foreword for this book summed up the major findings of the study as follows:

"While several channels of influence usually preceded introduction of the new drug, a social intermediary (detailman or colleague) rather than impersonal media (journals, house organs, etc.) was most frequently indicated.

The greater the involvement of the physician in the medical community — the more personal and professional ties he had in the complex network and thus the more deeply integrated he was in his local medical community — the greater the likelihood of early adoption of the new drug.

There were two distinctly different patterns of diffusion, telling us a great deal about the importance of social process: the cumulative adoption by the physicians well integrated in the medical community resembled the contagion process evidenced in epidemics, or the autocatalytic processes in chemical reactions, while the constant rate of adoption among those physicians less well integrated into the medical community was typical of individual isolated patterns.

The "contagion" pattern of adoption also varied with the nature of the social interaction: professional interaction tended to produce simultaneity of behavior more quickly than did friendship. However, even the interaction of friendship demonstrated greater similarity (though achieved more slowly than in the professional advisory relationship) than random pairing of physicians in the community.

The demonstration of the two distinct mathematical models of adoption characteristic of the "integrated" and "isolated" physicians is among the highlights of this volume. Demonstrated is the extreme importance of the existing social ties as the channels through which innovation moves."

1.3. Studies Related to Cosmetics

Letitia Sage discussed the history of cosmetics in her article titled "Cosmetics - Past, Present, Future." (30) (1975) She mentioned that the art of self-beautification started with Eve and has followed the ups and downs of sociological advance ever since. During periods of cultural growth and individual freedom, practice of personal adornment was widespread; whereas, the darker ages of history were gloomy periods when fragrance and cosmetics — even the necessary nicety of cleanliness — slipped from the scene.

About 4,000 years ago, the Hittites mined cinnebar for rouge in Asia Minor. The Near East, cradle of major civilizations, was also the birthplace of the cosmetic arts, and the conquerors who came from Greece and Rome were quickly converted to the glories of grooming. The Greeks used fragrance in all of their rites and Romans were wide users of make-up.

It was not until World War I that cosmetics were begun to be used widely. With money to spend, less time to mix up potions for themselves, and greater need for grooming, women turned to commercial sources for beauty help — and an industry was born. The growth of this industry was enhanced both by marketing skills (desire for cosmetics has been stimulated by fascinating packaging, new fashion looks with every seasonal change, a continual flow of improved products from the brilliant research and development divisions of sophisticated companies, strong advertising programs, and powerful point-of-sale approaches) and the advent of unthought - of improvements in cosmetic science: The development of synthetics, improvement in methods of preservation, invention of aerosols, compressed and liquid make-up, nonionic emulsifiers, etc.

However, in the eyes of cosmetic manufacturers, there are two factors that may cause concern for the future of cosmetics. "One is a subtle change in the philosophical and sociological climate, largely caused by worry about environmental pollution, and sparked by a rejection on the part of today's youth of anything they think smacks of materialism. A measurable effect of the trend has been the development of the so-called "natural" cosmetics that sound for all the world as though they had been stirred up in a colonial kitchen. Lemon, cucumber, avocado, balsam and the like are listed on millions of labels." The second factor the author mentions is consumerism. Today, cosmetic manufacturers in the United States put heavy stress on research facilities and quality control due partly to this consumerism movement which had its effect on cosmetic manufacture, bringing a virtually unceasing flow of legislative proposals for aerosol

(30) Sage, L.L., (1975).

warnings, pre-market testing and other protectionist measures.

In the introduction part of the book titled "Cosmetics and the Skin", F.V.Wells and Irwin Lubowe(31) (1964) discussed the factors that influenced the purchaser of a given cosmetic:

- a) her general attitude to cosmetics, dependent upon the society in which she lived and her educational and cultural background;
- b) her susceptibility to fashion and to current cosmetic advertising, particularly in so far as it concerned the cosmetic that she was examining;
- c) the appearance of the package and of the environment in which the package was displayed;
- d) the practical suitability of the package for its purpose;
- e) the appearance of the product in the package (i.e. the surface of a cream, gloss and shape of a lipstick, tint of a make-up, clarity of a lotion);
- f) the perfume of the product, this being an almost instinctive reaction with both men and women; and
- g) the price of the product, having regard to all the preceding factors.

At this point she might actually buy the cosmetic but any further purchases of the same product, or 'repeat sales', would undoubtedly depend upon some additional factors:

- h) the dermatological compatibility of the cosmetic with the skin, hair, nails (i.e. with the body surface on which it was to be applied);
- i) the cosmetic's physical and physical-chemical suitability for its purpose (e.g. texture, consistency, degree of absorption, rheological behavior, etc.).
- j) its stability, or freedom from subsequent deterioration and spoilage.

According to the authors, the development of a successful cosmetic product demanded a considerable general knowledge of the market (i.e. what has gone before) and a trained appreciation of the trends of fashion. Such a "flair" for innovation had to be accompanied by an understanding of dermatological requirements and cosmetic

(31) Wells, F.V., Lubowe, I.I., (1964).

chemistry, coupled with the ability to choose attractive, appropriate packages and to ensure that the completed product had enough of the right kind of publicity. In light of these facts, wrote the authors, it seemed obvious that the future of modern cosmetic practice lied in skilled team work.

Gretchen Morgenson's article is titled "How different can a \$17 lipstick be from a \$3 version?"(32) (1989). It is mentioned in the writing that Charles Revlon, founder of Revlon, said that his money was made by selling hope, the kind that came in a jar. The business had its advantages and its disadvantages. Since you were selling hope, you could charge a lot of money for a product that did not cost much to make. But the hope ingredient was expensive; it required constant nourishment not only with expensive advertising but also with advertising that had precisely the right touch.

Selling hopes and dreams, whether in bottles, tubes or jars, has gotten very frustrating in the United States due to glacial growth in the market, higher selling costs, and a change in the potential customers' behavior and attitudes toward cosmetics. "Today's cosmetics customer is more confident, more independent, and much less interested than ever before in being told what colors are "in" or correct. She is less likely to need the reassurance of buying a product for its image without regard to its quality. Brand loyalty is a thing of the past..." There is another important shift taking place inside the cosmetics consumer's head that only a handful of companies have recognized: Women know that they are not perfect and that no matter how many bottles of cosmetic products they buy, they will never look like the perfect women shown in ads. Yet, most cosmetics companies continue to show extraordinary women in their ads. This is a putdown. Cosmetics firms, for the most part, have chosen to ignore another, staggeringly obvious demographic trend: the aging of the population. It is happening to all people and "nobody wants to be caught dead doing an over-40 line". They are ignoring a market that can benefit them. In the very last sentence of the article, Morgenson sends a message to cosmetic manufacturers: "In this business, at least, an educated consumer is not necessarily your best customer for expensive products". This is due to an example cited in one of the paragraphs of the article: "Drive up in a BMW and you make a statement about your purse and your taste. Sport a Rolex watch, Gucci loafers or designer jeans with a prominent label and you make similar statements. But no one knows whether you are made up with a \$3 lipstick or a \$17 one..."

Gregory DI Morris, in his article titled "Putting a Good Face on the

(32) Morgenson,G., (1989).

Package,"(33)(1989) writes that the axiom 'looking good is feeling good' has always driven cosmetic sales. Yet, how a cosmetic product is packaged is as important as what is inside; poor packaging leaves the product untried, and poor performance means the packaging goes for naught. Thus practicality — delivering a safe, effective material in a usable form — runs up against perception — getting the consumer to notice and buy.

The current materials of choice are plastics. Along with enhanced safety, they offer design advantages in boxes, bottles, and tubes. But, says Morris, there is acute awareness in the cosmetics industry that along with the benefits from plastics use comes environmental responsibility. For this reason, the industry is working hard on recycling and consumers become more aware of the need to recycle and other environmental issues each passing day.

One of the new trends in the United States to day is mentioned to be the pressure by a leading animal-rights activist group (People for the Ethical Treatment of Animals) on marketers to end animal testing. The article in which this issue is included is titled "Animal Uproar" and is written by Laurie Freeman.(34) (1990)

"Concern about treatment of animals ... is related to a growing environmental consciousness among consumers," says an industry consultant. A survey found 60% of consumers say they oppose animal testing on cosmetics and toiletries such as shampoo, lipstick, and perfume. Yet industry estimates show that cosmetics companies use only one-half of 1% of all laboratory animals and some 90% of that are rats and mice. The position of the Cosmetic, Toiletry and Fragrance Association (CTFA) and most health-and beauty aids companies is that animal testing is vital to ensure product safety.

There are some major cosmetics marketers that have abandoned animal testing. None of these companies say pressure from animal-rights organizations has forced them to alter their positions. Instead, industry executives cite "increased confidence" in the reliability of alternative testing methods.

The absence of advertising related to animal testing reflects the fact that companies do not want to remind consumers that animals at any time have played a role in making cosmetics and for people who do not consider animal testing an issue, companies feel there is no benefit in mentioning the subject. Yet marketers that promote beauty aids as being free of animal testing may reap big profits in the 1990s, which so far

(33) Morris,G.D. (1989).

(34) Freeman,L., (1990).

has developed a reputation for being the decade of environmental awareness.

"The word 'natural' is finding its way back into the language of beauty marketers who spent much of the last decade nurturing science instead of nature" says Pat Sloan in the article titled "Back to Nature." (35) (1990).

"So far, major marketers express no interest in abandoning science for a strictly back-to-nature approach. But many mainstream manufacturers see naturals as a nice adjunct to their existing businesses. Many more marketers prefer the idea of marrying the two positionings, with nature and science co-existing within the same formula and product story.".

(35) Sloan,P., (1990).

CHAPTER TWO

RISK PERCEPTION IN COSMETICS AND DRUGS

There are two parts to chapter three. In the first part, the field study and how it was carried out are described; in the second part, related findings are reported.

2.1. Research Design and Methodology

2.1.1. Problem Formulation and Research Purpose

Since its introduction to consumer behavior by Raymond Bauer in 1960, perceived risk has been the theme of many studies. Much research was conducted to more fully understand this concept, to find out about risk reduction processes, and to reveal its relation to some other concepts like brand loyalty, personality traits, cognitive dissonance, and information acquisition and handling... As a result, further conceptualizations and model specifications were possible in the U.S.A. where most of these studies were carried out. Coming to Turkey, however, one would be surprised to find out that there are just a few studies conducted on this classical theme.

One of these studies is on the relationship between brand loyalty and risk perception for three product categories (bath soap, toothpaste, spaghetti). The other two are on women's perceptions of risk and risk reduction strategies in case of food shopping and purchase of convenience and durable goods.

The purpose of this study is to be descriptive and to find out if there are any changes in perception of risk when a middleman is placed between a final consumer and a product to be purchased. This notion is to be applied to cosmetic and drug industries which are somewhat related to each other. Besides, perceived types of losses and risk reduction methods for cosmetics and the extent to which an individual perceives risk in case of drugs (both prescribed and non-prescribed) when the illness is/is not serious are to be discussed in

case of the final consumer. The doctor's risk perception in prescribing drugs and related topics on drugs and drug choice are also to be included in the study.

2.1.2. Research Objective and Research Questions

The objective of this research is to testify the research purpose by carrying out a field study in Istanbul. The following are the research questions:

A) In case of the final consumer:

1. What types of risk are perceived for cosmetics?
2. What types of losses are perceived for cosmetics?
3. What are the risk reduction strategies used in case of cosmetics and which are more favored?
4. What are the types of risks that are involved in the purchase of a drug in case the illness is serious and in case the illness is not serious?
5. What is the level of risk perception in case of prescribed drugs (when there is a middleman - a doctor)
 - a) if the drug is new?
 - b) if the drug has been on the market for a period of time?
 - c) if the illness is serious?
6. What is the level of risk perception in case of non-prescribed drugs (no middleman)
 - a) if the drug is new?
 - b) if the drug has been on the market for a period of time?
 - c) if the illness is serious?
7. Are there some other sources people rely on when they get a prescription from a doctor in case
 - a) the drug is new?
 - b) the drug has been on the market for a period of time
 - c) if the illness is serious?

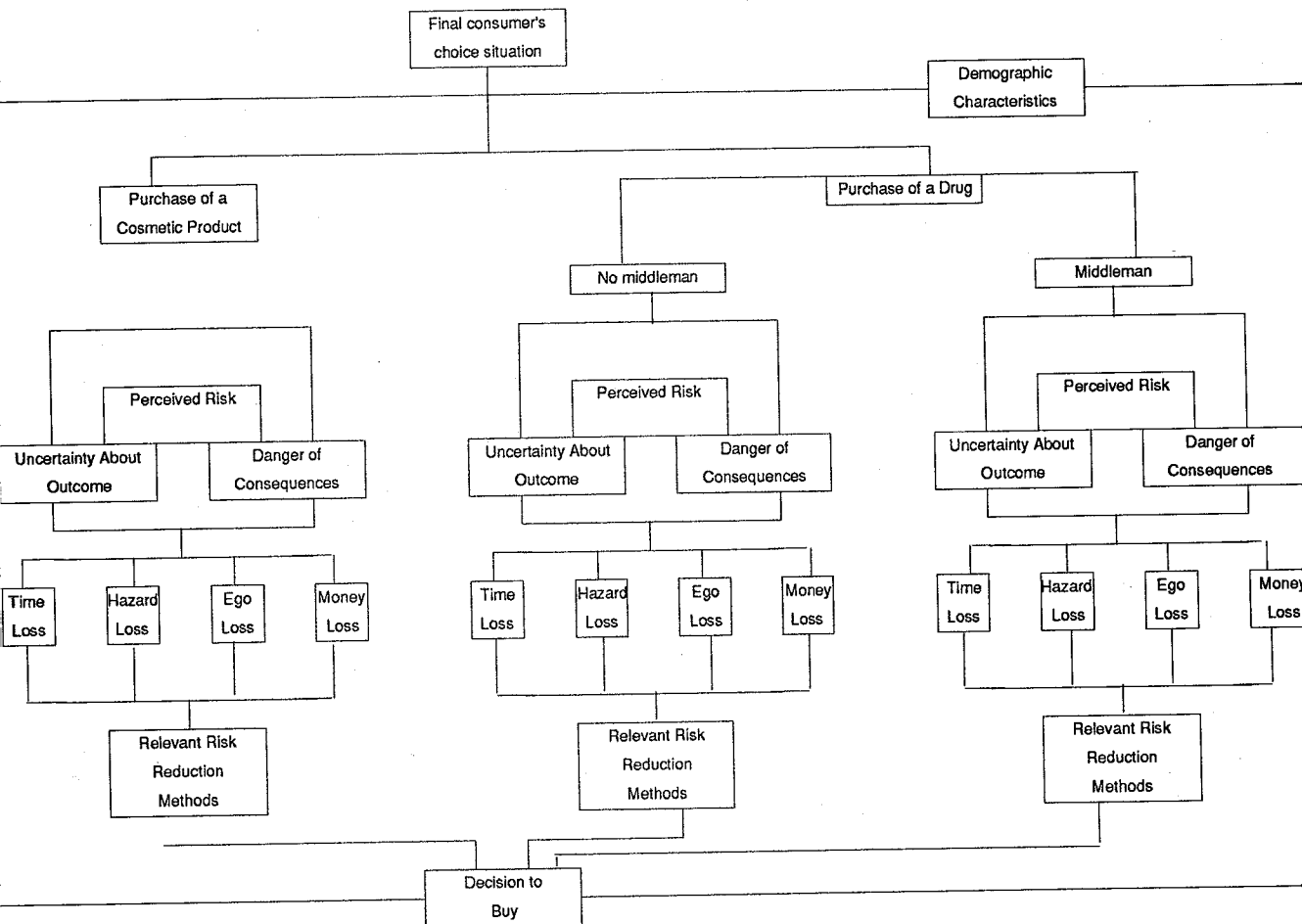
8. Are there some sources people rely on when they are to buy a drug by themselves (there is no middleman) in case
 - a) the drug is new?
 - b) the drug has been on the market for a period of time
 - c) if the illness is serious?
 9. Does a known producer of drugs have an influence on risk perception in drugs available without prescription in case
 - a) the drug is new?
 - b) the drug has been on the market for a period of time
 - c) if the illness is serious?
 10. What are the types of losses perceived when a prescribed drug does not work as was anticipated?
 11. What are the types of losses perceived when a non-prescribed drug does not work as was anticipated?
 12. Can some demographic characteristics be the determinants of risk perception and risk reduction methods for cosmetics?
 13. Can some demographic characteristics be the determinants of risk perception for drugs?
- B) In case of the doctor:
1. What types of risk are perceived for drugs in case
 - a) the illness is serious?
 - b) the illness is not serious?
 - c) the drug is new?
 - d) the drug has been on the market for a period of time?
 2. What is the level of risk perception in case of prescribing a drug if
 - a) the illness is serious?
 - b) it is new?

- c) it has been on the market for a period of time?
3. How do doctors become aware of new drugs - which sources do they use?
 4. Which source is more influential in the doctor's choice of a drug?
 5. On what basis does a doctor prescribe a drug which has been on the market for a period of time?
 6. What does a doctor think of the prohibition of drug advertising in media?
 7. Do the patients have the capability of asking questions about their illness and understanding the things being told?
 8. How important is it for a doctor to know about the producer of a drug
 - a) in case the drug is new?
 - b) in case the drug has been on the market for a period of time?
 9. How important is it for the patients to know about the producer of a drug
 - a) in case the drug is new?
 - b) in case the drug has been on the market for a period of time?
 10. What types of loss does a doctor perceive in case a drug which he has prescribed does not work well enough?
 11. Can some demographic characteristics be the determinants of risk perception in drugs?

2.1.3. Model and Hypotheses

The variables that were used in this study can be modeled as follows:

Figure 2.1. A Model For The Field Study On Perceived Risk



Different components (uncertainty/consequences) and levels (low/medium/high) of risk and types of loss (time/hazard/ego/money) are perceived in cosmetics and in drugs-when a middleman is/is not involved. Risk reduction methods differ from case to case, as well, resulting in the individual's decision to buy or not to buy.

The following hypotheses will be analyzed in this study:

- H1. a) Women perceive more uncertainty risk than men in buying cosmetics.
 - b) Women perceive more consequences risk than men in buying cosmetics.
- H2. There is a difference between males and females in the types of loss (money/time/ego/hazard) they perceive in case of cosmetics.
- H3. a) People who have different education levels will differ in their risk (uncertainty) perception (high/medium/low) in case of cosmetics.
 - b) People who have different education levels will differ in their risk (consequences) perception (high/medium/low) in case of cosmetics.
- H4. a) People who have different education levels will differ in their risk perception (uncertainty) in case of drugs used for serious illness.
 - b) People who have different education levels will differ in their risk perception (consequences) in case of drugs used for serious illness.
- H5. a) There is a difference between people who are younger than 40 years of age and those who are older than 40 years of age in the risk reduction methods they use in case of cosmetics.
 - b) There is a difference between people who are not working and who are government or private sector employees in the risk reduction methods they use in case of cosmetics.
- H6. a) Less uncertainty risk is perceived in cosmetics than in drugs used for serious illness.
 - b) Less consequences risk is perceived in cosmetics than in drugs used for serious illness.
- H7. a) People perceive more risk in buying a new drug by themselves than in buying a new drug by prescription.

- b) People perceive more risk in buying a drug that has been on the market for a period of time by themselves than in buying such a drug by prescription.
- H8. a) People perceive more risk in buying a new drug by themselves than in buying a new drug by prescription with respect to seriousness of illness.
 - b) People perceive more risk in buying a drug that has been on the market for a period of time by themselves than in buying such a drug by prescription with respect to seriousness of illness.
- H9. a) People perceive less uncertainty risk in buying cosmetics than in buying a new drug by themselves in case the illness is serious.
 - b) People perceive less consequences risk in buying cosmetics than in buying a new drug by themselves in case the illness is serious.
 - c) People perceive less uncertainty risk in buying cosmetics than in buying a drug that has been on the market for a period of time by themselves in case the illness is serious.
 - d) People perceive less consequences risk in buying cosmetics than in buying a drug that has been on the market for a period of time by themselves in case the illness is serious.
- H10. a) People perceive less uncertainty risk in buying cosmetics than in buying a new prescribed drug with respect to seriousness of illness.
 - b) People perceive less consequences risk in buying cosmetics than in buying a new prescribed drug in case the illness is serious.
 - c) People perceive less uncertainty risk in buying cosmetics than in buying an 'already on the market' prescribed drug in case the illness is serious.
 - d) People perceive less consequences risk in buying cosmetics than in buying an 'already on the market' prescribed drug in case the illness is serious.
- H11. There is significantly greater (consequences) risk in buying drugs without prescription than in buying them with prescription in case the drugs are new.

