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DO CONSUMERS REALLY TRUST THEIR DOCTORS' SUGGESTIONS AND DRUGS THEY PRESCRIBE?

The relationship between perceived risk and trust in consumer buying decisions on prescription drugs, and how pharmaceutical companies can improve consumer's trust through marketing activities in China

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ABSTRACT

This thesis examines how perceived risk and trust affect consumer's buying decisions during the process of buying and consuming prescription drugs, and investigates how pharmaceutical companies can improve consumer's trust by strategically designing and performing their marketing activities in the Chinese pharmaceutical market.

Previous literature has generally introduced the overview of consumer buying process and the two important factors that may influence the buying decisions: perceived risk and trust. But the whole picture of consumer's buying decision making processes on prescription drugs, detailed perceived risk and trust on prescription drugs, and how pharmaceutical companies can reduce the negative influence of distrust in buying decision, have not been investigated by researchers.

This research applied a qualitative approach through two phases of data collection. The first phase was a pilot study with 5 interviews to propose the buying decision process model of prescription drugs and investigate how perceived risk and trust can affect consumer's buying decision. The second phase was a field study with 31 interviews to examine consumer's concepts relating to "trust" on pharmaceutical activities. Pictures of market activities were shown to interviewees and questions were asked for drawing customer mind maps.

The prescription drug's buying decision process is consistent with classical 5 steps' model but also has its unique features: consumers evaluate and search information for hospitals and physicians to get reliable diagnosis before taking drugs. And trust, associating with several dimensions and antecedents of perceived risk, is playing an important role in consumer's buying decisions. Findings showed that pharmaceutical companies can build trustable relationships between patients and physicians by strategically design their market activities.

Key words: Pharmaceutical industry, Prescription drugs, Chinese pharmaceutical market, Consumer buying process, Perceived risk, Trust, Customer mind map, Market activities.

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CHAPTER 1 INTRODUCTION

1.1 Background

The pharmaceutical industry is an important sector for world economy and citizen's social welfare (Manchanda and Honka, 2005). In 2014, the total global marketing investment in pharmaceutical industry is $70.7 billion, among these marketing expenditure, the largest portion has been invested at "detailing", taking 62.5% of the whole investment, followed by "samples" taking 11.1% and "meeting" taking another 11.1% (IMS 2015). The three marketing channels in pharmaceutical industry all together take almost 85% of the whole marketing expenditure. No matter how differently the three marketing forms are performed, they are all directed to clinicians. Far differently from other industries, pharmaceutical companies are restricted to marketing directly to consumers. The data from IMS (2015) indicates only 10.3% marketing expenditures in the full year 2014 are directed to consumers. But undoubtedly, consumers (patients) are the final purchase decision makers of buying prescription drugs. The large amount of marketing expenditures focusing on physicians has caused lot of enterprise and social problems.

Pharmaceutical companies are facing enormous business risk and operation pressure. Researchers have already found that the money pharmaceutical companies spent on marketing are more than the money they invest in research and development (R&D) (Angell, 2004). In the past decades, pharmaceutical companies were constantly facing ethical challenges when performing their marketing practices. Correspondingly, some companies have been punished by heavy fines and even criminal sanctions.

One reason of the punishment is for the inappropriate manner of promotion on off label uses – a drug was initially approved onto the market for a narrow indication, but marketers sell it under unapproved conditions. For example, Johnson & Johnson promoted "Risperdal" – a drug for psychiatric treatment - for unapproved uses, and was sued to pay $2.2 billion to end

the civil and criminal investigations in U.S. (Reuters, 2013). Another pharmaceutical giant Pfizer paid $2.3 billion to end the investigation of their marketing case – the illegally marketing on its painkiller "Bextra". The drug was only approved to treat arthritis and menstrual cramps, but Pfizer also promoted it for the treatment of acute and surgical pain and even at dangers doses, which may cause kidney, skin and heart risks. This promotion behavior not only caused the huge fines, but the drug was also withdrawn in 2005 (The New York Times, 2009).