- H12. a) The image of a drug producing firm is more important for people in case of new rather than on the market drugs.
- b) The image of a drug producing firm is more important for people in case of new rather than on the market drugs as the illness gets serious.
- H13. Types of loss (time/hazard/money/ego) perceived when a prescribed drug fails to heal an individual differ from those perceived when a non-prescribed drug fails to heal.
- H14. There will be no differences between male and female doctors
- a) with respect to their risk (uncertainty) perception in case the illness is serious.
- b) with respect to their risk (uncertainty) perception in case the illness is not serious.
- c) with respect to their risk (consequences) perception in case of an on the market drug when the illness is serious.
- d) with respect to their risk (consequences) perception in case of an on the market drug when the illness is not serious.
- e) with respect to their risk (consequences) perception in case of a new drug when the illness is serious.
- f) with respect to their risk (consequences) perception in case of a new drug when the illness is not serious.
- g) with respect to their perception of types of loss in case a drug they prescribe does not heal an individual.
- H15. For a doctor, a newly introduced drug causes more risk perception than a drug that has been on the market for a period of time in case of a serious illness.
- H16. The doctor perceives more risk in prescribing a newly introduced drug than an already on the market drug in case the illness is serious.
- H17. There is a relationship between some demographics (gender, working status) of doctors and types of loss they perceive in case the prescribed drug does not function well enough.

- H18. a) The amount of uncertainty risk a doctor perceives in drugs becomes less as he/she gains more experience.
- b) The amount of consequences risk a doctor perceives in drugs becomes less as he/she gains more experience.
- H19. a) The image of a drug producing firm is more important for doctors in case of new rather than on the market drugs.
- b) The image of a drug producing firm is more important for doctors in case of new rather than on the market drugs as the illness gets serious.

2.1.4. Data Collection Procedure, Instrument, and the Sampling Plan

Since this study attempts to describe the characteristics of specific groups and to determine whether certain variables are associated, it can be considered a descriptive research(36). Besides, it is empirical. Descriptive studies are of two general types: longitudinal and cross-sectional. This study is cross-sectional and involves a sample of elements from the population of interest; the elements or sample members are measured once on a number of characteristics. Furthermore, it is a field study since it is mostly concerned with the in-depth study of a few typical situations, not with the generation of large representative samples — where that is the case with surveys, the second basic type of cross-sectional studies. For the purpose of this thesis, two types of structured questionnaires were prepared and distributed among two groups, consumers and doctors, as the data collection instrument. Convenience sampling was used in case of the sampling plan and 103 questionnaires were collected from consumers, 96 questionnaires were collected from doctors. To standardize and guarantee the comparability of the responses, questions were presented with exactly the same wording and in the same order with stated response alternatives to all respondents. Questionnaire A was distributed among consumers, questionnaire B was distributed among doctors. Consumers were both males and females and only practitioners rather than specialists were selected in case of doctors.

The questionnaire which was distributed among consumers has three main parts. The first part is on cosmetics and the second part is on drugs. Some information on the demographic characteristics of individuals is sought in the third part. Hence, the

(36) Churchill, G.A., (1976).

first, second, third, and fourth questions belong to part one. Questions five to fifteen form the second part and the rest belong to the third part.

Questions one and two measure the uncertainty and consequences components of perceived risk, respectively. These components were developed by Scott Cunningham (1967)(37) and are worded as follows:

"Would you say that you are "always", "frequently", "sometimes", or "never" certain that a brand of the product you have never tried before will work as well as your present brand?" and

"Would you say that there is "a great deal", "some", "not much", or "no" danger in trying a brand of the product you have never used before?"

The cosmetic products in question are deodorants, perfumes/shaving lotions, and make-up/shaving materials. Both components of perceived risk were measured for these products. Besides, an overall rating was obtained for cosmetics in terms of the two components: Those low in perceived risk scored between 1 and 4, those medium in perceived risk scored between 5 and 8, and those high in perceived risk scored between 9 and 12.

The third question is on the types of loss perceived in case the product which is purchased turns out to be of no good to the individual. Each comment reflects a different type of loss (time, hazard, ego, or money) and is taken from Ted Roselius(38):

TABLE 2.1. PERCEIVED LOSS COMMENTS USED IN QUESTIONNAIRE A

I think I spent time for something worthless. (Time loss)

I think I did something hazardous to health (Hazard loss)

I feel sorry for being deceived (Ego loss)

I think I spent money for something worthless (Money loss)

I think I could have bought better things with the same amount of money
(Money loss)

I feel sorry and upset (Ego loss)

I think it will take me time to buy a new one. (Time loss)

Source: The above-mentioned loss types are taken from Roselius and the statements are used in Questionnaire A (Appendix I)

(37) Cunningham, S.M., (1967).

(38) Roselius, T., (1971).

Question number four deals with risk reduction strategies. These strategies are also taken from Roselius(39). The statements in the questionnaire are shown in Table 2.2.

TABLE 2.2. RISK REDUCTION STRATEGIES

Buying the most advertised brand.

Buying the same brand all the time

Asking for the seller's advice.

Trying a free sample.

Buying the major brand.

Buying the brand having money back guarantee.

Buying from the same store

Buying the brand having government test and endorsement.

Shopping around.

Buying the most expensive brand.

Asking for friends' advice.

Buying the foreign brand.

Source: The above-mentioned risk reduction strategies are taken from Roselius and the statements are used in Questionnaire A (Appendix I).

Questions five through fourteen deal with drugs. The first two of these questions, namely, number five and number six are again on the components of perceived risk dericed by Cunningham. They are the same as the first and second questions of Questionnaire A. Individuals are asked about their opinions a) in case the illness is serious and b) in case it is not serious.

The seventh and eleventh questions are complements of each other: One asks for risk perception in case of a prescribed drug which a) is new or b) has been on the market for a period of time and the other question asks the same thing in case the illness gets serious.

Question eight asks for risk perception in case of a non-prescription drug which a) is new or b) has been on the market for a period of time and then the same question is asked with respect to seriousness of illness.

There are four parts to questions nine and ten. In the ninth question, the

individual is asked how much he/she asks for others' advice before purchasing a prescribed drug a) when the drug is new and b) when it has been on the market for a period of time. The same thing is asked for the case where the seriousness of illness is also taken into account. Question ten is the same as question nine, yet this time drugs available without prescription are the point of interest.

The importance of the reputation of a drug producing firm is asked in the twelfth question for a) new drugs and b) drugs that have been on the market for a time and with respect to seriousness of illness.

Questions thirteen and fourteen are also related except that the first is on prescribed drugs, the second is on drugs available without prescription. In the thirteenth question, types of losses perceived in case a prescribed drug fails to heal an individual are sought; in the fourteenth question, types of losses perceived in case a drug purchased by an individual fails to heal him/her are sought.

The third main part of questionnaire A is on some demographic characteristics of consumers, as was mentioned earlier. Here, the gender, age, income, education, and occupation of individuals are asked.

The second questionnaire (questionnaire B) was prepared for doctors. The first three questions are on the components of risk perceived for drugs in case a) the illness is serious, b) the illness is not serious, c) the drug is new, d) the drug is already on the market one. Again, Cunningham's measure⁽³⁷⁾ was utilized:

"Would you say that you are "always", "frequently", "sometimes", or "never" certain that a brand of the product you have never tried before will work as well as your present brand?" and

"Would you say that there is "a great deal", "some", "not much", or "no" danger in trying a brand of the product you have never used before?"

Fourth question is on the level of risk perception in prescribing a drug a) if the drug is new; b) if it is already on the market drug; c) as the illness gets serious.

How do doctors become aware of new drugs? — the sources they use to get informed about new drugs — is asked in the fifth question.

In the sixth question, the doctors are asked to rank the sources which they think are more influential in their choice of a drug. They are further asked if they change their response to this question when seriousness of illness changes.

'On what basis does a doctor prescribe a drug which has been on the market for a period of time?' is the seventh question. The doctors are again asked if they change their rankings when the seriousness of illness changes.

Then come two general questions: What doctors think of the prohibition of drug advertising in media and whether the patients have the capability of asking questions about their illness and understanding the things being told.

Question ten deals with the image of a drug producing firm; how important it is for both doctors and patients to know about the producer in case the drug a) is new or b) has been on the market for a period of time, and when the seriousness of illness changes.

The eleventh question is on types of losses perceived by a doctor in case a drug he/she prescribes does not function as was expected. Statements reflecting the different types of losses (time/hazard/ego) developed by Ted Roselius(39) together with some other statements (prescribing another drug, asking another colleague, thinking that the patient will go to another doctor, believing that negative - word - of - mouth will take place) were presented to the doctors.

Last of all, some demographics of doctors are sought: Gender, age, number of years they have been in the profession, languages they know, and their working status.

Upon the completion of data collection, both sets of questionnaires were coded (see the coding instructions sheets in the Appendix section) and SPSS (Statistical Program for Social Sciences) was used to analyze the data.

Analyses conducted on the hypotheses can be seen below, in Table 2.3.

TABLE 2.3. HYPOTHESES AND ANALYSES

	Hypothesis	Operationalization of Variables	Type of Analysis Conducted
1	Women perceive more risk (uncertainty and consequences) in buying cosmetics	Gender and risk perception in cosmetics	t-test
2	There is a difference between males and females in the types of loss they perceive in cosmetics)	Gender and types of loss in cosmetics	t-test
3	People with different education levels differ in their risk perception (uncertainty, consequences) in case of cosmetics	Education and risk perception in cosmetics	Cross-tab
4	People with different education levels differ in their risk perception in case of drugs used for serious illness.	Education and risk perception in drugs used for serious illness	Cross-tab.
5	There is a difference between people younger than 40 and people who are working in the risk reduction methods they use in case of cosmetics.	Occupation, gender and risk reduction methods	t-test
6	Less (uncertainty, consequences) risk is perceived in cosmetics than in drugs used for serious illness	Risk perception in cosmetics and in drugs used for serious illness	Paired t-test
7	People perceive more risk in buying (a new, an on the market) drug by themselves than in buying (a new, an on the market) drug by prescription	Risk perception in buying prescribed and non-prescribed drugs (both new and on the market drugs)	Paired t-test
8	People perceive more risk in buying (a new, an on the market) drug by themselves than in buying (a new, an on the market) drug by prescription with respect to the seriousness of illness.	Risk perception in buying drugs with respect to seriousness of illness	Paired t-test
9	People perceive less risk (uncertainty, consequences) in buying cosmetics than in buying (a new, an on the market) drug by themselves in case the illness is serious.	Risk perception in buying cosmetics versus non-prescription drugs (as the illness gets serious)	Paired t-test
10	People perceive less risk (uncertainty, consequences) in buying cosmetics than in buying (a new, an on the market) prescribed drug in case the illness is serious.	Risk perception in buying cosmetics versus prescription drugs (as the illness gets serious)	Paired t-test

TABLE 2.3.CONTINUED

	Hypothesis	Operationalization of Variables	Type of Analysis Conducted
11	There is significantly greater risk in buying drugs without prescription than in buying them with prescription in case the drugs are new	Perception of risk in prescribed and non-prescribed new drugs	Paired t-test
12	Image of a drug producing firm is more important for people in case of new rather than on the market drugs and in case of new rather than on the market drugs as the illness gets serious	Image of producer and drugs	Paired t-test
13	Types of losses perceived when a prescribed drug fails to heal an individual differ from those perceived when a non-prescribed drug fails to heal	Loss perception in case a prescribed/non-prescribed drug does not function as expected	Paired t-test
14	There will be no differences between male and female doctors with respect to their risk perception (uncertainty, consequences) in case (the illness is/is not serious) and in case (of an on the market/a new drug) when (the illness is/is not serious) and in their perception of loss in case a drug they perscribe does not heal an individual	Gender and risk perception when illness is/is not serious and drug is new/on the market	t-test
15	For a doctor, a newly introduced drug causes more risk perception than a drug that has been on the market for a period of time in case of a serious illness	Risk perception and new/on the market drug when illness is serious	Paired t-test
16	The doctor perceives more risk in prescribing a newly introduced drug than an already existing drug in case the illness is serious	Risk perception in prescribing drugs	Paired t-test
17	There is a relationship between gender and working status of doctors and types of loss they perceive in case the prescribed drug does not function well enough	Demographics and types of loss	Cross-tab
18	The amount of risk (uncertainty, consequences) a doctor perceives in drugs becomes less as he/she gains more experience	Risk perception and experience	Pearson correlation
19	Image of a drug producer is more important for doctors in case of new rather than on the market drugs and with respect to seriousness of illness.	Image of a producer in case of new/on the market drugs and wrt. seriousness of illness.	Paired t-test

2.2. Findings

Summary findings on the variables studied and findings related to the hypotheses will be presented in this section. First, consumers' questionnaires (Questionnaire A) and then doctors' questionnaires (Questionnaire B) will be evaluated in the above specified order.

2.2.1. Summary Findings on the Variables Studied

This section includes the results of the frequency analyses.

a) Questionnaire A

TABLE 2.4. DEMOGRAPHIC CHARACTERISTICS OF CONSUMERS

Demographic Variables	Frequency	Valid Percent
Gender		
Female	61	59.2
Male	42	40.8
	103	100.0
Age		
Below 20	7	6.9
21-29	27	26.5
30-39	20	19.6
40-49	35	34.3
50-59	8	7.8
60 and above	5	4.9
Missing	1	Missing
	103	100.0
Income Level		
Very low	1	1.0
Low	9	8.8
Medium	68	66.7
High	24	23.5
Missing	1	Missing
	103	100.0
Education Level		
Primary school	8	7.8
Secondray school	10	9.8
Lycee	35	34.3
University	38	37.3
Post graduate	11	10.8
Missing	1	Missing
	103	100.0

TABLE 2.4. CONTINUED

Demographic Variables	Frequency	Valid Percent
Occupation		
Self employed	7	6.9
Manager	14	13.9
Merchant	1	1.0
Tradesman	1	1.0
Government employee	33	32.7
Private sector employee	13	12.9
Retired	3	3.0
Housewife	14	13.9
Student	8	7.9
Worker	7	6.9
Missing	2	Missing
	103	100.0

Source: Author(40)

From the above table, it can be seen that majority of the respondents are female (59.2%); 34.3% are between 40-49 and 26.5% are between 21-29 years of age; 66.7% are in the middle income bracket; 37.3% are university graduates; 34.3% are lycee graduates; and 45.6% are employees (in the public and private sectors), 13.9% are managers and 13.9% are housewives.

(40) See: Questionnaire A in Appendix I, questions 15 to 19.

TABLE 2.5. RISK PERCEPTION IN CASE OF COSMETICS

Components of Perceived Risk	Frequency	Valid Percent
Uncertainty		
Low	18	17.5
Medium	43	41.7
High	39	37.9
Not using cosmetics	3	2.9
	103	100.0
Consequences		
Low	30	29.1
Medium	41	39.8
High	29	28.2
Not using cosmetics	3	2.9
	103	100.0

Source: Author(41)

41.7% of the respondents perceive medium and 37.9% perceive high levels of uncertainty risk while 39.8% perceive medium, 29.1% perceive low, and 28.2% perceive high levels of consequences risk in case of cosmetics.

TABLE 2.6. RISK PERCEPTION IN CASE OF INDIVIDUAL COSMETICS PRODUCTS

Components of Perceived Risk	Frequency			Valid Percent		
	Deo.	Per./ Sh.lot.	Make-up/ Sh.mat.	Deo.	Per./ Sh.lot.	Make-up/ Sh.mat.
Uncertainty						
Low	10	15	16	9.8	14.9	15.6
Medium	79	69	67	77.5	68.3	65.7
High	3	8	7	2.9	7.9	6.9
Not using	10	9	12	9.8	8.9	11.8
Missing	1	2	2	Missing	Missing	Missing
Consequences						
Low	31	33	28	30.1	32.7	27.4
Medium	57	56	42	55.2	55.4	41.2
High	5	3	20	4.9	3.0	19.6
Not using	10	9	12	9.8	8.9	11.8
Missing	-	2	1	-	Missing	Missing

Source: Author(42)

(41) See: Questionnaire A in Appendix I; questions 1 and 2.

(42) ibid.

Medium uncertainty and consequences risks are perceived for each individual cosmetic product. Comparing the two components, it can be seen that those who perceive low levels of risk are more in case of consequences risk than uncertainty risk.

TABLE 2.7. PERCEPTION OF LOSS IN CASE OF COSMETICS

Type of Loss	Frequency			Valid Percent		
	Deo.	Per./ Sh.lot.	Make-up/ Sh.mat.	Deo.	Per./ Sh.lot.	Make-up/ Sh.mat.
Hazard Loss						
Agreement	67	57	56	71.3	66.3	70
Disagreement	27	29	24	28.7	33.7	30
	9 missing	17 missing	23 missing			
Total Time Loss						
Agreement	58	51	45	58.6	57.3	54.9
Disagreement	41	38	37	41.4	42.7	45.1
	4 missing	14 missing	21 missing			
Total Ego Loss						
Agreement	71	62	59	71.7	68.9	70.2
Disagreement	28	28	25	28.3	31.1	29.8
	4 missing	13 missing	19 missing			
Total Money Loss						
Agreement	88	82	73	87.1	90.1	86.9
Disagreement	13	9	11	12.9	9.9	13.1
	2 missing	12 missing	19 missing			

Source: Author(43)

People agree, for most of the cases, that they perceive hazard loss, time loss, ego loss, and money loss in case of cosmetics which turn out to be useless. This perception is more clear in money loss; then come ego loss, hazard loss, and time loss, in succession, for each product.

(43) See Questionnaire A in Appendix I; question 3.

'Most advertised brand' and 'expensive product' are not seen as good risk reduction strategies in case of the chosen cosmetic products: 74% of the respondents for deodorants, 72.4% for perfumes/shaving lotions, and 75% for make-up/shaving materials; 73.8% for deodorants, 72.4% for perfumes/shaving lotions, and 72.9% for, make-up/shaving materials do not agree that 'the most advertised brand' and 'expensive product', respectively, are good risk reduction methods (Table 2.8).

TABLE 2.8. DEGREE OF AGREEMENT WITH RISK REDUCTION STRATEGIES

Risk Reduction Strategies	Deodorants		Perfumes/Sh.lotions		Make-up/Shaving materials	
	Freq.	Valid %	Freq.	Valid %	Freq.	Valid %
Most Advertised Brand						
Agreement	26	26.0	27	27.6	24	25.0
Disagreement	74	74.0	71	72.4	72	75.0
	3 missing		5 missing		7 missing	
Brand Loyalty						
Agreement	65	64.3	64	65.3	67	69.8
Disagreement	36	35.7	34	34.7	29	30.2
	2 missing		5 missing		7 missing	
Advice of Seller						
Agreement	60	59.4	53	55.8	52	55.9
Disagreement	41	40.6	42	44.2	41	44.1
	2 missing		8 missing		10 missing	
Free Sample						
Agreement	83	83.0	81	84.4	75	81.5
Disagreement	17	17.0	15	15.6	17	18.5
	3 missing		7 missing		11 missing	
Major Brand						
Agreement	76	75.3	71	75.5	72	79.6
Disagreement	25	24.7	23	24.5	22	23.4
	2 missing		9 missing		9 missing	
Money Back Guarantee						
Agreement	54	54.0	49	52.1	48	51.6
Disagreement	46	46.0	45	47.9	45	48.4
	3 missing		9 missing		10 missing	
Store Image						
Agreement	57	55.3	57	59.4	54	56.2
Disagreement	46	44.7	39	40.6	42	43.7
	-		7 missing		7 missing	
Government Test						
Agreement	64	62.1	58	59.2	57	59.4
Disagreement	39	37.9	40	40.8	39	40.6
	-		5 missing		7 missing	
Shopping Experience						
Agreement	82	80.4	74	76.3	75	78.9
Disagreement	20	19.6	23	23.7	20	21.1
	1 missing		6 missing		8 missing	
Expensive Product						
Agreement	27	26.2	27	27.6	26	27.1
Disagreement	76	73.8	71	72.4	70	72.9
	-		5 missing		7 missing	
Word-of-mouth						
Agreement	74	71.8	68	69.4	71	74.0
Disagreement	29	28.2	30	30.6	25	26.0
	-		5 missing		7 missing	
Foreign brand						
Agreement	55	53.4	56	57.1	57	59.4
Disagreement	48	46.6	42	42.9	39	40.6
	-		5 missing		7 missing	

Source: Author(44)

(44) See Questionnaire A in Appendix I; question 4.

'Free sample', 'shopping experience', 'major brand', and 'word-of-mouth', on the other hand, are considered to be good risk reduction strategies. In case of 'free sample', 83%, 84.4%, and 81.5%; in case of 'shopping experience', 80.4%, 76.3%, and 78.9%; in case of 'major brand', 75.3%, 75.5%, and 79.6%; in case of 'word-of-mouth', 71.8%, 69.4%, and 74% for deodorants, perfumes/shaving lotions, and make-up/shaving materials, respectively, agree that these are good ways to reduce risk involved in purchasing the given cosmetic products.

TABLE 2.9. RISK PERCEPTION IN CASE OF DRUGS

Components of Perceived Risk	Frequency	Valid Percent
Uncertainty (when illness is serious)		
Low	8	8.0
Medium	71	71.0
High	21	21.0
	3 missing	
Uncertainty (when illness is not serious)		
Low	6	5.9
Medium	80	79.2
High	15	14.9
	2 missing	
Consequences (when illness is serious)		
Low	7	6.9
Medium	30	29.4
High	65	63.7
	1 missing	
Consequences (when illness is not serious)		
Low	11	10.9
Medium	71	70.3
High	19	18.8
	2 missing	

Source: Author(45)

Uncertainty risk in case of drugs when the illness is serious or not serious does not differ much. Medium risk is perceived most of the time and there is a trend toward high risk. (71% and 21% when illness is serious and 79.2% and 14.9% when illness is not serious). High consequences risk is perceived (63.7%) when illness is serious and medium level of consequences risk is perceived (70.3%) when illness is not serious.

(45) See Questionnaire A in Appendix I; questions 5 and 6.

TABLE 2.10a. RISK PERCEPTION IN PRESCRIBED AND NON-PRESCRIBED DRUGS

	Frequency	Valid Percent
Risk Perception in prescribed drugs (new drug)		
Low	13	12.9
Medium	59	58.4
High	29	28.7
	2 missing	
Risk Perception in prescribed drugs (drug that has been on the market)		
Low	40	39.6
Medium	57	56.4
High	4	4.0
	2 missing	
Risk Perception in non-prescribed drugs (drug is new)		
Low	4	3.9
Medium	43	42.2
High	55	53.9
	1 missing	
Risk Perception in non-prescribed drugs (drug that has been on the market)		
Low	24	23.5
Medium	64	62.8
High	14	13.7
	1 missing	

In Table 2.10a, it can be seen that 58.4% of the respondents perceive medium level of risk and 28.7% perceive 'high' level of risk in prescribed drugs when they are new. Medium level becomes 56.4% and 'low' level becomes 39.6% when the drugs are already on the market. In case of new, non-prescription drugs, 53.9% of the respondents perceive high risk and 42.2% perceive medium risk. 62.8% are medium level risk perceivers while 23.5% are low risk perceivers when non-prescription drugs have been on the market for a period of time.

**TABLE 2.10b. RISK PERCEPTION IN PRESCRIBED AND NON-PRESCRIBED DRUGS
WITH RESPECT TO SERIOUSNESS OF ILLNESS**

	Frequency	Valid Percent
Risk Perception in prescribed drugs (new drug)		
Low	6	5.9
Medium	58	57.5
High	37	36.6
	2 missing	
Risk Perception in prescribed drugs (drug that has been on the market)		
Low	18	17.8
Medium	75	74.3
High	8	7.9
	2 missing	
Risk Perception in non-prescribed drugs (drug is new)		
Low	3	3.0
Medium	34	34.4
High	62	62.6
	4 missing	
Risk Perception in non-prescribed drugs (drug that has been on the market)		
Low	6	6.0
Medium	78	78.0
High	16	16.0
	3 missing	

Source: Author(46)

In Table 2.10b, it is seen that as the illness gets serious, risk perception in prescribed new drugs is medium for 58 people (57.5%) and 'high' for 37 people (36.6%). When the drugs have been on the market for a time, 75 people (74.3%) perceive medium risk and 18 people (17.8%) perceive 'low' risk. In case of non-prescribed new drugs, 62 people (62.6%) perceive high risk and 34 people (34.4%) perceive medium risk; while in already on the market drugs 78 people (78%) perceive medium risk and 16% perceive high risk.

(46) See Questionnaire A in Appendix I; questions 7,8,11.

TABLE 2.11. a) ASKING FOR OTHERS' ADVICE IN CASE OF PRESCRIBED DRUGS WHEN THEY ARE NEW

	Another Doctor		Pharmacist		Friends, Relatives	
	Freq.	%	Freq.	%	Freq.	%
High	6	6.0	8	8.5	5	5.2
Medium	68	68.0	68	72.4	52	54.2
Low	26	26.0	18	19.1	39	40.6
	3 missing		9 missing		7 missing	

TABLE 2.11. b) ASKING FOR OTHERS' ADVICE IN CASE OF PRESCRIBED DRUGS WHEN THEY HAVE BEEN ON THE MARKET FOR A PERIOD OF TIME

	Another Doctor		Pharmacist		Friends, Relatives	
	Freq.	%	Freq.	%	Freq.	%
High	3	3.1	7	7.1	2	2.2
Medium	52	53.6	61	62.3	46	48.9
Low	42	43.3	30	30.6	46	48.9
	6 missing		5 missing		9 missing	

TABLE 2.11. c) ASKING FOR OTHERS' ADVICE IN CASE OF PRESCRIBED DRUGS WHEN THEY ARE NEW - WITH RESPECT TO SERIOUSNESS OF ILLNESS

	Another Doctor		Pharmacist		Friends, Relatives	
	Freq.	%	Freq.	%	Freq.	%
Low	11	10.8	10	10.5	28	30.1
Medium	26	25.5	44	46.3	44	47.3
High	65	63.7	41	43.2	21	22.6
	1 missing		8 missing		10 missing	

TABLE 2.11. d) ASKING FOR OTHERS' ADVICE IN CASE OF PRESCRIBED DRUGS WHEN THEY HAVE BEEN ON THE MARKET FOR A PERIOD OF TIME - WITH RESPECT TO SERIOUSNESS OF ILLNESS

	Another Doctor		Pharmacist		Friends, Relatives	
	Freq.	%	Freq.	%	Freq.	%
Low	20	20.8	22	23.4	41	43.1
Medium	53	55.2	62	66.0	47	49.5
High	23	24.0	10	20.6	7	7.4
	7 missing		9 missing		8 missing	

Source: Author(47)

(47) See Questionnaire A in Appendix I; question 9.

When a prescribed drug is new, most people refer to another doctor's advice, a pharmacist or friends/relatives at a medium level (68%, 72.4%, and 54.2%, respectively); these values become 53.6%, 62.3%, and 48.9% in case of prescribed drugs which have been on the market for a period of time. There is a trend toward low referral rate in both of the cases with the second group (pharmacists) being more pronounced.

With respect to seriousness of illness, 63.7% of the respondents say that they highly ask for another doctor's advice when the drug in question is new. The same percentage goes down to 24.0 in case the drug is already on the market.

TABLE 2.12. a) ASKING FOR OTHERS' ADVICE IN CASE OF NON-PRESCRIBED DRUGS WHEN THEY ARE NEW

	A Doctor		Pharmacist		Friends, Relatives		Ask Nobody	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
High	18	18.4	15	15.5	6	6.6	1	1.2
Medium	69	70.4	75	77.3	55	60.4	24	28.9
Low	11	11.2	7	7.2	30	33.0	58	69.9
	5 missing		6 missing		12 missing		20 missing	

TABLE 2.12. b) ASKING FOR OTHERS' ADVICE IN CASE OF NON-PRESCRIBED DRUGS WHEN THEY HAVE BEEN ON THE MARKET FOR A PERIOD OF TIME

	A Doctor		Pharmacist		Friends, Relatives		Ask Nobody	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
High	17	17.5	12	12.2	6	6.7	3	3.8
Medium	60	61.9	78	79.6	53	58.9	28	35.4
Low	20	20.6	8	8.2	31	34.4	48	60.8
	6 missing		5 missing		13 missing		24 missing	

TABLE 2.12. c) ASKING FOR OTHERS' ADVICE IN CASE OF NON-PRESCRIBED DRUGS WHEN THEY ARE NEW - WITH RESPECT TO SERIOUSNESS OF ILLNESS

	A Doctor		Pharmacist		Friends, Relatives	
	Freq.	%	Freq.	%	Freq.	%
Low	5	5.0	5	5.3	32	34.8
Medium	22	22.0	49	52.1	48	52.2
High	73	73.0	40	42.6	12	13.0
	3 missing		9 missing		11 missing	

TABLE 2.12. d) ASKING FOR OTHERS' ADVICE IN CASE OF NON-PRESCRIBED DRUGS WHEN THEY HAVE BEEN ON THE MARKET FOR A PERIOD OF TIME - WITH RESPECT TO SERIOUSNESS OF ILLNESS

	A Doctor		Pharmacist		Friends, Relatives	
	Freq.	%	Freq.	%	Freq.	%
Low	9	9.1	10	10.3	34	36.2
Medium	43	43.4	66	68.0	52	55.3
High	47	47.5	21	21.7	8	8.5
	4 missing		6 missing		9 missing	

Source: Author(48)

Whether a non-prescribed drug is new or an already on the market one, people do not go and buy it just by themselves without asking anybody. It is highly probable for just one respondent in case of new and three respondents in case of on the market drugs to go and buy the drug without asking anybody.

As the illness gets serious, there is a high referral rate to a doctor when the drug is new (73.0%). This figure goes down to 47.5 in case of a drug which has been on the market for a period of time.

In all of the cases studied, referral to friends or relatives is medium to low.

(48) See Questionnaire A in Appendix I; questions 10.

TABLE 2.13. a) IMPORTANCE OF A KNOWN DRUG PRODUCER

	New Drug		On the Market Drug	
	Frequency	Valid %	Frequency	Valid %
Low	12	11.9	16	16.0
Medium	29	28.7	56	56.0
High	60	59.4	28	28.0
	2 missing		3 missing	

TABLE 2.13. b) IMPORTANCE OF A KNOWN DRUG PRODUCER WITH RESPECT TO SERIOUSNESS OF ILLNESS

	New Drug		On the Market Drug	
	Frequency	Valid %	Frequency	Valid %
Low	9	9.0	11	11.1
Medium	35	35.0	59	59.6
High	56	56.0	29	29.3
	3 missing		4 missing	

Source: Author(49)

In Table 2.13a, it can be seen that individuals consider a known producer to be an important factor in case of a new drug (59.4%). This importance is medium (56.0%) to high (28.0%) when the drug has been on the market for a period of time. With respect to seriousness of illness, the same thing may be concluded: 56.0% give it high importance in case of a new drug, 59.6% give it medium and 29.3% give it high importance in case of a drug that has been on the market for a period of time.

TABLE 2.14. TYPES OF LOSS PERCEIVED AND SOME OTHER PERCEPTIONS IN CASE A PRESCRIBED DRUG FAILS TO HEAL

	AGREEMENT		DISAGREEMENT	
	Frequency	Valid %	Frequency	Valid %
Time Loss	85	86.7	13	13.3
	5 missing			
Hazard Loss	50	52.1	46	47.9
	7 missing			
Go to the same doctor	66	65.3	35	34.7
	2 missing			
Go to another doc.	80	81.6	18	18.4
	5 missing			
Money Loss	46	48.4	49	51.6
	8 missing			
Ego Loss	81	83.5	16	16.5
	6 missing			

Source: Author(50)

Time loss, ego loss, and going to another doctor are the 'most-agreed-upon' types of losses and perception in case a prescribed drug fails to heal an individual (Table 2.14). When a non-prescribed drug fails, however, individuals think that they should go to a doctor; they perceive time loss, hazard loss, and ego loss as well as money loss to a degree (Table 2.15).

(49) See Questionnaire A in Appendix I; question 12.

(50) See Questionnaire A in Appendix I; question 13.

TABLE 2.15. TYPES OF LOSS PERCEIVED AND SOME OTHER PERCEPTIONS IN CASE A NON-PRESCRIBED DRUG FAILS TO HEAL

	AGREEMENT		DISAGREEMENT	
	Frequency	Valid %	Frequency	Valid %
Time Loss	94 4 missing	94.9	5	5.1
Hazard Loss	83 7 missing	86.5	13	13.5
Money loss	70 7 missing	72.9	26	27.1
Ego loss	81 7 missing	84.3	15	15.7
Go to a doctor	98 2 missing	97.0	3	3.0
Ask a pharmacist	52 7 missing	54.2	44	45.8
Ask friends, relatives	37 7 missing	38.5	59	61.5

Source: Author(51)

b) Questionnaire B (for doctors)

TABLE 2.16. DEMOGRAPHIC CHARACTERISTICS OF DOCTORS

Demographic Variables	Frequency	Valid Percent
Gender		
Female	44	45.8
Male	52	54.2
	96	100.0
Age		
20-29	48	50.0
30-39	39	40.6
40-49	7	7.3
50-59	2	2.1
	96	100.0
Number of Years in Profession		
Less than a year	3	3.1
1-2 years	18	18.8
3-4 years	20	20.8
5-6 years	26	27.1
7-8 years	11	11.5
9-10 years	6	6.2
More than 10 years	12	12.5
	96	100.0

(51) See Questionnaire A in Appendix I; question 14.

TABLE 2.16. CONTINUED

Demographic Variables	Frequency	Valid Percent
Number of Languages Known		
Does not know	6	6.2
1	77	80.2
2	11	11.5
3	2	2.1
	96	100.0
English	82	85.4
French	7	7.3
German	11	11.5
Russian, Bulgarian	3	3.1
Working Status		
Full-time in a hospital	51	53.1
Part-time in a hospital	13	13.5
Health center	24	25.0
Public enterprise	4	4.2
Maternity and Child Health Center	4	4.2
	96	100.0

Source: Author(52)

Of the 96 doctors, 44 are female and 50% are between 20 and 29 years of age. This rather young sample is due to their being practitioner doctors. 27.1% have been in the profession for 5 or 6 years. 77 doctors know one language and those who know English are 82 in number. Besides, 53.1% of all respondents work full-time in a hospital.

TABLE 2.17. RISK PERCEPTION IN CASE OF DRUGS

Components of Perceived Risk

Uncertainty	Serious Illness		Simple Illness	
	Frequency	Valid %	Frequency	Valid %
Low	3	3.1	2	2.1
Medium	65	67.7	79	83.2
High	28	29.2	14	14.7
			1 missing	

Consequences

	Already on the Market Drug				New Drug			
	Serious Illness		Simple Illness		Serious Illness		Simple Illness	
	Freq.	Valid %	Freq.	Valid %	Freq.	Valid %	Freq.	Valid %
Low	9	9.5	22	23.4	2	2.1	10	10.5
Medium	61	64.2	66	70.2	47	50.0	69	72.6
High	25	26.3	6	6.4	45	47.9	16	16.8
	1 missing		2 missing		2 missing		1 missing	

Source: Author(53)

(52) See Questionnaire B in Appendix I; questions 12 to 16.

(53) See Questionnaire B in Appendix I; questions 1-2-3.

TABLE 2.18. a) RISK PERCEPTION IN PRESCRIBING DRUGS

	New Drug		Already on the Market Drug	
	Frequency	Valid %	Frequency	Valid %
Low	5	5.3	44	46.8
Medium	61	64.9	47	50.0
High	28	29.8	3	3.2
	2 missing		2 missing	

TABLE 2.18. b) RISK PERCEPTION IN PRESCRIBING DRUGS WITH RESPECT TO SERIOUSNESS OF ILLNESS

	New Drug		Already on the Market Drug	
	Frequency	Valid %	Frequency	Valid %
Low	4	4.3	32	34.0
Medium	40	42.5	60	63.9
High	50	53.2	2	2.1
	2 missing		2 missing	

Source: Author(54)

Doctors perceive medium to high uncertainty risk in case of drugs. The same thing may be cited in case of consequences risk, however, this time higher risk perception can be seen, especially if the illness is serious and the drug is new. When the illness is not serious and the drug is an already on the market one, risk perception is medium to low.

In prescribing a new drug, medium to high risk (64.9% to 29.8%) is perceived whereas in prescribing an on-the-market drug, medium to low risk (50.0% to 46.8%) is perceived. With respect to seriousness of illness, the same thing holds true except for the percentagas (42.5% to 53.2% and 63.9% to 34.0%).

(54) See Questionnaire B in Appendix I; question 4.

TABLE 2.19. SOURCES OF INFO. USED AND THEIR RELATIVE IMPORTANCE IN GETTING TO KNOW ABOUT A NEW DRUG

	1		2		3		4		5		6		7		
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	
Other colleagues	6	6.6	4	4.4	17	18.7	15	16.5	19	20.9	12	13.2	17	18.7	5 missing
Meetings, conferences	9	9.9	5	5.5	19	20.9	25	27.5	15	16.5	11	12.1	7	7.7	5 missing
Detailmen	32	34.0	16	17.0	6	6.4	10	10.6	7	7.4	12	12.8	11	11.7	2 missing
Brochures from producer	12	13.0	28	30.4	9	9.8	8	8.7	13	14.1	11	12.0	9	9.8	2 do not use 4 missing
Turkish literature	17	18.3	15	16.1	19	20.4	15	16.1	18	19.4	7	7.5	2	2.2	3 missing
Foreign literature	13	14.6	15	16.9	3	3.4	10	11.2	3	3.4	12	13.5	30	33.7	1 does not use 7 missing
Professional articles	4	4.4	11	12.1	20	22.0	10	11.0	17	18.7	21	23.1	7	7.7	1 does not use 5 missing

Source: Author(55)

TABLE 2.20. SOURCES OF INFO. USED AND THEIR RELATIVE IMPORTANCE IN CHOOSING DRUGS

	1		2		3		4		5		6		7		
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	
Other colleagues	7	7.4	12	12.8	10	10.6	18	19.1	23	24.5	7	7.4	16	17.0	1 not using 2 missing
Meetings, conferences	22	23.4	11	11.7	13	13.8	28	29.8	12	12.8	4	4.3	4	4.3	2 missing
Detailmen	9	9.6	6	6.4	6	6.4	6	6.4	16	17.0	28	29.8	22	23.4	2 missing
Brochures from producer	4	4.3	10	10.6	8	8.5	8	8.5	11	11.7	26	27.7	25	26.6	2 missing
Turkish literature	19	20.0	20	21.1	27	28.4	12	12.6	12	12.6	4	4.2	4	-	1 missing
Foreign literature	22	24.2	16	17.6	7	7.7	14	15.4	7	7.7	10	11.0	12	13.2	1 not using 5 missing
Professional articles	10	10.6	20	21.3	23	24.5	9	9.6	12	12.8	11	11.7	8	8.5	1 not using 2 missing

Source: Author(56)

The most frequently used source to get informed about a new drug is detailmen (individuals coming from drug firms to give information on a new drug). Then come brochures from producer, meetings and conferences, and Turkish literature. Sources used in choosing drugs are meetings and conferences, and foreign literature together with Turkish literature. Professional articles are also a source used in choosing drugs. Only 9.6% of all respondents choose detailmen as the first source, this time.

(55) See Questionnaire B in Appendix I; question 5.

(56) See Questionnaire B in Appendix I; question 6.