Another reason of the punishment is for their bribery behavior in the marketing processes. Forbes (2015) says over the years, pharmaceutical companies have had a lot improper and illegal sales and marketing practices. It reported Bristol-Myers paid $14 million to settle down their bribery case in china – gave healthcare providers cash, jewelry, meals, travels, entertainment and conference sponsorships from 2009 to 2014. GlaxoSmithKline (GSK) has been fined $490 million by Chinese authority for bribing doctors and hospitals to promote product sales. Besides finance punishment, the company's former country manager got a suspended three years prison sentence and other four executives got up to four years suspended jail sentences (BBC, 2014).

Pharmaceutical companies have learned a lot from the above lessons. And lots of countries' government authorities and anti-corruption organizations are paying eyes on pharmaceutical companies' sales and marketing behaviors. The marketing environment has become healthier a lot. In china, doctors are warned by superiors to compliance with their career norms. Representatives are constantly trained with professional medicine and product knowledge and are warned to behave within the company's requirements. But the social problems following the industry scandals are enormous, especially in the market like China, where social norms and the relationships between people always play important roles in daily life.

The research is focusing on Chinese market for several reasons. The first reason is that China

is a large and emerging market to international pharmaceutical industry. Comparing the marketing expenditure from 2013 to 2014, it grows 11% in China, higher than the investment growth ratio of American and any European country (IMS 2015). And there are more representatives employed by international pharmaceutical companies in Asia Pacific region. IMS (2015) reports that the overall number of representatives hired by international pharmaceutical companies in the world is 444,112 in 2014. Asia Pacific takes more than one third of the number, and in addition, the number is still growing with the highest rate compared with other regions. In such an important and large market, how to wisely spend money on market has significant meaning, which can largely increase the return on investment. The second reason we focusing on Chinese pharmaceutical market is that, unlike European and US markets, Chinese pharmaceutical market is not mature. In developed regions like European and US, the productivity of pharmaceutical industry is relatively high concentrated. The world's top 10 pharmaceutical companies take almost 40% of the global market share (IMS 2012). But the international pharmaceutical companies altogether only take 24% of the market share in China (IMS 2014). Chinese pharmaceutical market is highly competitive market because by the end of 2005, there are more than 5000 national companies had already got the GMP (Good Manufacturing Practice) certification and most of them are generics manufactures, which means the pharmaceutical marketing environment in china is not only directed by policies and government (as we all know the same as in other Chinese industry markets), but also guided by local companies market behaviors. The last but not the least reason we recommend international pharmaceutical companies to pay attention to Chinese market is that, the time long comparative pharmaceutical marketing environment in China has caused special social trust issues between customers and medicine marketing participants through previous unethical market activities.

A survey taken in 30 hospitals from east region in china shows that only 10% patients trust in doctors (Gov.cn, 2013). Patients are not satisfied with the hospital and doctor's services but doctors are feeling exhausted and fewer and fewer students want to engage in clinical works.

Patients don't trust doctors because they think hospitals are pushing excessive examinations and treatments. And doctors are constantly facing unpredictable violence. The China Health Ministry showed the statistic data from 2006 to 2010, the medical violence increased sharply in the whole country – increased 70% compared with the case number from 2006, ended at 17243 cases in 2010 (Gov.cn, 2013).

Pharmaceutical companies are facing enormous challenges under such a social environment. The trust is a key factor in patient-doctor relationship that may cause various patient behaviors. More and more people don't follow the doctor's advice. They take prescription drugs according to their own experience, listening to friend's advice, or just follow the drug instruction or website information, which is very dangerous to patient. China Association for Science and Technology did a survey among urban and rural residents in 27 provinces of China to investigate the drug use safety. Results showed that 87% of the respondents have had the experience of self-medication, 36% in the self-medication ended up with errors, and 26% said their disease treatments were delayed by the wrong medication (People.cn 2014). The various behaviors will cause the pharmaceutical company's invalid market operation or even put the company's reputation in dangerous.

1.2 Research questions

The prescription drug's market in China, as one of the largest emerging market in the world, is getting great attentions from international pharmaceutical company's headquarters. But one of the prerequisites for these pharmaceutical companies to smoothly enlarge the Chinese prescription drug's market is to understand their customer's consuming minds, especially when under the extremely special market environment. Previous literature has generally introduced the overview of consumer buying process and the two important factors that may influence the buying decisions: perceived risk and trust. But the whole picture of consumer's buying decision making processes on prescription drugs, detailed perceived risk and trust on

prescription drugs, and how pharmaceutical companies can reduce the negative influence of distrust in buying decision, have not been investigated by researchers.