TABLE 2.21. SOURCES DOCTORS RELY ON AND THEIR RELATIVE IMPORTANCE IN PRESCRIBING DRUGS

	1		2		3		4		5		6		7		8		9
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	
Previous experience	63	66.3	11	11.6	4	4.2	6	6.3	5	5.3	3	3.2	2	2.1	1	1.1	1
Professional articles	6	6.4	17	18.1	25	26.6	18	19.1	15	16.0	11	11.7	2	2.1	-	-	2
Other colleagues ideas	1	1.1	19	20.2	15	16.0	19	20.2	18	19.1	13	13.8	9	9.6	-	-	2
Meetings, conferences	2	2.2	18	19.4	13	14.0	15	16.1	21	22.6	15	16.1	9	9.7	-	-	3
Info. from producers	-	-	3	3.2	10	10.8	11	11.8	7	7.5	18	19.4	38	40.9	6	6.5	3
Turkish literature	13	13.8	10	10.6	14	14.9	22	23.4	14	14.9	20	21.3	-	-	1	1.1	2
Foreign lit.	6	6.5	15	16.3	13	14.1	3	3.3	13	14.1	14	15.2	25	27.2	2	2.2	4
1 not using																	

Source: Author(57)

Previous experience is by far the most important factor doctors rely on in prescribing drugs. Other colleagues' ideas are also valuable for doctors.

Answers to "what that 'others' is" and whether or not there would be any differences in the doctors' rankings with respect to seriousness of illness were not satisfactory in any of the questions. Most of the doctors who marked 'others' did not explain what it was and some irrelevant answers were also recorded.

As to the sources doctors were first informed about a new drug, the following could be obtained for the 'others' category: One mention for newspapers, one mention for pharmacists, and still another mention for pharmacological sources and lecture books. Coming to irrelevant answers, one said that he relied on past experience, one mentioned the drug's previous effect on earlier patients, and one replied that it would be according to the patient's situation and the drugs he/she has used before.

As to which source was more influential in choosing a drug, pharmacological substances a drug contained was cited as 'other'. With respect to seriousness of illness, 74 respondents said that they would not change their rankings whether the illness was serious or not. When those, who said that they would change, were asked for their reasons, three respondents said that literature gained importance, five mentioned that the effect of the drug was important, three cited that colleagues' opinions were important, another three cited that they would change their rankings to eliminate failure probability

(57) See Questionnaire B in Appendix I; question 7.

and three said that the patient's situation affected their behavior in such a case where seriousness of illness was the issue.

In prescribing a drug, two said that they relied on their professional knowledge and two said that they looked at the pharmacological substances the drug contained for the 'others' category. With respect to seriousness of illness, the drugs a patient has used beforehand and their effect on him/her were mentioned by four respondents, and three said that related literature was of more importance in case of serious illness.

TABLE 2.22. DOCTORS' REACTIONS TO 'NO ADVERTISING IN MEDIA'

	Frequency	Valid Percent
"Apropriate"	60	63.2
"Inappropriate"	35	36.8
		1 missing

Source: Author(58)

63.2% of the respondents think that it is appropriate not to have drug-related advertisements in media.

TABLE 2.23. INTELLIGENCE OF QUESTIONS PATIENTS ASK TO DOCTORS

	Frequency	Valid Percent
Much	2	2.2
Some	31	33.7
Little	55	59.8
None	4	4.3
		4 missing

Source: Author(59)

Most doctors think that patients vary in their capacity to understand the things they are told and to ask intelligent questions. The two key factors determining this variance are educational background and socioeconomic level.

(58) See Questionnaire B in Appendix I; question 8.

(59) See Questionnaire B in Appendix I; question 9.

TABLE 2.24. a) IMPORTANCE OF KNOWN PRODUCER FOR DOCTORS

	New Drug		On the Market Drug	
	Frequency	Valid %	Frequency	Valid %
Low	8	8.4	19	20.0
Medium	37	39.0	66	69.5
High	50	52.6	10	10.5
				1 missing

TABLE 2.24. b) IMPORTANCE OF KNOWN PRODUCER FOR PATIENTS

	New Drug		On the Market Drug	
	Frequency	Valid %	Frequency	Valid %
Low	56	59.0	58	61.0
Medium	35	36.8	37	39.0
High	4	4.2	-	-
				1 missing

TABLE 2.24. c) IMPORTANCE OF KNOWN PRODUCER FOR DOCTORS WITH RESPECT TO SERIOUSNESS OF ILLNESS

	New Drug		On the Market Drug	
	Frequency	Valid %	Frequency	Valid %
Low	19	20.2	32	34.4
Medium	43	45.8	49	52.7
High	32	34.0	12	12.9
	2 missing		3 missing	

Source: Author(60)

When a drug is new, it is highly important for doctors to know the producer. This importance is medium to low in case of drugs that have been on the market for a period of time (Table 2.24 a). Doctors do not think that it is of any importance for patients to know about the producer (Table 2.24 b). With respect to seriousness of illness, medium to high importance is given in case the drugs are new; medium to low importance is given in case the drugs have been on the market for a period of time (Table 2.24 c).

(60) See Questionnaire B in Appendix I; question 10.

**TABLE 2.25. TYPES OF LOSS PERCEIVED AND SOME OTHER PERCEPTIONS IN CASE A
PRESCRIBED DRUG FAILS TO HEAL**

	Agreement		Disagreement		
	Frequency	Valid %	Frequency	Valid %	
Time Loss	38	42.7	51	57.3	7 missing
Hazard Loss	23	25.8	66	74.2	7 missing
Give another drug	73	80.2	18	19.8	5 missing
Ask another colleague	81	88.0	11	12.0	4 missing
Ego loss	36	40.0	54	60.0	6 missing
Patient will go to another dr.	15	17.0	73	83.0	8 missing
Negative word-of-mouth	32	36.4	56	63.6	8 missing

Source: Author(61)

Doctors mostly agree that they ask another colleague (88.0%) or give another drug (80.2%) in case a drug they prescribe does not function well enough or fails to heal an individual. They are not afraid of negative word-of-mouth that can take place or of the patient going to another doctor.

2.2.2. Findings Related to the Hypotheses

2.2.2.1. Gender and Risk Perception Cosmetics

The hypothesis that "women perceive more risk (uncertainty and consequences) in buying cosmetics" was not supported by the data. The significance levels were found to be greater than 0.050 in both of the cases (0.612 and 0.863).

(61) See Questionnaire B in Appendix I; question 11.

TABLE 2.26. T-TEST RESULTS (Gender and Risk Perception in Cosmetics)

Variables	X ₁ Female	X ₂ Male	t	df	P
Uncertainty risk for cosmetics	6.6230	6.8810	-0.51	96.48	0.612
Consequences risk for cosmetics	5.9508	6.0476	-0.17	97.84	0.863

Source: Author(62)

2.2.2.2. Gender and Types of Loss in Cosmetics

The hypothesis that "there is a difference between males and females in the types of loss they perceive in cosmetics" was not supported by the data. Significance levels were found to be greater than 0.050 in all of the cases.

TABLE 2.27. T-TEST RESULTS (Gender and Types of Loss in Cosmetics)

Variables	X ₁ Female	X ₂ Male	t	df	P
Deodorants					
Hazard loss	1.8036	2.0789	-1.30	70.09	0.198
Total time loss	4.1017	4.5000	-1.12	71.60	0.268
Total ego loss	3.5932	3.7000	-0.36	87.32	0.721
Total money loss	2.9833	2.9756	0.03	77.17	0.976
Perfume/Sh.lotion					
Hazard loss	2.0208	2.1053	-0.40	73.12	0.690
Total time loss	4.3000	4.3846	-0.23	69.39	0.816
Total ego loss	3.7308	3.6053	0.38	84.38	0.703
Total money loss	2.8654	3.0769	-0.82	77.01	0.413
Make-up/sh.material					
Hazard loss	1.9070	2.0811	-0.76	75.19	0.448
Total time loss	4.3864	4.4737	-0.22	71.08	0.824
Total ego loss	3.6170	3.5946	0.07	79.35	0.945
Total money loss	2.9783	3.2105	-0.81	74.04	0.418

Source: Author

(62) X₁, X₂ are the mean values

t is calculated t value

df is degrees of freedom

p is two-tail probability (significance level)

2.2.2.3. Education and Risk Perception in Cosmetics

The hypothesis that "people with different education levels differ in their risk perception (uncertainty and consequences) in case of cosmetics" was supported by the data.

TABLE 2.28.

	Chi-Square	df	significance	min.E.F.	Cells	More
Uncertainty risk	24.26581	12	0.0187	0.235	14 of 20	(70%)
Consequences risk	26.11065	12	0.0104	0.235	14 of 20	(70%)

Source: Author(63)

Risk perception variable is recoded as low (1,2,3,4), medium (5,6,7,8), and high (9,10,11,12) in this hypothesis.

The chi-square values with 12 degrees of freedom have a probability of 0.0187 in case of uncertainty risk and 0.0104 in case of consequences risk meaning that education level and risk perception in cosmetics are related to each other (both are below the accepted level of significance — i.e., $p=0.05$). However, since 70% of cells have expected frequency less than 5.0, significance has to be interpreted with care in both of the cases (uncertainty and consequences risks). For uncertainty risk, the following cross-tab results were obtained: 37.3% of those who answered the question were university graduates and 34.3% were lycee graduates. There were a total of three people who did not use cosmetics, two of whom were primary school graduates and one lycee graduate. 17.6% of the total respondents were low uncertainty risk perceivers, 41.2% were medium, and 38.2% were high risk perceivers. Among the primary school graduates, 25% were low, 37.5% were medium, and 12.5% were high risk perceivers. No secondary school graduates were low risk perceivers, 70% were medium, and 30% were high risk perceivers. Coming to lycee graduates, 20% were low, 42.9% were medium, and 34.3% were high risk perceivers. 21.1% of university graduates were low, 36.8% were medium, 42.1% were high risk perceivers. 9.1% of post graduates were low, 27.3% were medium, and 63.6% were high risk perceivers. For consequences risk, the following cross-tab results were obtained: Again, 37.3% of those who answered the question were

(63) min. E.F.: minimum expected cell frequency.

university graduates and 34.3% were lycee graduates. Three respondents did not use cosmetics; two were primary school graduates and one was a lycee graduate. 29.4% of the total respondents were low consequences risk perceivers, 40.2% were medium risk perceivers, and 27.5% were high risk perceivers. Among the primary school graduates, 25% were low and 50% were medium risk perceivers. There were no high risk perceivers among them. 10% of the secondary school graduates were low, 80% were medium, and 10% were high risk perceivers. 28.6% were low, 34.3% were medium, and 34.3% were high risk perceivers among lycee graduates. 36.8% of university graduates were low, 34.2% were medium, and 28.9% were high in risk perception while these figures were 27.3%, 36.4%, and 36.4% for low, medium, and high risk perception, respectively, in case of post graduates.

When the education variable was also recoded (as primary/secondary/lycee and university/post graduate), the hypothesis was supported in case of uncertainty risk (significance level was 0.0449, yet 37.5% of cells had expected frequencies less than 5.0) and was not supported in case of consequences risk.

2.2.2.4. Education and Risk Perception in Drugs Used for Serious Illness

The hypothesis that "people with different education levels differ in their risk perception (uncertainty and consequences) in case of drugs used for serious illness" was not supported by the data.

TABLE 2.29.

	Chi-Square	df	significance
Uncertainty risk	10.98322	12	0.5304
Consequences risk	8.54344	12	0.7414

Source: Author

In both of the cases, the chi-square values with 12 degrees of freedom have a probability of significance level above the accepted level of significance (i.e., $p=0.05$) (0.5304 and 0.7414) meaning that the variables are independent; there is no relationship between education level and risk perception in case of drugs used for serious illness. No satisfactory answer was found when the education variable was recoded (as primary/secondary/lycee graduates and university/post graduates; primary school

graduates/secondary and lycee graduates/and university post graduates).

2.2.2.5. Age, Occupation and Risk Reduction Methods

The hypothesis that "there is a difference between people who are younger than 40 years of age and those who are older than 40 years of age in the risk reduction methods they use in case of cosmetics" was not supported by the data except for one case. Significance levels were found to be greater than 0.05 in all of the cases except for free samples used for deodorants. Just for that case, the significance level was 0.011 and the means were 1.6226 (those who are younger than 40) to 2.0217 (those who are older than 40).

TABLE 2.30. T-TEST RESULTS (Age and Risk Reduction Methods in Cosmetics)

Variables	X ₁ (Younger than 40)	X ₂ (Older than 40)	t	df	p
Most advertised brand					
deo.	2.8113	2.9130	-0.72	95.58	0.473
perfume/sh.lotion	2.8039	2.8261	-0.13	93.99	0.895
make-up/sh.mat	2.7800	2.9130	-0.86	93.45	0.390
Brand loyalty					
deo.	2.0755	2.1915	-0.69	97.73	0.493
per./sh.lot.	2.0980	2.1739	-0.45	94.73	0.655
make-up/sh.mat.	1.9804	2.1778	-1.13	93.99	0.261
Advice of seller					
deo.	2.3889	2.6087	-1.20	89.04	0.234
per./sh.lot.	2.4200	2.7273	-1.68	85.13	0.097
make-up/sh.mat.	2.4286	2.6591	-1.24	84.78	0.219
Free sample					
deo.	1.6226	2.0217	-2.58	87.55	0.011
per./sh.lot.	1.6735	1.9565	-1.79	87.08	0.077
make-up/sh.mat.	1.6809	2.0000	-1.93	88.43	0.057
Major brand					
deo.	2.0556	1.9348	0.68	97.88	0.496
per./sh.lot.	2.1224	1.8636	1.45	90.82	0.151
make-up/sh.mat.	2.0417	1.8696	0.98	91.61	.330
Money-back guarantee					
deo.	2.3462	2.4043	-0.28	94.32	0.779
per./sh.lot.	2.3958	2.3778	0.08	87.89	0.934
make-up/sh.mat.	2.3830	2.3913	-0.04	89.37	0.969

TABLE 2.30. CONTINUED

Variables	X ₁ (Younger than 40)	X ₂ (Older than 40)	t	df	p
Store image					
deo.	2.2407	2.3542	-0.58	94.95	0.565
perfume/sh.lotion	2.2000	2.2889	-0.44	88.78	0.662
make-up/sh.mat	2.1837	2.3830	-0.98	92.54	0.328
Government test					
deo.	2.1667	2.3958	-1.14	96.23	0.255
per./sh.lot.	2.1961	2.4130	-1.04	91.77	0.301
make-up/sh.mat.	2.2245	2.3830	-0.75	93.26	0.453
Shopping experience					
deo.	2.0189	2.0208	-0.01	91.06	0.989
per./sh.lot.	2.0200	2.0870	-0.43	85.03	0.666
make-up/sh.mat.	2.0000	2.0213	-0.13	88.30	0.893
Expensive product					
deo.	2.9815	2.9167	0.42	98.15	0.676
per./sh.lot.	2.9804	2.8913	0.54	92.50	0.594
make-up/sh.mat.	3.0204	2.8298	1.07	90.55	0.285
Word-of-mouth					
deo.	2.2407	2.1250	0.85	97.33	0.399
per./sh.lot.	2.2941	2.1739	0.88	93.84	0.383
make-up/sh.mat.	2.2245	2.1489	0.52	93.75	0.608
Foreign brand					
deo.	2.5370	2.4167	0.65	99.81	0.515
per./sh.lot.	2.4314	2.3696	0.32	94.81	0.751
make-up/sh.mat.	2.3878	2.2979	0.45	93.22	0.652

Source: Author

There was one other hypothesis stating that "there is a difference between people who are not working (retired, housewife, student) and people who are government or private sector employees in the risk reduction methods they use in case of cosmetics". This hypothesis was not supported by the data in any of the cases studied. All significance levels were far above the accepted level of 0.05.

2.2.2.6. Risk Perception in Cosmetics and in Drugs Used for Serious Illness

The hypothesis that "less (uncertainty and consequences) risk is perceived in cosmetics than in drugs used for serious illness" was supported by the data at .000 level of significance.

TABLE 2.31.

	Mean	t	df	P
Uncertainty risk in deodorants	2.2727	-4.48	98	.000
Uncertainty risk in drugs used for serious illness	2.8687			
Uncertainty risk in perfume/saving lotions	2.3265	-3.99	97	.000
Uncertainty risk in drugs used for serious illness	2.8673			
Uncertainty risk in make-up/shaving materials	2.1919	-4.84	98	.000
Uncertainty risk in drugs used for serious illness	2.8788			
Consequences risk in deodorants	1.8922	-12.03	101	.000
Consequences risk in drugs used for serious illness	3.4608			
Consequences risk in perfume/shaving lotions	1.9200	-13.10	99	.000
Consequences risk in drugs used for serious illness	3.4600			
Consequences risk in make-up/shaving materials	2.2178	-8.42	100	.000
Consequences risk in drugs used for serious illness	3.4554			

Source: Author

2.2.2.7. Risk Perception in Buying Prescribed and Non-prescribed Drugs-New and Already on the Market

The hypothesis that "people perceive more risk in buying (a new, an on-the-market) drug by themselves than in buying (a new, an on-the-market) drug by prescription" was supported by the data at .000 level of significance.

In case of new drugs, the means are 3.3861 (new, non-prescribed) to 2.8515

TABLE 2.32.

	Mean	t	df	P
Risk perception in buying a new, non-prescribed drug	3.3861	4.59	100	.000
Risk perception in buying a new, prescribed drug	2.8515			
Risk perception in buying an on-the-market, non-prescribed drug	2.4059	4.43	100	.000
Risk perception in buying an on-the-market, prescribed drug	1.9208			

Source: Author

(new, prescribed); in case of on the market drugs, the means are 2.4059 (on the market, non-prescribed) to 1.9208 (on the market, prescribed).

2.2.2.8. Risk Perception in Buying Drugs With Respect To Seriousness of Illness

The hypothesis that "people perceive more risk in buying (a new, an on-the-market) drug by themselves than in buying (a new, an on-the-market) drug by prescription with respect to the seriousness of illness" was supported by the data at .000 and .026 levels of significance.

In case of new drugs, the means are 3.5361 (new, non-prescribed) to 3.0619

TABLE 2.33

	Mean	t	df	P
Risk perception in new, non-prescr. drug wrt seriousness of illness	3.5361	5.54	96	.000
Risk perception in new, prescribed drug wrt seriousness of illness	3.0619			
Risk perception in on the market, non-pres. drug.wrt serious.of illness	2.6735	2.25	97	0.026
Risk perception in on the market, prescribed drug wrt serious.of illness	2.4286			

Source: Author

(new prescribed); in case of on the market drugs, the means are 2.6735 (on the market, non-prescribed) to 2.4286 (on the market, prescribed).

2.2.2.9. Risk Perception in Buying Cosmetics Versus Non-Prescription Drugs-As the Illness Gets Serious

The hypothesis that "people perceive less risk (uncertainty and consequences) in buying cosmetics than in buying (a new, an on-the-market) drug by themselves in case the illness is serious" was supported by the data at .000, .001, and .010 levels of significance.