The purpose of this research is to get a more detailed picture about the consumer's buying decision process in prescription drugs and how perceived risks and trust affecting the process, by studying these, further suggestion of how pharmaceutical companies can strategically perform their market activities to be perceived more trusted is suggested. Therefore the following research questions will be answered.

What is the consumer's buying decision process of prescription drug?

For this question, I will base on the previous theoretical results and data from 5 pilot interviewees to exam the buying decision process when patients consume prescription drugs. By doing this, I intend to identify how the theory indicates the process and how this happens in practice in medicine and pharmaceutical industry. This question also help me to identify further factors that may affecting the final buying decisions – perceived risks and trust.

How do perceived risks exist in buying decision process when consuming prescription drugs?

The purpose of this research question is to identify the consumer's concrete emotional, cognitive, and behavior representations in dimensions and antecedents of perceived risks in the process when they make decision to buy prescription drugs. This question can help to investigate and find out the role of perceived risks in buying decision process and if there is any other factor that may also affect the final decisions.

How does trust affect buying decisions through the relationship between trust, perceived risks, and buying decision process?

In this question, I will try to discovery and explore the relationship between trust, perceived risk and the buying decisions and discuss why trust is important in pharmaceutical market. Investigating on this question can help me to capture the practical research target for pharmaceutical companies to improve their market activity's effect.

How can pharmaceutical companies improve customer's trust feeling on prescription drugs through market activities?

In this question, I will stand at patient's position, referring to exist and mostly in use pharmaceutical marketing methods, to see to what extent we can enhance the consumer's feeling of trust and influence their purchasing behavior. This question has practical meaning to pharmaceutical companies in real market environment.

1.3 Structure of the thesis

The structure of this thesis is as follows: Chapter 1 shows an introduction of the research background and argues how the research questions are developed to solve the research topic introduced in background. Then, Chapter 2 provides the literature review, separately shown by introducing the model of buying decision process; definition, dimensions and antecedents of perceived risks; and the relationship between trust, perceived risk, and buying process. The status of each concept in pharmaceutical industry have also been introduced and reviewed. Chapter 3 introduces the methodology of the thesis. Chapter 4 describes the four stages of data analysis, findings, validity, and limitations. Chapter 5 presents conclusions and final thoughts.

CHAPTER 2 LITERATURE REVIEW

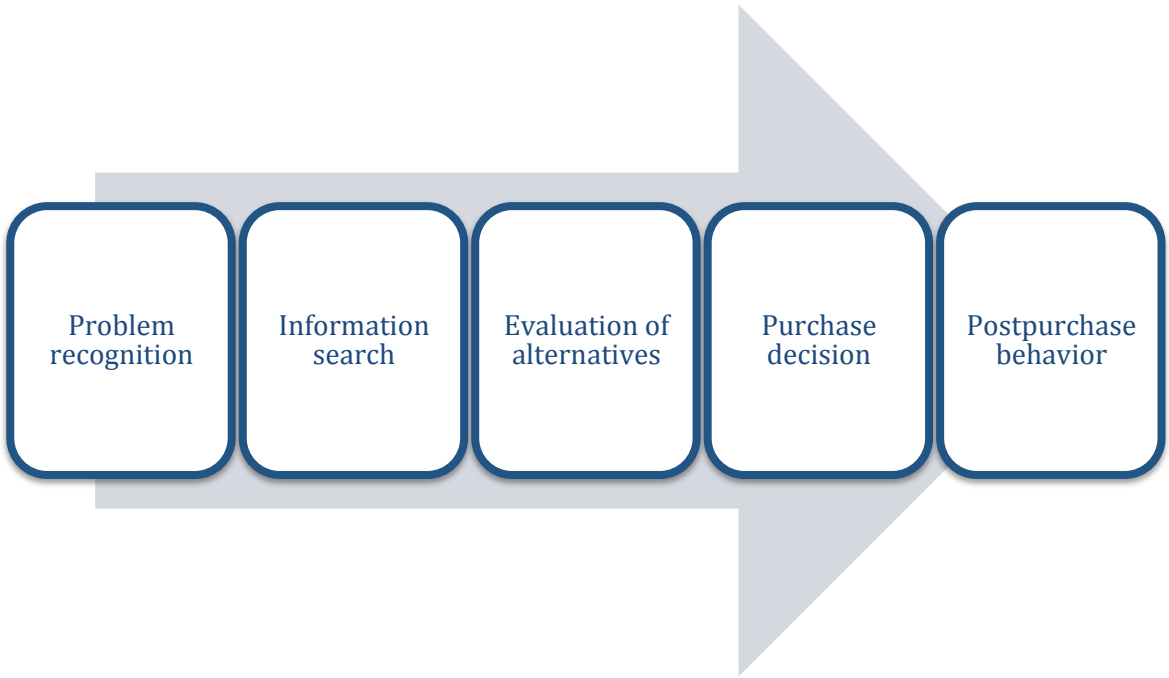
2.1 THE CONSUMER BUYING DECISION PROCESS