TABLE 2.34

	Mean	t	df	P
Uncertainty risk in deodorants	2.2551	-10.90	97	.000
Risk perception in new non-prescribed drug wrt.seriousness of illness	3.5510			
Uncertainty risk in perfume/shaving lotions	2.3299	-10.05	96	.000
Risk perception in new, non-prescribed drug wrt. seriousness of illness	3.5464			
Uncertainty risk in make-up/shaving materials	2.1939	-9.62	97	.000
Risk perception in new, non-prescribed drug wrt.seriousness of illness	3.5408			
Consequences risk in deodorants	1.8990	-13.68	98	.000
Risk perception in new, non-prescribed drug wrt.seriousness of illness	3.5455			
Consequences risk in perfume/shaving lotions	1.9588	-14.15	96	.000
Risk perception in new non-prescribed drug wrt.seriousness of illness	3.5361			

TABLE 2.34. CONTINUED

	Mean	t	df	P
Consequences risk in make-up/ shaving materials	2.2755	-8.74	97	.000
Risk perception in new, non-prescribed drug wrt.seriousness of illness	3.5408			
Uncertainty risk in deodorants	2.2626	-3.47	98	.001
Risk perception in on-the-market non-prescribed drug wrt.ser.of illness	2.6970			
Uncertainty risk in perfume/shaving lotions	2.3367	-2.64	97	.010
Risk perception in on-the-market, non-presc.drug wrt.serious.of illness	2.6837			
Uncertainty risk in make-up/ shaving materials	2.2121	-3.46	98	.001
Risk perception in on-the-market, non- prescribed drug wrt. ser. of illness	2.6970			
Consequences risk in deodorants	1.9100	-6.11	99	.000
Risk percep. in on-the-market, non- prescribed drug wrt.serios.of illness	2.6900			
Consequences risk in perfume/shaving lotions	1.9490	-6.16	97	.000
Risk perception in on-the-market non-prescribed drug wrt.seriousness of illness	2.6837			
Consequences risk in make-up/ shaving materials	2.2525	-3.28	98	.001
Risk perception in on-the-market, non- prescribed drug wrt.seriousness of illness	2.6970			

Source: Author

2.2.2.10. Risk Perception in Buying Cosmetics Versus Prescription Drugs-As the Illness Gets Serious

The hypothesis that "people perceive less risk (uncertainty, consequences) in buying cosmetics than in buying (a new, an on-the-market) prescribed drug in case the illness is serious" was supported at .000 level of significance except for three cases. For uncertainty risk perception in on-the-market, prescribed drugs with respect to

seriousness of illness, the hypothesis was not supported by the data.

TABLE 2.35.

	Mean	t	df	P
Uncertainty risk in deodorants	2.2800	-6.02	99	.000
Risk perception in new, prescribed drug wrt.seriousness of illness	3.1100			
Uncertainty risk in perfume/ shaving lotions	2.3434	-5.42	98	.000
Risk perception in new, prescribed drug wrt.seriousness of illness	3.0909			
Uncertainty risk in make-up/shaving materials	2.2000	-5.82	99	.000
Risk perception in new, prescribed drug wrt.seriousness of illness	3.0900			
Consequences risk in deodorants	1.8713	-8.25	100	.000
Risk perception in new, prescribed drug wrt.seriousness of illness	3.0990			
Consequences risk in perfume/ shaving lotions	1.9192	-8.61	98	.000
Risk perception in new, prescribed drug wrt.seriousness of illness	3.1010			
Consequences risk in make-up/ shaving materials	2.2300	-5.06	99	.000
Risk perception in new, prescribed drug wrt. seriousness of illness	3.0900			
Uncertainty risk in deodorants	2.2800	-1.20	99	.232
Risk perception in on-the-market, prescribed drug wrt.serious.of illness	2.4500			

TABLE 2.35. (Continued)

	Mean	t	df	P
Uncertainty risk in perfume/shaving lotions	2.3434	-0.58	98	.566
Risk perception in on-the-market, prescribed drug wrt.serious.of illness	2.4242			
Uncertainty risk in make-up/shaving materials	2.2000	-1.51	99	.133
Risk perception in on-the-market, prescribed drug wrt.serious.of illness	2.4200			
Consequences risk in deodorants	1.8713	-3.83	100	.000
Risk perception in on-the-market, prescribed drug wrt.serious.of illness	2.4356			
Consequences risk in perfume/shaving lotions	1.9192	-3.74	98	.000
Risk perception in on-the-market, prescribed drug wrt.serious.of illness	2.4242			
Consequences risk in make-up/shaving materials	2.2300	-1.18	99	.000
Risk perception in on-the-market, prescribed drug wrt.serious.of illness	2.4200			

Source: Author.

2.2.2.11. Perception of Risk in Prescribed and Non-Prescribed New Drugs

The hypothesis that "there is significantly greater risk in buying drugs without prescription than in buying them with prescription in case the drugs are new" is supported by the data at .000 level of significance.

TABLE 2.36

	Mean	t	df	P
Risk perception in a new, non-prescribed drug	3.3861	4.59	100	.000
Risk perception in a new, prescribed drug	2.8515			

Source: Author

The means are 3.3861 (new, non-prescribed drug) to 2.8515 (new, prescribed drug).

2.2.2.12. Image of Producer And Drugs

The hypothesis that "image of a drug producing firm is more important for people in case of new rather than on-the-market drugs and in case of new rather than on the market drugs as the illness gets serious" is supported by the data at .000 level of significance.

TABLE 2.37

	Mean	t	df	P
Importance of producer in case of new drugs	3.2600	5.36	99	.000
Importance of producer in case of on-the-market drugs	2.8200			
Importance of producer in case of new drugs wrt.seriousness of illness	3.3333	6.19	98	.000
Importance of producer in case of on-the-market drugs wrt.serious.of illness	2.8687			

Source: Author

For the first part, the means are 3.2600 (new drugs) to 2.8200 (on-the-market drugs); for the second part, the means are 3.3333 (new drugs wrt. seriousness of illness) to 2.8687 (on-the-market drugs wrt. seriousness of illness).

2.2.2.13. Loss Perception in Case a Prescribed/Non-Prescribed Drug Does Not Function as Expected

The hypothesis that "types of loss perceived when a prescribed drug fails to heal an individual differ from those perceived when a non-prescribed drug fails to heal" is supported by the data except for ego loss.

TABLE 2.38

	Mean	t	df	P
Time loss perceived in prescribed drugs	1.6735	2.00	97	.048
Time loss perceived in non-prescribed drugs	1.5102			
Hazard loss perceived in prescribed drugs	2.4105	6.90	94	.000
Hazard loss perceived in non-prescribed drugs	1.6842			
Money loss perceived in prescribed drugs	2.5532	5.92	93	.000
Money loss perceived in non-prescribed drugs.	2.0106			
Ego loss perceived in prescribed drugs	1.9375	1.56	95	.122
Ego loss perceived in non-prescribed drugs	1.8125			

Source: Author

For time, hazard, and money loss, significance levels are .048, .000, and .000, respectively. The means are 1.6735 to 1.5102 in case of time loss; 2.4105 to 1.6842 in case of hazard loss, and 2.5532 to 2.0106 in case of money loss.

2.2.2.14. Gender and Risk Perception When Illness is/is not Serious and Drug is New/Has Been on the Market for a Period of Time

The hypothesis that "there will be no differences between male and female doctors with respect to their risk perception (uncertainty, consequences) in case (the illness is/is not serious) and in case of (an on-the-market/a new drug) when the illness is/is not serious and in their perception of loss in case a drug they prescribe does not heal an individual" is supported by the data except for uncertainty risk when illness is serious. For that particular case, significance level is 0.006 and male doctors perceive more uncertainty risk than their female colleagues in case of serious illness.

TABLE 2.39

	X ₁ female	X ₂ male	t	df	P
Uncertainty risk when illness is serious	2.9091	3.3077	-2.81	89.60	.006
Uncertainty risk when illness is not serious	2.9318	2.8824	0.37	90.61	.715
Consequences risk in case of an on-the-market drug when illness is serious	2.7907	2.9038	-0.59	90.36	.554
Consequences risk in case of an on-the-market drug when illness is not serious	2.2558	2.1961	0.32	88.25	.746
Consequences risk in case of a new drug when illness is serious	3.3721	3.2941	0.50	91.16	.617
Consequences risk in case of a new drug when illness is not serious	2.7442	2.5192	1.26	92.63	.211
Time loss perceived when drug is ineffective	2.6341	2.6250	0.04	82.17	.965
Hazard loss perceived when drug is ineffective	2.9756	2.8333	0.79	86.96	.431
Try another drug	1.8372	2.0417	-1.19	88.91	.236
Ask a colleague	1.9048	1.7400	1.19	87.66	.236
Ego loss perceived when drug is ineffective	2.8049	2.6735	0.65	86.78	.517
Patient will go to another doctor	3.1282	3.1020	0.15	85.93	.880
Negative word-of-mouth	3.0513	2.7959	1.36	85.84	.177

Source: Author.

2.2.2.15. Risk Perception and New/Already on the Market Drug When Illness is Serious

The hypothesis that "for a doctor, a newly introduced drug causes more risk perception than a drug that has been on the market for a period of time in case of a serious illness" is supported by the data at .000 level of significance.

Table 2.40.

	Mean	t	df	P
Consequences risk perceived in case of an on-the-market drug when illness is serious	2.8617	-4.91	93	.000
Consequences risk perceived in case of a new drug when illness is serious	3.3298			

Source: Author

The means are 3.3298 (in case of a new drug) to 2.8617 (in case of an on the market drug).

2.2.2.16. Risk Perception in Prescribing Drugs

The hypothesis that "the doctor perceives more risk in prescribing a newly introduced drug than an already on-the-market drug in case the illness is serious" is supported by the data at .000 level of significance. The means are 3.3617 (in case of a new drug) to 1.9681 (in case of an on-the-market drug).

TABLE 2.41.

	Mean	t	df	P
Risk perception in case of a new drug with respect to seriousness of illness serious	3.3617	18.72	93	.000
Risk perception in case of an on-the-market drug with respect to ser.of ill.	1.9681			

Source: Author

2.2.2.17. Demographics and Types of Losses

The hypothesis that "there is a relationship between gender and working status of doctors and types of losses they perceive in case the prescribed drug does not function well enough" is not supported by the data except for working status and asking a colleague in case a prescribed drug fails.

TABLE 2.42.

	Chi-square	df	significance
Gender and time loss	0.80406	3	.8485
Gender and ego loss	1.39132	3	.7076
Gender and hazard loss	4.60491	3	.2031
Gender and trying another drug	2.01953	3	.5684
Gender and asking a colleague	3.60161	3	.3078
Gender and going to another doctor	1.91158	3	.5910
Gender and negative word of mouth	7.09815	3	.0688
Working status and time loss	14.39567	12	.2762
Working status and ego loss	9.59547	12	.6514
Working status and hazard loss	10.94854	12	.5333
Working status and trying another drug	17.63706	12	.1272
Working status and asking a colleague	30.40212	12	.0024
Working status and going to another doctor	7.46124	12	.8257
Working status and negative word of mouth	14.53571	12	.2678

Source: Author

Working status and asking a colleague was found to be below 0.05 level, at twelve degrees of freedom.

2.2.2.18. Risk Perception and Experience

The hypothesis that "the amount of uncertainty/consequences risk a doctor perceives in drugs becomes less as he/she gains more experience" was not supported by the data.

TABLE 2.43.

	Mean	Std.Dev.	Variance-Covar.	Correlations
Uncertainty risk	3.1250	0.7145	.1526	.0437
No of years in profession	5.9583	4.8837		
Consequences risk	2.8526	0.92222	-.6489	-.1438
No of years in profession	6.0000	4.8925		

Source: Author

2.2.2.19. Image of a Drug Producer in Case of New/on the Market Drugs and With Respect to Seriousness of Illness

The hypothesis that "image of a drug producer is more important for doctors in case of new rather than on-the-market drugs and with respect to seriousness of illness" was supported by the data at .000 level of significance. The means are 3.2632 (new drug) to 2.5158 (on-the-market drug) and 2.7204 (new drug wrt. seriousness of illness) to 2.1613 (on-the-market drug wrt. seriousness of illness).

TABLE 2.44.

	Mean	t	df	P
Importance of known producer in case of a new drug	3.2632	7.80	94	.000
Importance of a known producer in case of an on-the-market drug	2.5158			
Importance of known producer in case of a new drug wrt.seriousness of illness	2.7204	6.52	92	.000
Importance of known producer in]. seriousness of illness	2.1613			

CHAPTER THREE

CONCLUSION AND IMPLICATIONS

Interpretation of the findings and implications of the study will be presented in this chapter.

3.1. Conclusion: Interpretation of the Findings

Data for this study of risk perception was collected through structured questionnaires designed separately for consumers and doctors. 103 consumers and 96 doctors responded to questions on perceived risk in cosmetics and/or drugs (Consumers answered questions on both cosmetics and drugs, doctors answered questions on drugs).

Perceived risk consists of two components - uncertainty and consequences - and these two components were studied separately throughout the study. Three products were chosen in case of cosmetics: deodorants, perfume/shaving lotions, and make-up/shaving materials. Uncertainty and consequences risk perceptions differed from each other for the chosen cosmetic products in that 79.6% of the respondents perceived medium to high uncertainty risk while this percentage went down to 68.0 in consequences risk meaning that uncertainty about the outcome was perceived more often than risk of possible consequences. Remembering Cunningham's(64) definition of these two components of risk, the following can be said: People, in general, were not very certain that a brand of deodorant (perfume/shaving lotion, make-up/shaving material) they have not tried would work as well as their present brand. However, compared with other products, they would say more easily than the above case that there was not so much risk in trying a brand of deodorant (perfume/shaving lotion, make-

(64) Cunningham, S. (1967).

up/shaving material) they never used before. Looking at these products individually, the same thing could be seen. In all of the three cases, uncertainty risk was higher than consequences risk, the difference being more pronounced in case of deodorants and perfume/shaving lotions.

Coming to perception of loss, one can see that money loss was the most agreed upon type of loss in case a cosmetic product turned out to be useless. Then came ego loss, hazard loss, and time loss, in succession. Individuals may think that the products in question are rather expensive items and perceive money loss in case they cannot be used; besides, a feeling of having been deceived may lead to frustration and hence, ego loss.

Expensive product and most advertised brand were the least favored risk reduction strategies in case of the chosen cosmetic products. Free sample, shopping experience, major brand, and word-of-mouth, on the other hand, were considered to be good risk reduction strategies; then came brand loyalty, government test, advice of seller, store image, foreign brand, and money back guarantee, in succession. Answers given were not very different from each other in any of the product categories involved. This finding gives a message to cosmetic manufacturers, in a way, since it reveals customers' ideas on buying new products: They would not always choose the expensive product or the most advertised brand; and yet, they would very much appreciate free samples.

Questions coming after the cosmetics part were related to drugs in consumers' questionnaires. Different cases where illness was serious and not serious and where the drug was new and has been on the market for a time were analyzed to reach at various findings. In case of uncertainty risk, seriousness of illness did not make a big difference; medium risk was perceived most of the time and there was a trend toward high risk. Coming to consequences risk, high risk was perceived when the illness was serious and medium level of risk was perceived when the illness was not serious. That means, people were not very certain that a drug they have not tried would work as well as a drug they have been using whether the illness was serious or not. Furthermore, they would say that there was much risk in trying a drug they never used before in case of serious illness and that there was still risk in trying such a drug in case of simple illness.

When a drug was prescribed by the doctor, risk perception was medium to high if the drug was new; it was medium to low if the drug was an already-on-the-market one. The same pattern might be seen in case of a drug available with no prescription; however, individuals perceived more risk in case of non-prescribed drugs, be they new or

already on the market. In short, people perceive risk in using new drugs even if they are prescribed by the doctor. This risk perception is more when the drugs are not prescribed. Lower levels of risk are still perceived in on-the-market-drugs whether they are prescribed or not. With respect to seriousness of illness, again medium to high risk was perceived when the drug was new and prescribed by the doctor and this perception was more compared to the case where seriousness of illness was not the issue. In on-the-market prescribed drugs, medium to low risk was perceived, this being less than the first case where seriousness of illness was not the issue. In case of non-prescribed drugs, high to medium risk was perceived in new drugs and medium to high risk was perceived in on-the-market drugs, both being higher than the above case where seriousness of illness was not the issue. As the illness got serious, individuals' anxiety increased in all of the cases studied except for on-the-market prescribed drugs. This might be due to the presence of a doctor together with a known drug which has been on the market for a period of time; people felt more secure in such a case.

Asking for others' advice in case of prescribed drugs whether they were new or already on the market was medium to low, being more pronounced in on-the-market drugs. That is, people did not go to others to get their opinion after they went to a doctor. As the illness got serious, however, most individuals thought that it was better to ask another doctor if the drug was new; they referred to pharmacists and friends more than the other case where seriousness of illness was not the issue. When the drug was an on-the-market one, the referral rates were lowered again. As the illness got serious, people were frightened and searched for more information from every source available to them, especially if the drug in question was a new one.

When buying a drug on one's own, medium to high referral rate to a doctor and a pharmacist were seen whether the drug was new or an already-on-the-market one. It was not quite common to go and buy just by oneself without asking anybody's advice. As the illness got serious, a doctor was mostly referred to and a pharmacist was also seen as a source to get advice. This was most pronounced in case of non-prescribed new drugs when the illness got serious. Word-of-mouth communication did not play a role in case of simple illness, individuals did not rely on friends' or relatives' ideas so much. However, in serious illness, people tried to get as much information as possible from every available source; hence, although not high, some referral rate to friends/relatives was seen when serious illness was the issue.

Importance of a known drug producer in case of a new drug was high to medium in both cases where seriousness of illness was and was not the issue. When the drug

was an on-the-market one, this importance changed direction and was medium to high in both of the cases, meaning that people, in general, wished to know the producer of a drug they were to use.

When a prescribed drug failed to heal an individual, time loss and ego loss were perceived for most part. Time loss, in the sense that it might have been better for the patient if another drug were to be used during that period of time. And ego loss resulting from a frustration due to remaining ill or due to the doctor's "poor" decision. Not much hazard loss was perceived: They would be under the supervision of a doctor and a doctor always knew better than themselves; if a drug did not work, the doctor would prescribe another drug which worked. Or, if the doctor was not good enough, there was always a chance of finding a better doctor. Again, more than half of the respondents would go to the same doctor while most of them would also go and see another doctor, in such a case. If a non-prescribed drug failed to heal an individual, importance of each type of loss changed: Almost 100% of the respondents said that they would go to a doctor and would perceive time loss. Then came ego loss following hazard loss. Money loss perceived was more compared to the above case where the drug was prescribed. If a doctor was seen, he might have given the right drug and money spent for the wrong drug would not have been spent. Ego loss might be a result of feeling bad due to not having gone to a doctor right at the beginning of illness without losing time in healing the individual. In this instance, hazard loss was quite high showing perceived fear of a possible harm to the individual.

The second type of questionnaire was distributed among doctors and was aimed at finding out about doctors' risk perceptions in prescribing drugs and related topics on drugs. Medium to high uncertainty risk was perceived in both serious and simple illness, the high percentage being more in case of serious illness. For consequences risk, two more factors were analyzed: the drug's being new or on the market. In on-the-market drugs, medium to high risk was perceived when the illness was serious; medium to low risk was perceived when the illness was not serious. In new drugs, as well, the same thing took place in case of serious illness; however, it was medium to high even if the illness was not serious. To put this another way, doctors were not very certain that a drug they had not tried would work as well as the drugs they were using in case of both serious and simple illness. Furthermore, they would say that there was some risk in trying an on-the-market drug they never used before in case of serious illness and lower risk in case of simple illness. They would also say that there was much risk in trying a new drug they never used before in case of serious illness and still some risk in case of simple illness.

Coming to risk perception in prescribing drugs, the following can be cited: Risk perception was quite high in prescribing a new drug; it was rather low in prescribing on-the-market drugs. With respect to seriousness of illness, again risk perception was quite high in case of a new drug and rather low in case of an on-the-market drug. From the above statements, it can be seen that even if the substances a drug contains are known, doctors hesitate to prescribe it if it is new. This hesitation becomes more as the illness gets serious. Side effects together with the overall effect of a drug need to be known in order for risk perception to decrease. "A new drug presents something of a threat to both the patient and the doctor. It may, for example, have unforeseen deleterious side effects. Apart from his primary professional concern for his patient, the doctor wants to 'avoid trouble. Thus, it is not unusual for doctors being interviewed to express concern that some new practice or drug might cause them personal embarrassment. One might assume from this that the 'conservative' and professional' course of action would be to go slow in adopting new drugs, and particularly to be wary of commercial sources of information"(65).

Sources of information used in getting to know about a new drug, and in choosing a drug together with the sources doctors relied on in prescribing drugs were the next topics that were analyzed: The most frequently used source to get informed about a new drug was detailmen (individuals coming from drug firms to give information on a new drug). However, as Bauer and Wortzel(66) pointed out in their study titled "Doctor's Choice: The Physician and His Sources of Information About Drugs", awareness and trial were not synonymous and awareness, no matter what its source, did not necessarily induce trial. In this study, too, the above statement was supported by the data because when asked about sources used in choosing drugs, meetings and conferences and foreign literature together with Turkish literature were the sources which were ranked the first by majority of the doctors. Detailmen, on the other hand, lost their importance; only ten percent of all respondents chose them as their first source. When asked about the sources they relied on in prescribing drugs, previous experience was by far the most important factor doctors mentioned. Besides this, other colleagues' ideas were also mentioned but with a rather low rate compared to previous experience.

In this study, the respondents were mostly from state hospitals and health centers. The patients, therefore, were of lower socio-economic levels and educational background. This resulted in a specific patient profile in the doctors' minds. They said the

(65) Bauer,R.(1967).

(66) Bauer,R., Wortzel,L. (1967).

patients could not ask intelligent questions and could not understand the things told; they were very much under the influence of their relatives; the patient kept quiet, while the third party acted as the patient's spokesman. In such a situation, more than half of the doctors found it appropriate not to have drug related advertisements in media. Some doctors mentioned that even the educated could not sometimes understand or ask as he/she should. These doctors thought that it was of vital importance to educate everybody on health issues. According to these doctors, health was the least known but the most argued upon area by everybody. Without education, nobody could expect to have conscious patients. Similarly, doctors thought that it was of no importance for patients to know about the producer of a drug, be it a new or an on-the-market one. This seems contrary to the consumers' opinions. As can be remembered, it was important for consumers to know about the producer of a drug. However, the sample taken for this study was a rather educated one and socio-economic levels were not very low. The doctors were replying with their specific patient profile in their minds, on the other hand.

Importance of known producer for doctors was high to medium in case of new drugs and medium to low in case of already-on-the-market drugs. With respect to seriousness of illness, it was medium to high in case of new drugs and medium to low in case of on-the-market drugs: It is quite important for doctors to know about producers; doctors, in a way, trust only the firms that are reliable and apply the latest scientific production methods; that helps them differentiate among the many available drugs on the market containing the same substances. This need is not affected by a change in the seriousness of illness. As was mentioned before, a new drug is always troublesome; it may have 'unforeseen deleterious side effects'. The trust put in a known producer plays a role in such an instance, as well. A reliable firm helps the doctor make his choice. This might be the reason for the high percentage of importance given to known producers in case of new drugs.

In case a drug the doctor prescribed failed to heal an individual, most respondents did not perceive any type of loss (time/hazard/ego). They said they asked another colleague or gave another drug. They were not afraid of negative word-of-mouth that could take place or of the patient going to another doctor. These perceptions might be quite different if the respondents were independent doctors, not working in hospitals or health centers.

Coming to findings related to the hypotheses, the following may be mentioned:

Women are known to be keener than men in grooming and caring for their appearance. With this in mind, it was hypothesized that they would be more careful in

case of cosmetics and be different than men in every aspect related to cosmetics. Contrary to this, however, it was found that there were no significant differences between the two genders in perception of both uncertainty and consequences risks and in the types of losses perceived in case of the cosmetic products chosen. This may be due to the products at hand; these results may only hold true for these cosmetic products or men may have begun to give importance to their physical appearance as well as women.

People with different education levels differed in their risk perception in cosmetics. Comparing uncertainty risk with consequences risk, one can see that people, in general, perceived lower consequences risk than uncertainty risk in case of cosmetics. This finding is the same as was found in the beginning of this chapter: People are not very certain that a brand of deodorant (perfume/shaving lotion, make-up/shaving material) they have not tried will work as well as their present brand. However, compared with other products, they would say more easily than the above case that there is not so much risk in trying a brand of deodorant (perfume/shaving lotion, make-up/shaving material) they never used before. Looking at the education levels individually, it can be seen that both uncertainty and consequences risks increased as the education level increased. This increase was more clear in case of uncertainty risk. When the difference between the two components of risk was sought, the percentages did not change very much; there was a trend toward lower levels of consequences risk (low consequences risk increased and high consequences risk decreased in every education level) with individuals having higher education levels perceiving more risk than individuals having lower education levels. This may be due to the consciousness education brings with itself. As an individual gets more educated, he/she becomes more aware of everything. Usage of cosmetics, perception and understanding of the things written and said about them all change with education. Related to this, it was also hypothesized that people with different education levels differed in their risk perception (uncertainty and consequences) in case of drugs used for serious illness. However, this hypothesis was not supported by the data. Possible explanations may be as such: People, no matter what their education levels are, may be asking a doctor about the kinds of drugs they are to use in case of serious illness. They may also be talking with others - pharmacists and friends, relatives - to get their ideas and this form of communication may somewhat affect risk perception. Or as some doctors have put it, health issues are the least known but the most argued upon subjects in Turkey and even the educated need to be educated on these issues. By saying so, doctors have categorized all patients in one group: "knowing nothing and in need of education". This may be a factor contributing to 'no significant differences' between people with different education levels.

The hypotheses dealing with age, occupation and risk reduction methods in cosmetics were not supported by the data except for one case, free sample in deodorants. People older than 40 years of age were found to favor free deodorant samples more than those younger than 40 years of age (most probably just by chance). Again, no significant differences were found between people who were not working (housewife, retired, student) and people who were working (government and private sector employees).

Less risk (uncertainty and consequences) was perceived in cosmetics than in drugs used for serious illness, a logical statement, was supported by the data.

The next set of hypotheses were formed to figure out if risk perception was affected in case a middleman was placed between the final consumer and a product to be purchased. The middleman was taken to be a doctor in this study.

People perceived more risk in buying a drug by themselves, be it new or already-on-the-market (situation where there is no middleman), than in buying a drug by prescription (situation where there is a middleman). Hence, a middleman in case of buying new and on-the-market drugs played a role so as to reduce risk perception. The same result was applicable to the case where seriousness of the illness was the issue: Again, a middleman functioned to decrease the amount of risk perception. People perceived less risk in buying cosmetics (no middleman) than in buying a new or an on-the-market drug by themselves in case the illness was serious (no middleman). Here, there were no middleman involved and logically, there was more risk perception in buying the drug. People perceived less risk in buying cosmetics (no middleman) than in buying a new prescription drug in case the illness was serious (situation where there is a middleman). Although no middleman was involved in buying cosmetics, less risk was perceived in their purchase. This shows that there are cases which can be handled without a middleman; risk perception in such cases may even be less than the risk perceived in some other cases where a middleman exists. On the other hand, in buying cosmetics (no middleman) versus an on-the-market prescribed drug in case the illness was serious (situation where there is a middleman), it was not supported by the data that people perceived less uncertainty risk in buying cosmetics. There was no significant relationship between the variables studied, for uncertainty risk. The presence of a doctor (middleman) together with a known drug which has been on the market for a period of time decreased risk perception to a great extent. Uncertainty risk may have been reduced due to having enough information - there is a doctor and a known drug producer involved. However, people still perceived less consequences risk in buying cosmetics

than in buying an on-the-market prescription drug. That means, people, no matter how much information they have, perceive danger in using a drug when the illness is serious. There was significantly greater risk in buying drugs without prescription (no middleman) than in buying them with prescription in case the drugs were new (situation where there is a middleman). Risk was perceived at a lower level when there was a middleman. In sum, it can be said that according to the situation the individual is in, risk perception and the need for a middleman change.

As was found out earlier, image of a drug producing firm was more important for people in case of new rather than on-the-market drugs where seriousness of illness was and was not the issue. A well-known producer was thought to be reliable and individuals felt secure, in a way, buying the drug of such a firm. This tendency was even stronger when the drug in question was a new, not widely known and applied one.

Time loss, hazard loss, and money loss perceived when a prescribed drug failed to heal an individual differed from those perceived when a non-prescribed drug failed to heal. These differences were greater in prescribed drugs. This hypothesis was not supported in case of ego loss: For ego loss, there was no significant difference perceived when a prescribed or a non-prescribed drug failed to heal an individual. A possible explanation for these results might be that people believe in doctors quite a lot and cannot even think that there is a possibility of their being wrong in some instances. Individuals feel equally bad when a drug fails whether it is prescribed or not; the patient is still a patient and no matter what or who the source of error is (!), he/she is frustrated.

Hypotheses related to doctors may be cited as follows: Except for one case, there were no significant differences between male and female doctors in their risk and loss perception when the illness was/was not serious, the drug was new/on the market and when a drug they prescribed failed to heal an individual. The only difference was seen in uncertainty risk when illness was serious. According to this finding, male doctors felt more uncertain than their female colleagues that a drug they have not tried would work as well as the ones they have been using.

A newly introduced drug caused more risk perception than a drug that had been on the market for a period of time in case of serious illness. Furthermore, the doctor perceived more risk in prescribing a newly introduced drug than an already on-the-market drug in case the illness was serious.

It was found that there was no relation between gender and working status of doctors and types of loss they perceived in case the prescribed drug did not function well

enough except for 'Working status and asking a colleague. Since most of the respondents were state hospital and health center doctors, they had friends around from whom they could get opinions. That is the reason why there is a relationship between working status and asking a colleague in case a prescribed drug fails to heal a patient.

The amount of uncertainty/consequences risk a doctor perceived in drugs did not become less as he/she gained more experience. Every time a new drug is produced, there is the possibility of its being hazardous to health due to some "unforeseen deleterious side effects". This can never be overlooked by any doctor whatever her/his experience may be.

Image of a drug producing firm was more important for doctors in case of new rather than on-the-market drugs in case the illness was or was not serious. Since there is always a possibility of having hazardous consequences in case of a new drug, doctors need a way of reducing their perception of risk and this may be accomplished, to a degree, through a well-known, reliable drug producer.

3.2. Importance and Implications of the Study

This study on perceived risk is one of the few studies conducted on this classical theme of consumer behavior in Turkey. It tries to find out about risk perception in cosmetics and drugs. Although it may have shortcomings, the researcher hopes that it will have some contribution for future research.

a) Implications for Marketers

The study has some implications for marketers; the subject of perceived risk has to be taken into account by marketers in order to be able to compete with competitors. Product, price, place, and promotion - four P's of marketing - may all, at times, be influenced by perceived risk since it is perceived risk that determines how a customer will act and it is the customer that determines the fate of a product.

In case of the chosen cosmetic products, both men and women were found to perceive similar types of risks and loss: Uncertainty risk and money loss, together with ego loss to a degree, were the most frequently mentioned perceptions. "Consumers develop characteristic styles of reducing uncertainty - to increase their feelings of certainty. These risk handling styles are a function of dominant personality and buying goals; cognitive needs and styles; degree of buying maturity and experience."(67)

Besides, people with different education levels differ in their risk perception (uncertainty and consequences) in case of cosmetics. Those having higher education perceive more risk, especially uncertainty risk. This component of risk, on the other hand, may be reduced by giving information to these people having the capacity to understand things more easily-since they are more educated. Hence, once a target market is selected, marketers may isolate the personality traits and cognitive needs and styles of the individuals in that market, look at the education level of the market, develop strategies so as to eliminate uncertainty risk perception by giving information to the market and by influencing their risk handling styles. By doing so, they can persuade customers to buy their products. Specific cosmetic products may be designed and promotional strategies may be forwarded that will appeal to the existing target market.

'Expensive product' and 'most advertised brand' are the two least favored, and hence the least effective risk reduction strategies in case of the chosen cosmetic products. In some instances, the price of a product is thought to reflect its quality and people are ready to pay enormous amounts of money for such a product; 'quality' may be a way of reducing risk, then. However, in this study, no such trend was seen; on the contrary, expensiveness repelled customers. Advertisement, a promotional tool, is used so as to inform and persuade consumers and this is a means for communication between customers and marketers. However, those marketers who think that they should invest much in ads, should think about it once again before doing so because in this study, 'most advertised brand' was not favored, either. On the other hand, 'free sample' and 'major brand' were admired by most of the respondents. When a cosmetic product is given free, an individual tries it once and if she likes it, a positive attitude may be formed toward it. Although it is not the individual's decision to consume, enforced behavior change may result in directing a customer to buy that specific product from then on. The respondents also thought that 'shopping experience' and 'word-of-mouth communication' were two other effective strategies in the reduction of perceived risk. It must never be forgotten that 'word-of-mouth communication' is a two-edged sword; negative as well as positive communication may take place and of these, negative communication can cause much harm to a producer. More than half of the respondents agreed that 'brand loyalty', 'advice of seller', 'money back guarantee', 'store image', 'government test', and 'foreign brand' were all good ways of reducing risk. Accordingly, the above methods should not be underestimated.

Although the below paragraphs do not show the importance of the study, the researcher believes that the points taken up in those paragraphs are basic to marketing and should be carefully analyzed by marketers.

The first and most important element of the marketing mix is product. In developing a cosmetic product, the product planner needs to think about the essential service that the buyer is really buying. As was mentioned before, Charles Revlon of Revlon, Inc. has said that their job was to sell hope in case of cosmetics. Marketer's job is to uncover the needs hiding under every product and to sell benefits, not features. A marketer should, thus, define his business domain first. There may be a differential response from different segments of the market. In order to penetrate into the market, marketers may either force people to use more of the cosmetic products they are producing, steal the competitors' consumers, or make the non-users, users. Besides, a differential advantage may be sought for to compete with the competitors. Coming to target market selection, one of the four following strategies may be used: Market specialization where all kinds of cosmetic products are produced for specific consumers; product specialization where only one type of cosmetic product (deodorants, e.g.) is produced for all customers; selective specialization where multiple niches are entered that have no relation to each other except for their constituting an attractive opportunity; and full coverage where a product for "every person, purse, and personality" is produced. The product, in turn, will have a quality level, features, styling, a brand name, and packaging. According to the selected target market, the above mentioned characteristics may be established for each individual cosmetic product. Among these characteristics, packaging plays a major role in case of cosmetics since it performs several functions in attracting and satisfying customers. It produces a differential advantage and accomplishes promotion in the sense that it both gives information and persuades individuals to buy the product. Therefore, it should not be overlooked by marketers.

In setting the price of a product, the company should first establish its marketing objectives, such as survival, current profit maximization, market-share leadership, or product-quality leadership. Then, a demand schedule, which shows the probable quantity purchased per period at alternative price levels should be determined. The company can set its price higher if the demand for the particular cosmetic product(s) at hand is inelastic. Third, the company should estimate how its costs vary at different output levels and with different levels of accumulated production experience. Competitors' prices should also be examined as a basis for positioning the company's own price. After this step, an appropriate pricing method should be selected. Lastly, a final price needs to be selected, expressed in the most effective psychological way and checked to conform to company pricing policies and to prevail with company sales force, competitors, suppliers, and the government.

Coming to promotion, marketers should know how to use advertising, sales promotion, publicity, and personal selling to communicate the product's existence and value to the target market. To be able to communicate, as was mentioned in one of the above paragraphs, he/she needs to identify the target market and its characteristics, including the image it carries of the cosmetic product at hand. The communication objective must be defined and a message must be designed. Then communication channels must be selected, total promotion budget must be established. The communicator must then try to see how much of the market becomes aware and tries the product and is satisfied in the process. Finally, all of these must be managed and coordinated for consistency, good timing, and effectiveness.(68)

The last important factor to be considered is distribution. As Philip Kotler puts it, retailing and wholesaling consist of many organizations designed to bring goods and services from the point of production to the point of use. Retailing includes all the activities involved in selling goods or services directly to final consumers for their personal, non-business use. Retailers can be classified in several ways: by product line sold (specialty stores), department stores, supermarkets, convenience stores ... Retailers make decisions on their target market, product assortment and services, pricing, promotion, and place. Cosmetic producers may choose to use specialty stores in order to sell their products. Besides, department stores may be good places for the sale of cosmetics; working people, especially women, tend to go to department stores a lot since such stores contain most of the products individuals may be in need and search of. There are some cosmetic products being sold at supermarkets, as well. Producers should choose among such retailers in order to reach consumers. This choice will be in accordance with company objectives and policies, of courses.

b) Implications for Consumers

Consumers perceive different types and levels of risk in different buying situations. In the case of cosmetics, uncertainty risk is perceived most of the time; consumers in Turkey do not perceive danger in trying a brand they have not used before. In terms of the types of losses involved in case a cosmetic product turns out to be useless, more than half of the respondents agree that they perceive all types of loss (time, ego, money, hazard) for the chosen cosmetic products. However, compared with others, time and hazard loss are perceived less. Comparing the degrees of loss

(68) Kotler,P. (1988)

perceived among the different cosmetic products, all types of loss are perceived the least in make-up/shaving materials. Even if a lipstick or mascara which is used for two years does not harm a woman, considering the products that fall within the category of make-up materials (including all kinds of facial cremes), it is surprising that some Turkish women do not see danger in trying products on their skins and even faces. This point should not be overlooked by individuals since any kind of an allergy would most probably result in hazard loss. As to drugs, most respondents said that it was important for them to know about the producer of a drug they were to use. That shows a sign of consciousness on the part of consumers in the choice of drugs. Besides, individuals rely on doctors quite much. However, they should be capable of going and asking questions to the doctors or tell the doctors about their disappointment with a prescribed drug if it fails. For such a thing to take place, they need to be educated and informed as discussed below.

c) Implications for Drug Producers

In case of drugs, individuals perceive risk in using new drugs even if they are prescribed by the doctor. This risk perception is more when the drugs are not prescribed. Lower levels of risk are still perceived in drugs which have been on the market for a period of time whether they are prescribed or not. As it is known, pharmaceutical manufacturing companies have no way of reaching individuals so as to convince them on the reliability of their drugs; they are not able to advertise and, hence, communicate with people. Due to this, these manufacturers need to reach doctors in one way or another; this communication is their only way to reach individuals. Once a doctor begins to think that the drug producer is reliable, some kind of a trust will be formed and both the doctor's and his patient's - in case of prescribed drugs - perception of risk may diminish.

Individuals mostly ask for another doctor's advice in new and on-the-market prescribed drugs if the illness is serious. If not, only the doctor's advice is enough for them. Referral rate to a pharmacist is somewhat more in case of serious illness. When the drug is new and illness is serious, friends and relatives are referred to, as well, up to a degree. The need to get as much information as possible, from every source available, is a good indicator of the degree of risk perception involved in such a case. Together with these, doctors, too, perceive risk in prescribing new drugs; this risk increases as the illness gets more serious. Promotional tools by pharmaceutical manufacturers have to be directed towards being more informative and interpersonal/organizational communication between these marketers and doctors/pharmacists have to be strengthened. Conferences and seminars by pharmaceutical companies may be helpful in giving

information on drugs. This may also increase the trust doctors put in the company and make it better-known, too, which is highly valued by most of the respondents. Some promotional tools being used widely by the pharmaceutical companies are calendars, diaries, note pads, pens, and small samples. These are effective, at least, in making the company known; doctors like such things. It should not be forgotten by the manufacturers that detailmen are important in letting the doctors learn about a new drug; yet, their effect decrease a lot when it comes to choosing the drug.

d) Implications for the State

The findings show that there are some severe problems which have to be dealt with also by the State in case of the relationships between doctors and patients. Practitioner doctors who are mostly aged between 20-30 and who are mostly state hospital and health center doctors have patients that are mostly at low socioeconomic and education levels. Hence, a set profile of patients is reported to be formed in the doctors' minds: The patients are not capable of understanding the things they are told by the doctor and they are not able to ask intelligent questions. Most of the doctors seem not to care about the patients very much: If a drug does not heal an individual, another drug may do the job! A mechanism at the macro level consisting of accountability, consciousness, and responsibility as its components has to be formed by the state such that, when a drug does not function as is expected and fails to heal an individual, the patient should be able to go and tell the doctor that he/she is not fond of the drug; the doctor, in turn, should go back and inform the drug producer that the drug is inefficient (if the illness is a known and specific one that can be cured by certain drugs) so as to enable the drug producer to control it and make some necessary changes to have it function properly. For such a mechanism to work, there must be consciousness on the part of patients, responsibility on the part of doctors, and accountability together with responsibility on the part of drug producing firms. If any of the chains is broken, the mechanism fails to function effectively. For the above purposes, patients need to be educated on health issues. Whether they are of high or low socioeconomic and educational levels, individuals are in need of education with regard to these issues. Drug producers should be reliable and working with the latest technological methods to diminish the possibility of defective drug production. On the other hand, doctors, too, may be educated so as to value every patient whatever his/her level of education or socioeconomic status is. Doctor's task is to heal human beings without making discriminations. The rather young sample of doctors have many more years ahead and if

motivating measures are taken to change their attitudes and intentions toward patients, related problems will be better handled in Turkey.

e) Implications for Researchers

This study may be helpful for future research and researchers in that it provides a basis for the study of risk perception in two somewhat related areas: cosmetics and drugs. Although it may have shortcomings, this is one of the few studies conducted on this theme of consumer behavior in Turkey. It consists of a literature review, as well, from which ideas for other studies may be generated. Respondents chosen in this particular study had somewhat similar demographic characteristics. Differing demographic characteristics and their effects on the findings may be searched for in a later study. In the case of cosmetic products, "which kind of risk relievers are more suitable for what types of losses" may be another issue to be analyzed. The results, then, may be compared with those of Ted Roselius, who was the first one interested in that particular question. Different cosmetic products may be chosen and the results of such a study may be compared with the results of this one. Coming to drugs, particular drugs may be chosen, their names may be specified and the same questions may be asked - In the present questionnaires, three types of information (when the drug is new/already-on-the market, is prescribed/not prescribed, the illness is/is not serious) were sought for and the respondents were quite bored with the repetitive questions. Particular, known drugs may reduce the individuals' boredom and may result in more effective findings. According to the researcher, in a further study, it would be interesting to find out about the differences between (a) state hospital/health center doctors and independent doctors and (b) practitioners and specialists with respect to risk perception.

APPENDIX I

Questionnaire A

Questionnaire B (For doctors)

QUESTIONNAIRE A

Bu anket, Boğaziçi Üniversitesi Sosyal Bilimler Enstitüsü İşletme Anabilim Dalı bünyesinde ve Doç.Dr.Eser Borak danışmanlığında hazırlanan yüksek lisans tezinin bir parçası olup, kozmetik ve ilaç sanayii konularında bilgi edinmek amacıyla düzenlenmiştir. Sonuçlar genel olarak değerlendirileceği için isim yazmanız gerekmemektedir. Ancak, çalışmanın güvenilirliği açısından tüm soruları tam olarak yanıtlamanız çok önemlidir. Ankete gösterdiğiniz ilgi ve değerli yardımlarınız için çok teşekkür ediyoruz.

1. Lütfen aşağıdaki soruyu okuyarak sunulan ürünlerin her biri için ayrı ayrı cevap veriniz.

"Şimdiye kadar hiç kullanmadığınız yeni bir markanın şu anda kullanmakta olduğunuz marka kadar iyi olabileceğine inanır mısınız?"

	Hiçbir zaman	Bazen	Genellikle	Her zaman	Kullanmıyorum
Deodorant					
Parfüm					
Tıraş Losyonu					
Makyaj Malzemesi					
Tıraş Malzemesi					

2. Lütfen aşağıdaki soruyu okuyarak sunulan ürünlerin her biri için ayrı ayrı cevap veriniz.

"Daha önce hiç denemediğiniz bir markayı denemedeki sakıncalar"

	Çok	Biraz	Çok az	Hiç	Kullanmıyorum
Deodorant					
Parfüm					
Tıraş Losyonu					
Makyaj Malzemesi					
Tıraş Malzemesi					

3. Satın aldığınız bir ürünün bozulmuş olması ya da işe yaramaz çıkması halinde aşağıdaki cümleler hislerinizi ve düşüncelerinizi ne ölçüde yansıtırlar? Belirtilen sıralamaya göre cevabınızı daire içine alınız.

1. Kesinlikle aynı fikirdeyim
2. Aynı fikirdeyim
3. Aynı fikirde değilim
4. Kesinlikle aynı fikirde değilim.

	Deodorant	Parfüm Traş losyonu	Makyaz malzemesi Traş malzemesi
Boşuna zaman harcadığımı düşünürüm	1 2 3 4	1 2 3 4	1 2 3 4
Sağlığa zararlı birşey yaptığımı düşünürüm	1 2 3 4	1 2 3 4	1 2 3 4
Aldatıldığım için çok üzülürüm	1 2 3 4	1 2 3 4	1 2 3 4
Paramı boşa harcadığımı düşünürüm	1 2 3 4	1 2 3 4	1 2 3 4
Aynı para ile daha iyi şeyler alabileceğimi düşünürüm.	1 2 3 4	1 2 3 4	1 2 3 4
Kendimi kötü hissedirim	1 2 3 4	1 2 3 4	1 2 3 4
Yenisini satın almam zamanımı alacak diye düşünürüm	1 2 3 4	1 2 3 4	1 2 3 4

4. Aşağıda belirtilen ürünlerin satın alınma veya kullanımında ortaya çıkabilecek sakıncaları giderme açısından, aşağıda belirtilen davranışların sizce uygunluğu nedir?

1. Kesinlikle aynı fikirdeyim
2. Aynı fikirdeyim
3. Aynı fikirde değilim
4. Kesinlikle aynı fikirde değilim.

	Deodorant	Parfüm Traş losyonu	Makyaz malzemesi Traş malzemesi
Reklamı en çok yapılan ürünü almak	1 2 3 4	1 2 3 4	1 2 3 4
Devamlı olarak belirli bir markayı kullanmak	1 2 3 4	1 2 3 4	1 2 3 4
Satıcının fikrini almak	1 2 3 4	1 2 3 4	1 2 3 4
Numune almak, denemek	1 2 3 4	1 2 3 4	1 2 3 4
Tanınmış markayı almak	1 2 3 4	1 2 3 4	1 2 3 4
Parayı geri alma imkânı olan markayı almak	1 2 3 4	1 2 3 4	1 2 3 4
Belirli bir mağazadan almak	1 2 3 4	1 2 3 4	1 2 3 4
Devlet garantisi, kamu kuruluşlarının araştırma sonuçlarına bakmak	1 2 3 4	1 2 3 4	1 2 3 4
Kişisel alışveriş tecrübesine güvenmek	1 2 3 4	1 2 3 4	1 2 3 4
Ürünün pahalısını almak	1 2 3 4	1 2 3 4	1 2 3 4
Arkadaşların, dostların fikrini almak	1 2 3 4	1 2 3 4	1 2 3 4
Yabancı marka satın almak	1 2 3 4	1 2 3 4	1 2 3 4

5. Aşağıda belirtilen iki durum için, şimdiye kadar hiç kullanmadığınız bir ilâcın şu anda kullanmakta olduğunuz ilâç kadar iyi olabileceğine inanır mısınız?

Hastalık ciddi ise	<input type="checkbox"/> Hiçbir zaman	<input type="checkbox"/> Bazen	<input type="checkbox"/> Genellikle	<input type="checkbox"/> Her zaman
Hastalık ciddi değilse	<input type="checkbox"/> Hiçbir zaman	<input type="checkbox"/> Bazen	<input type="checkbox"/> Genellikle	<input type="checkbox"/> Her zaman

6. Aşağıda belirtilen iki durum için, daha önce hiç denemediğiniz bir ilâcı denemedeki sakıncıları

Hastalık ciddi ise	<input type="checkbox"/> Çok	<input type="checkbox"/> Biraz	<input type="checkbox"/> Çok az	<input type="checkbox"/> Hiç
Hastalık ciddi değilse	<input type="checkbox"/> Çok	<input type="checkbox"/> Biraz	<input type="checkbox"/> Çok az	<input type="checkbox"/> Hiç

7. Aşağıda belirtilen iki durum için, reçetesiz satılmayan bir ilâcı doktorun izni ile satın alırken ne derecede tereddüt edersiniz?

	Çok	Biraz	Çok az	Hiç
İlâç piyasaya yeni çıkmışsa				
İlâç uzun zamandır piyasadaysa				

8. Aşağıda belirtilen iki durum için, reçetesiz satılabilen bir ilâcı kendiniz satın alırken ne derece tereddüt edersiniz?

	Çok	Biraz	Çok az	Hiç
İlâç piyasaya yeni çıkmışsa				
İlâç uzun zamandır piyasadaysa				

Hastalığın ciddiyetine göre tereddütünüz ne derece olur?

	Çok	Biraz	Çok az	Hiç
İlaç piyasaya yeni çıkmışsa				
İlaç uzun zamandır piyasadaysa				

9. Reçetesiz satılmayan bir ilâcı doktorun tavsiyesi ve izni üzerine de olsa almadan önce aşağıda belirtilen şahıslara da ilâcı alıp almama konusunda danışır mısınız?

a) İlaç piyasaya yeni çıkmışsa

	Hiçbir zaman	Bazen	Genellikle	Her zaman
Başka bir doktora				
Eczacıya				
Arkadaşa, eşe dosta				
Diğer (Lütfen belirtiniz)				

b) İlaç uzun zamandır piyasadaysa

	Hiçbir zaman	Bazen	Genellikle	Her zaman
Başka bir doktora				
Eczacıya				
Arkadaşa, eşe dosta				
Diğer (Lütfen belirtiniz)				

Danışma oranınız hastalığın ciddiyetine göre ne derece olur?

a) İlaç piyasaya yeni çıkmışsa

	Hiçbir zaman	Bazen	Genellikle	Her zaman
Başka bir doktora				
Eczacıya				
Arkadaşa, eşe dosta				
Diğer (Lütfen belirtiniz)				

b) İlâç uzun zamandır piyasadaysa

	Çok	Biraz	Çok az	Hiç
Başka bir doktora				
Eczacıya				
Arkadaşa, eşe dosta				
Diğer (Lütfen belirtiniz)				

10- Reçetesiz satılan bir ilâcı kendiniz satın alırken aşağıda belirtilen şahıslara da ilâcı alıp almama konusunda danışır mısınız?

a) İlâç piyasaya yeni çıkmışsa

	Hiçbir zaman	Bazen	Genellikle	Her zaman
Bir doktora				
Eczacıya				
Arkadaşa, eşe dosta				
Kimseye danışmam, alır denerim.				
Diğer (Lütfen belirtiniz)				

b) İlâç uzun zamandır piyasadaysa

	Hiçbir zaman	Bazen	Genellikle	Her zaman
Bir doktora				
Eczacıya				
Arkadaşa, eşe dosta				
Kimseye danışmam, alır denerim.				
Diğer (Lütfen belirtiniz)				

Danışma oranınız hastalığın ciddiyetine göre ne derece olur?

a) İlâç piyasaya yeni çıkmışsa

	Çok	Biraz	Çok az	Hiç
Bir doktor				
Eczacı				
Arkadaş, eş dost				

b) İlâç uzun zamandır piyasadaysa

	Çok	Biraz	Çok az	Hiç
Bir doktor				
Eczacı				
Arkadaş, eş dost				

11- Aşağıda belirtilen iki durum için, reçetesiz satılmayan bir ilâcı doktorun izni ile satın alırken tereddütünüz hastalığın ciddiyetine göre ne derece olur?

	Çok	Biraz	Çok az	Hiç
İlâç piyasaya yeni çıkmışsa				
İlâç uzun zamandır piyasadaysa				

- 12- Aşağıda belirtilen iki durum için, reçetesiz satılabilen bir ilâcı satın alırken üretici firmanın tanınmış olması sizce ne derecede önemlidir?

	Çok	Biraz	Çok az	Hiç
Piyasaya yeni çıkmış bir ilâç				
Uzun zamandır piyasada olan bir ilâç				

Firmanın tanınmış olmasını tercih etme ihtimaliniz hastalığınız ciddiyetine göre ne derece olur?

	Çok	Biraz	Çok az	Hiç
İlâç piyasaya yeni çıkmışsa				
İlâç uzun zamandır piyasadaysa				

- 13- Doktor reçetesi ile satın aldığınız ilâç tedavide olumlu sonuç vermez, hastanın durumu iyiye gitmezse, genellikle aşağıdaki cümlelere ne ölçüde katıldığınızı uygun boşluğa (X) işareti koyarak belirtiniz.

	Kesinlikle aynı fikirdeyim	Aynı fikirdeyim	Aynı fikirde değilim	Kesinlikle aynı fikirde değilim
Hastalığınız tedavisinde boşa zaman geçirildiğini düşünürüm				
Doktorun sağlığa zararlı birşey yaptığını düşünürüm				
Tekrar aynı doktora danışmayı uygun görürüm				
Başka bir doktora gitmeyi uygun görürüm				
Paramı boşa harcadığımı düşünürüm				
Kendimi kötü hissederim				

- 14- Reçetesiz satılabildiği için kendi aldığınız ilâç tedavide iyi sonuç vermez, hastanın durumu iyiye gitmez ise, genellikle aşağıdaki cümlelere ne ölçüde katıldığınızı uygun boşluğa (X) işareti koyarak belirtiniz.

	Kesinlikle aynı fikirdeyim	Aynı fikirdeyim	Aynı fikirde değilim	Kesinlikle aynı fikirde değilim
Hastalığın tedavisinde boşa zaman geçirildiğini düşünürüm				
Sağlığa zararlı birşey yaptığımı düşünürüm				
Paramı boşa harcadığımı düşünürüm				
Kendimi kötü hissederim				
Bir doktora başvurmam gerektiğini düşünürüm				
Bir eczacıya danışmak isterim				
Arkadaşlara, eşe dosta danışmak isterim				

- 15- Cinsiyetiniz

_____ Bayan _____ Bay

- 16- Yaş grubunuz

_____ 20 den küçük _____ 30-39 _____ 50-59
_____ 20-29 _____ 40-49 _____ 60 ve yukarı

- 17- Toplam net aile gelirinize göre kendinizi aşağıdaki gelir gruplarından hangisinde görmektesiniz?

_____ Çok düşük _____ Düşük _____ Orta _____ Yüksek _____ Çok yüksek

- 18- Öğrenim durumunuz

_____ Okur yazar _____ Ortaokul _____ Üniversite/Yüksekokul

- 19- Mesleğiniz

_____ Serbest meslek _____ Kamu (memur) _____ Öğrenci
_____ Yönetici _____ Özel (memur) _____ İşçi
_____ Tüccar _____ Emekli _____ Diğer (Lütfen belirtiniz)
_____ Esnaf _____ Ev kadını

QUESTIONNAIRE B

Bu anket, Boğaziçi Üniversitesi Sosyal Bilimler Enstitüsü İşletme Anabilim Dalı bünyesinde ve Doç.Dr.Eser Borak danışmanlığında hazırlanan yüksek lisans tezinin bir parçası olup, kozmetik ve ilaç sanayii konularında bilgi edinmek amacıyla düzenlenmiştir. Sonuçlar genel olarak değerlendirileceği için isim yazmanız gerekmemektedir. Ancak, çalışmanın güvenilirliği açısından tüm soruları tam olarak yanıtlamanız çok önemlidir. Ankete gösterdiğiniz ilgi ve değerli yardımlarınız için çok teşekkür ediyoruz.

- 1- Aşağıda belirtilen iki durum için, şimdiye kadar hiç tavsiye etmediğiniz bir ilâcın şu anda tavsiye etmekte olduğunuz ilâçlar kadar iyi olabileceğine inanır mısınız?

	Hiçbir zaman	Bazen	Genellikle	Her zaman
Hastalık ciddi ise				
Hastalık ciddi değilse				

- 2- Aşağıda belirtilen iki durum için, daha önce hiç denemediğiniz ancak uzun zamandır piyasada olan bir ilâcı denemedeki sakıncalar sizce

	Çok	Biraz	Çok az	Hiç
Hastalık ciddi ise				
Hastalık ciddi değilse				

- 3- Daha önce hiç denemediğiniz ve piyasaya yeni çıkmış bir ilâcı denemedeki sakıncalar sizce

	Çok	Biraz	Çok az	Hiç
Hastalık ciddi ise				
Hastalık ciddi değilse				

4- Aşağıda belirtilen iki durum için, hastanıza reçete yazarken ne derecede tereddüt edersiniz?

	Çok	Biraz	Çok az	Hiç
İlaç piyasaya yeni çıkmışsa				
İlaç uzun zamandır piyasadaysa				

Tereddütünüz hastalığın ciddiyetine göre ne derece olur?

	Çok	Biraz	Çok az	Hiç
İlaç piyasaya yeni çıkmışsa				
İlaç uzun zamandır piyasadaysa				

5- Bir ilaç piyasaya yeni çıktığında onunla ilgili bilgiyi hangi kaynaktan öğrenirsiniz? Lütfen cevabınızı 1. en önce kullanılan kaynak ve 8. en son kullanılan kaynak olmak üzere 1'den 8'e kadar numaralandırınız. Eğer herhangi bir kaynağı kullanmıyorsanız lütfen belirtiniz:

- | | |
|--|--|
| ___ Diğer meslektaşlardan | ___ Türkiye'de yayınlanan literatürden |
| ___ Toplantı ya da konferanslardan | ___ Yabancı literatürden |
| ___ Üretici firmadan gelen yetkililerden | ___ Meslekî makalelerden |
| ___ Üretici firmanın gönderdiği tanıtma yazılarından | ___ Diğer (Lütfen belirtiniz) |

- 6- Yukarıda sayılan kaynaklardan hangileri ilâç seçiminizde daha etkili olur? Önem derecesine göre 1'den 8'e kadar numaralandırınız. 1: Sizin için en önemli olan kaynak ve 8: Sizin için en az önemli olan kaynak.

<input type="checkbox"/> Diğer meslektaşlardan	<input type="checkbox"/> Türkiye'de yayınlanan literatürden
<input type="checkbox"/> Toplantı ya da konferanslardan	<input type="checkbox"/> Yabancı literatürden
<input type="checkbox"/> Üretici firmadan gelen yetkililerden	<input type="checkbox"/> Meslekî makalelerden
<input type="checkbox"/> Üretici firmanın gönderdiği tanıtma yazılarından	<input type="checkbox"/> Diğer (Lütfen belirtiniz)

Hastalığın ciddiyetine göre yukarıda yaptığınız sıralamada bir değişiklik olur mu?

☐ Evet

☐ Hayır

Cevabınız "Evet" ise neden?

- 7- Hastalarınıza uzun zamandır piyasada olan bir ilâcı tavsiye ederken neye dayanarak karar verirsiniz? 1'den 8'e kadar kullanım sıklığınıza göre numaralandırınız. 1: Sizce en önemli olan unsur, 8: Sizce en az önemli olan unsur.

<input type="checkbox"/> Geçmiş tecrübelerinize	<input type="checkbox"/> İlâç firmalarından alınan bilgilere
<input type="checkbox"/> Meslekî makalelere	<input type="checkbox"/> Türkiye'de yayınlanan literatüre
<input type="checkbox"/> Diğer meslektaşların fikirlerine	<input type="checkbox"/> Yabancı literatüre
<input type="checkbox"/> Toplantı ve konferanslardan edindiğiniz izlenimlere	<input type="checkbox"/> Diğer (Lütfen belirtiniz)

Hastalığın ciddiyetine göre yukarıda yaptığınız sıralamada bir değişiklik olur mu?

☐ Evet

☐ Hayır

Cevabınız "Evet" ise neden?

8- Sizce halkın izlediği yayın organlarında ilâçlarla ilgili reklâm yapılmaması

_____ Kesinlikle uygundur _____ Uygundur _____ Uygun Değildir _____ Kesinlikle uygun değildir

9- Hastalarınızın genelde kendi sorunlarını/hastalıklarını kavrayabilme, size akılcı sorular sorabilme yetenekleri sizce

_____ Çok _____ Biraz _____ Çok az _____ Hiç

Görüşlerinizi belirtiniz:

10- Aşağıda belirtilen iki durum için, reçete yazarken ilâcı üreten firmanın doktorlarca tanınmış olması sizce ne derecede önemlidir?

	Çok	Biraz	Çok az	Hiç
İlâç piyasaya yeni çıkmışsa				
İlâç uzun zamandır piyasadaysa				

Aşağıda belirtilen iki durum için, reçete yazarken ilâcı üreten firmanın hastalarınızca tanınmış olması sizce ne derecede önemlidir?

	Çok	Biraz	Çok az	Hiç
İlâç piyasaya yeni çıkmışsa				
İlâç uzun zamandır piyasadaysa				

Firmanın tanınmış olmasını tercih etme ihtimaliniz hastalığınız ciddiyetine göre ne derece olur?

	Çok	Biraz	Çok az	Hiç
İlâç piyasaya yeni çıkmışsa				
İlâç uzun zamandır piyasadaysa				

- 11- Yazdığınız reçete ile uygulanan tedavi olumlu sonuç vermez, hastanın durumu iyiye gitmezse, aşağıdaki cümlelere ne ölçüde katıldığınızı uygun boşluğa (X) işareti koyarak belirtiniz.

	Kesinlikle aynı fikirdeyim	Aynı fikirdeyim	Aynı fikirde değilim	Kesinlikle aynı fikirde değilim
Hastalığın tedavisinde boşa zaman geçirildiğini düşünürüm				
Hastamın sağlığını tehlikeye attığını düşünürüm				
Başka bir ilaç veririm				
Başka bir meslektaşına danışırım				
Kendimi kötü hissederim				
Hastamın artık başka bir doktora gideceğini düşünürüm				
Hastamın memnuniyetsizliğini başkalarına da aktaracağını düşünürüm				

- 12- Cinsiyetiniz

_____ Bayan

_____ Bay

- 13- Yaşınız

_____ 20-29

_____ 30-39

_____ 40-49

_____ 50-59

_____ 60 ve yukarısı

- 14- Kaç yıldır doktorluk yapıyorsunuz?

- 15- Bildiğiniz yabancı dil(ler)

- 16- Çalışma durumunuz

_____ Hastahanede full-time

_____ Hastahanede part-time

_____ Bağımsız

_____ Diğer (Lütfen belirtiniz)

APPENDIX II

CODING INSTRUCTIONS SHEETS

A

Question No	Variable No	Column	Range	Variable Description	Instruction
		1-3	001-104	Questionnaire number	
1	001	4-5	00-12,99	Uncertainty risk (cosmetics)	Never:04 Sometimes:03 Usually:02 Always:01 Not using:00 Missing:99
	002	6	0-4,9	Perceived uncertainty risk for deodorants	Never:4 Sometimes:3 Usually:2 Always:1 Not using:0 Missing:9
	003	7	0-4,9	Perceived uncertainty risk for perfume/shaving lotions	Same as V002
	004	8	0-4,9	Perceived uncertainty risk for make-up/shaving materials	Same as V002
2	005	9-10	00-12,99	Consequences risk (cosmetics)	Much:04 Some:03 Little:02 None:01 Not using:00 Missing:99
	006	11	0-4,9	Perceived consequences risk for deodorants	Much:4 Some:3 Little:2 None:1 Not using:0 Missing:9
	007	12	0-4,9	Perceived consequences risk for perfume/shaving lotions	Same as V006
	008	13	0-4,9	Perceived consequences risk for make-up/shaving mater.	Same as V006
3	009	14	1-4,9	Time loss (deodorants)	Strongly agree:1 Agree:2 Disagree:3 Strongly disagree:4 Missing:9
	010	15	1-4,9	Hazard loss (deo.)	Same as V009
	011	16	1-4,9	Ego loss (deo.)	Same as V009
	012	17	1-4,9	Money loss (deo.)	Same as V009
	013	18	1-4,9	Money loss (deo.)	Same as V009
	014	19	1-4,9	Ego loss (deo.)	Same as V009
	015	20	1-4,9	Time loss (deo.)	Same as V009
	016	21	1-8,9	Total time loss (deo.)	Strongly agree:1-2 Agree:3-4 Disagree:5-6 Strongly disagree:7-8 Missing:9
	017	22	1-8,9	Total ego loss (deo)	Same as V016
	018	23	1-8,9	Total money loss (deo.)	Same as V016
	019	24	1-4,9	Time loss (perfume/shav.lotion)	Same as V009
	020	25	1-4,9	Hazard loss (perfume/shav.lotion)	Same as V009
	021	26	1-4,9	Ego loss (perfume/shav.lotion)	Same as V009
	022	27	1-4,9	Money loss (perfume/shav.lotion)	Same as V009
	023	28	1-4,9	Money loss (perfume/shav.lotion)	Same as V009
	024	29	1-4,9	Ego loss (perfume/shav.lotion)	Same as V009
	025	30	1-4,9	Time loss (perfume/shav.lotion)	Same as V009
	026	31	1-8,9	Total time loss (perfume/shav.lot.)	Same as V016
	027	32	1-8,9	Total ego loss (perfume/shav.lotion)	Same as V016
	028	33	1-8,9	Total money loss (perfume/shav.lotion)	Same as V016
	029	34	1-4,9	Time loss (make-up/shav.mat.)	Same as V009

Question No	Variable No	Column	Range	Variable Description	Instruction
	030	35	1-4,9	Hazard loss (make-up/shav.mat.)	Same as V009
	031	36	1-4,9	Ego loss (make-up/shav.mat.)	Same as V009
	032	37	1-4,9	Money loss (make-up/shav.mat.)	Same as V009
	033	38	1-4,9	Money loss (make-up/shav.mat.)	Same as V009
	034	39	1-4,9	Ego loss (make-up/shav.mat.)	Same as V009
	035	40	1-4,9	Time loss (make-up/shav.mat.)	Same as V009
	036	41	1-8,9	Total time loss (make-up/shav.mat.)	Same as V016
	037	42	1-8,9	Total ego loss (make-up/shav.mat.)	Same as V016
	038	43	1-8,9	Total money loss (make-up/shav.mat.)	Same as V016
4	039	44	1-4,9	Most advertised brand (deodorants)	Same as V009
	040	45	1-4,9	Most advertised brand (perfume/shav.lotion)	Same as V009
	041	46	1-4,9	Most advertised brand (make-up/shav.material)	Same as V009
	042	47	1-4,9	Brand loyalty (deo.)	Same as V009
	043	48	1-4,9	Brand loyalty (per./sh.lot.)	Same as V009
	044	49	1-4,9	Brand loyalty (make-up/sh.mat.)	Same as V009
	045	50	1-4,9	Advice of seller (deo.)	Same as V009
	046	51	1-4,9	Advice of seller (per./sh.lot.)	Same as V009
	047	52	1-4,9	Advice of seller (make-up/sh.mat.)	Same as V009
	048	53	1-4,9	Free sample (deo.)	Same as V009
	049	54	1-4,9	Free sample (per./sh.lot.)	Same as V009
	050	55	1-4,9	Free sample (make-up/shav.mat.)	Same as V009
	051	56	1-4,9	Major brand (deo)	Same as V009
	052	57	1-4,9	Major brand (per./sh.lot.)	Same as V009
	053	58	1-4,9	Major brand (make-up/shav.mat.)	Same as V009
	054	59	1-4,9	Money-back guarantee (deo.)	Same as V009
	055	60	1-4,9	Money-back guarantee (per./sh.lot.)	Same as V009
	056	61	1-4,9	Money-back guarantee (make-up/sh.mat.)	Same as V009
	057	62	1-4,9	Store image (deo.)	Same as V009
	058	63	1-4,9	Store image (per./sh.lotion)	Same as V009
	059	64	1-4,9	Store image (make-up/sh.mat.)	Same as V009

Question No	Variable No	Column	Range	Variable Description	Instruction
	060	65	1-4,9	Government test (deo.)	Same as V009
	061	66	1-4,9	Government test (per./sh.lot.)	Same as V009
	062	67	1-4,9	Government test (make-up/sh.mat.)	Same as V009
	063	68	1-4,9	Shopping experience (deo.)	Same as V009
	064	69	1-4,9	Shopping experience (per./sh.lot.)	Same as V009
	065	70	1-4,9	Shopping experience (make-up/sh.mat.)	Same as V009
	066	71	1-4,9	Expensive product (deo.)	Same as V016
	067	72	1-4,9	Expensive product (per./sh.lot.)	Same as V016
	068	73	1-4,9	Expensive product (make-up/sh.mat.)	Same as V016
	069	74	1-4,9	Word-of-mouth (deo.)	Same as V009
	070	75	1-4,9	Word-of-mouth (per./sh.lot.)	Same as V009
	071	76	1-4,9	Word-of-mouth (make-up/sh.mat.)	Same as V009
	072	77	1-4,9	Foreign brand (deo.)	Same as V009
	073	78	1-4,9	Foreign brand (per./sh.lot.)	Same as V009
	074	79	1-4,9	Foreign brand (make-up/sh.mat.)	Same as V009
5	075	80	1-4,9	Uncertainty risk in case of serious illness	Never:4 Sometimes:3 Usually:2 Always:1 Missing:9
		1-3		Questionnaire number	
	076	4	1-4,9	Uncertainty risk in case illness is not serious	Same as V075
6	077	5	1-4,9	Consequences risk in case of serious illness	Much:4 Some:3 Little:2 None:1 Missing:9
	078	6	1-4,9	Consequences risk in case illness is not serious	Same as V077
7	079	7	1-4,9	Risk perception in prescribed drugs when they are new	Same as V077
	080	8	1-4,9	Risk perception in on-the-market prescribed drugs	Same as V077
8	081	9	1-4,9	Risk perception in a new non-prescription drug	Same as V077
	082	10	1-4,9	Risk perception in an on-the-market non-prescrip.drug.	Same as V077
	083	11	1-4,9	Risk perception-seriousness of illness and new drug	Same as V077
	084	12	1-4,9	Risk perception-ser. of illness and on-the- mar.drug	Same as V077
9	085	13	1-4,9	New prescribed drug-another doctor	Never:4 Sometimes:3 Usually:2 Always:1 Missing:9
	086	14	1-4,9	New prescribed drug-pharmacist	Same as V085
	087	15	1-4,9	New prescribed drug-friends, relatives	Same as V085

Question No	Variable No	Column	Range	Variable Description	Instruction
	088	16	1-4,9	On-the-market prescribed drug-another doctor	Same as V085
	089	17	1-4,9	On-the-market perscribed drug-pharmacist	Same as V085
	090	18	1-4,9	On-the-market, perscribed drug-friends, relatives	Same as V085
	091	19	1-4,9	Seriousness of illness-new drug/another doctor	Much:4 Some:3 Little:2 None:1 Missing 9
	092	20	1-4,9	Seriousness of illness/new drug/pharmacist	Same as V091
	093	21	1-4,9	Seriousness of illness/new drug/friends, relatives	Same as V091
	094	22	1-4,9	Seriousness of illness/On-the-market drug/anot.doctor	Same as V091
	095	23	1-4,9	Seriousness of illness/On-the-market drug/pharmacist	Same as V091
	096	24	1-4,9	Seriousness of illness/On-the-market drug/friends.	Same as V091
10	097	25	1-4,9	Non-prescription drug/New/Ask a doctor	Never:4 Sometimes:3 Usually:2 Always:1 Missing:9
	098	26	1-4,9	Non-prescription durg/New/Ask a pharmacist	Same as V097
	099	27	1-4,9	Non-prescription drug/New/Ask friends	Same as V097
	100	28	1-4,9	Non-prescription drug/New/Ask nobody	Same as V097
	101	29	1-4,9	Non-prescription drug/On-the-market/As a doctor	Same as V097
	102	30	1-4,9	Non-prescription drug/On-the-market/Ask a pharmacist	Same as V097
	103	31	1-4,9	Non-prescription drug/On-the-market/Ask friends	Same as V097
	104	32	1-4,9	Non-prescription drug/On-the-market/Ask nobody	Same as V097
	105	33	1-4,9	Seriousness of illness/New drug/Ask a doctor	Much:4 Some:3 Little:2 None:1 Missing 9
	106	34	1-4,9	Seriousness of illness/New drug/Ask a pharmacist	Same as V105
	107	35	1-4,9	Seriousness of illness/New drug/Ask friends	Same as V105
	108	36	1-4,9	Seriousness of illness/On-the-market drug/Ask a doctor	Same as V105
	109	37	1-4,9	Seriousness of illness/On-the-market drug/Ask a pharma.	Same as V105
	110	38	1-4,9	Seriousness of illness/On-the-market drug/Ask friends	Same as V105
11	111	39	1-4,9	Seriousness of illness/risk percep./prescription drug/new	Same as V105
	112	40	1-4,9	Risk perception/ser. of illness/presc.on the mark.drug	Same as V105
12	113	41	1-4,9	Importance of producer/new drug	Same as V105
	114	42	1-4,9	Importance of producer/On-the-market drug	Same as V105
	115	43	1-4,9	Seriousness of illness/prefer known producer/new drug	Same as V105
	116	44	1-4,9	Seriousn. of illness/prefer known prod./on the mark.drug	Same as V105

Question No	Variable No	Column	Range	Variable Description	Instruction
13	117	45	1-4,9	Time loss/Prescription drug is useless	Strongly agree:1 Agree:2 Disagree:3 Strongly disagree:4 Missing:9
	118	46	1-4,9	Hazard loss/Prescription drug is useless	Same as V117
	119	47	1-4,9	Go to the same doctor	Same as V117
	120	48	1-4,9	Go to another doctor	Same as V117
	121	49	1-4,9	Money loss/Prescription drug is useless	Same as V117
	122	50	1-4,9	Ego loss/Prescription drug is useless	Same as V117
14	123	51	1-4,9	Time loss/Non-prescription drug is useless	Same as V117
	124	52	1-4,9	Hazard loss/Non-prescription drug is useless	Same as V117
	125	53	1-4,9	Money loss/Non-prescription drug is useless	Same as V117
	126	54	1-4,9	Ego loss/Non-prescription drug is useless	Same as V117
	127	55	1-4,9	Ask a doctor	Same as V117
	128	56	1-4,9	Ask a pharmacist	Same as V117
	129	57	1-4,9	Ask friends and relatives	Same as V117
15	130	58	1-4,9	Gender	Female:1 Male:2 Missing:9
16	131	59	1-4,9	Age	20 ↓:1 20-29:2 30-39:3 40-49:4 50-59:5 60 ↑:6 missing:9
17	132	60	1-4,9	Income	Very low:1 Low:2 Middle:3 High:4 Very high:5 Missing:9
18	133	61	1-4,9	Education level	Literate:1 Primary ed:2 Secondary ed:3 Lycee:4 Univ.:5 Post gr.:6
19	134	62-63	01-12,99	Occupation	Sell employed:01 Manager:02 Merchant:03 Tradesman:04 Government employee:05 Private sector:06 Retired:07 Housewife:08 Student:09 Worker:10 Missing 99

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Question No	Variable No	Column	Range	Variable Description	Instruction
		1-2	01-96	Questionnaire number	
1	01	3	1-4,9	Uncertainty risk/serious illness	Never:4 Sometimes:3 Usually:2 Always:1 Missing:9
	02	4	1-4,9	Uncertainty risk/illness not serious	Same as V01
2	03	5	1-4,9	Consequences risk/on the mark.drug/illness serious	Much:4 Some:3 Little:2 None:1 Missing 9
	04	6	1-4,9	Consequences risk/On-the-market drug/ill.not serious	Same as V03
3	05	7	1-4,9	Consequences risk/new drug/serious illness	Same as V03
	06	8	1-4,9	Consequences risk/new drug/illness is not serious	Same as V03
4	07	9	1-4,9	Risk perception in prescribing a new drug	Same as V03
	08	10	1-4,9	Risk perception in prescribing an On-the-market drug	Same as V03
	09	11	1-4,9	Risk perception/Seriousness of illness/new drug	Same as V03
	10	12	1-4,9	Risk perception/Seriousness of illness/on the mar.drug	Same as V03
5	11	13	1-8,9	Information gathering/Other colleagues	First used:1 Second used:2 Eighth used:8 Missing:9
	12	14	1-8,9	Information gathering/meetings, conferences	Same as V11
	13	15	1-8,9	Information gathering/Detailmen	Same as V11
	14	16	1-8,9	Information gathering/Brochures from producer	Same as V11
	15	17	1-8,9	Information gathering/Turkish literature	Same as V11
	16	18	1-8,9	Information gathering/Foreign literature	Same as V11
	17	19	1-8,9	Information gathering/Professional articles	Same as V11
	18	20	1-8,9	Information gathering/Other	Same as V11
	19	21	1-8,9	What the above 'other' is.	9:The above is numbered but not explained
6	20	22	1-8,9	Effectiveness of source on drug choice/other colleagues	Same as V11
	21	23	1-8,9	Effectiveness of source on drug choice/meet.confe.	Same as V11
	22	24	1-8,9	Effecti. of source on drug choice/detailmen	Same as V11
	23	25	1-8,9	Effecti.of source on drug choice/Brochures from produ.	Same as V11
	24	26	1-8,9	Effecti.of source on drug choice/Turkish literature	Same as V11
	25	27	1-8,9	Effecti. of source on drug choice/Foreign literature	Same as V11
	26	28	1-8,9	Effecti. of source on drug choice/Professional articles	Same as V11
	27	29	1-8,9	Effectiveness of source on drug choice/Other	Same as V11

Question No	Variable No	Column	Range	Variable Description	Instruction
	28	30	1-8,9	What the above 'other' is	9:The above is numbered but not explained:8
	29	31	1-2,9	Change in this ranking with respect to seriousness	Yes:1 No:2 Missing:9
	30	32	0-8,9	If 'yes', why?	If the above answer is 'No':0/If the above is 'Yes' but no exp.here:9
7	31	33	1-8,9	The things a doctor relies on when presc./prev.experience	Most important source:1 / Least important source:8
	32	34	1-8,9	The things a doctor relies on when presc./prof. articles	Same as V31
	33	35	1-8,9	The things a doctor relies on when presc./ oth.colle.ideas	Same as V31
	34	36	1-8,9	The things a doctor relies on when presc./meetings, con.	Same as V31
	35	37	1-8,9	The things a doctor relies on when presc./infor.from prod.	Same as V31
	36	38	1-8,9	The things a doctor relies on when presc./Turkish lit.	Same as V31
	37	39	1-8,9	The things a doctor relies on when presc./Foreign lit.	Same as V31
	38	40	1-8,9	The things a doctor relies on when presc./other	Same as V31
	39	41	1-8,9	What the above 'other' is	9: The above is numbered but not explained
	40	42	1-2,9	Change in this ranking with respect to seriousness	Yes:1 No:2 Missing:9
	41	43	0-8,9	If 'yes', why?	If the above answer is 'No':0/If the above is 'Yes' but no exp.here:9
8	42	44	1-4,9	No advertising in media	Certainly suitable:1 Suit.:2Not suit.:3 Cert.not suit.:4 Missing:9
9	43	45	1-4,9	Intelligent questions	Much:4 Some:3 Little:2 None:1 Missing:9
10	44	46	1-4,9	Importance of known producer for doctors/new drug	Same as V43
	45	47	1-4,9	Importance of known prod.for doc./On-the-market drug	Same as V43
	46	48	1-4,9	Importance of known prod.for patients/new drug	Same as V43
	47	49	1-4,9	Importance of known produ.for pat./On-the-market drug	Same as V43
	48	50	1-4,9	Seriousness of illness/known prod./new drug	Same as V43
	49	51	1-4,9	Seriousness of illness/known prod./On-the-market drug	Same as V43
11	50	52	1-4,9	Time loss/drug is ineffective	Cert.agree:1 Agree:2 Disagree:3 Cert.disagree:4 Missing:9
	51	53	1-4,9	Hazard loss/drug is ineffective	Same as V50
	52	54	1-4,9	Try another drug	Same as V50
	53	55	1-4,9	Ask another colleague	Same as V50

Question No	Variable No	Column	Range	Variable Description	Instruction
	54	56	1-4,9	Ego loss/Drug is ineffective	Same as V50
	55	57	1-4,9	Go to another doctor	Same as V50
	56	58	1-4,9	Negative word-of-mouth	Same as V50
12	57	59	1-2,9	Gender	Female:1 Male:2 Missing 9
13	58	60	1-5,9	Age	20-29:1 30-39:2 40-49:3 50-59:4 60 ↑:5
14	59	61-62	00-...,99	No. of years he/she is in the profession	Number as it is/If less than a year: 00
15	60	63	1-5,9	No. of foreign languages	Number as it is
	61	64	1	English	
	62	65	2	French	
	63	66	3	German	
	64	67	4	Russian, Bulgarian	
16	65	68	1-6,9	Working Status	Full-time:1 Part-time:2 Independent:3 Health center:4 Public enterprise:5 Maternity and child health center:6

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