Market researchers have kept seeking a lot to understand consumer behavior since the end of World War Ⅱ, when large amount of goods and services began to emerge in developed country's market (Scheepers, 2001). The Consumer Decision Process (CDP) model, introduced by Blackwell, Miniard and Engel (2001), became one of the established models of buyer behavior. Consumer behavior scholars also argued that situation was playing a significant role in consumer's buying decision. According to Belk (1974), the purchase and consumption situation significantly affects consumer's buying preferences. In this part, I will first generally introduce the consumer buying decision process model (the CDP model), then the consumer buying decision process in pharmaceutical industry will be specifically described to establish a theoretical framework for studying of consumer behavior in the situation relating to prescription drugs in pharmaceutical industry.

2.1.1 Five-stage model of the consumer buying decision process

The consumer buying decision model is developed based on the psychological process of consumer behavior through the experience in the whole journey of consuming a product and has been widely used by companies to fully understand their consumer (Kotler and Kelle, 2016). The decision process started long before the occurrence of a purchase behavior and lasts till the after-use period. Marketing scholars state that there are usually five stages through the consumer buying behavior, which are "problem recognition, information search, evaluation of alternatives, purchase decision, and postpurchase behavior" (Kotler and Kelle, 2016, p 195). The five stages model can be drawn as **Figure 1**.

Figure 1: Five-stage model of the consumer buying process



Source: Kotler, P. and Kelle, K. L. (2016) 'Marketing Management' (15th edn), *Pearson*, pp. 194-205.

Problem recognition can also be called as need recognition, which is triggered by internal or external stimuli (Kotler and Armstrong, 2005). The internal stimuli can be a person's normal needs like hunger or thirsty. The external stimuli may be the elicited admire of others or the needs triggered out by seeing an advertisement. Kinnear and Bernhardt (1986) state that demographic factors like age, gender, income, race, education, accommodation size, and marital status influence this problem/need recognition. Understanding and identifying the elements that trigger a particular need of customers can help marketing managers to attract the most potential customer's interest.

Information search is the part where consumers gather information about a target product set from various information source channels. The information gathering behavior has two levels of state: the mild state when the potential consumer become familiar with a product by heightened attention from advertisements or conversations, and the active state when the consumer proactively search information or engage in conversations about a product or brand

(Kotler and Kelle, 2006). Kotler and Kelle also categorize the information source into four, which are personal source, commercial source, public source, and experiential source. Personal source can be the buyer's friend, family member, neighbors or any acquaintance. Commercial resource can be advertisement, salespersons, packages, and displays. Public source refers to mass media, government, and social organizations. Experiential source is the personal experiences of using or examining the products. The amount and authority of these four sources are also different depending on the product categories and consumer's characteristics (Kotler and Kelle, 2016). Generally speaking, consumers receive the most information from commercial sources. And the second amount of information source is public, then personal source, and the last one is experiences. But consumers are most likely to believe the experiential and personal sources. The relationship between the amount and the authority of sources are negatively correlated. Kotler and Kelle (2016) also claim that the different information sources have different function, like the commercial source is just for supplying information, while personal sources help consumers to make choice. Along with the journey of information search, consumers get knowledge about all relevant brands, then they narrow the choices down and come up with a final decision. The dynamic journey starts at "total set", goes through "awareness set", "consideration set", "choice set", and finally arrives at a "decision". Kotler and Kelle argue that marketers should take appropriate strategies to put their products in the awareness, consideration, and choice set. Other scholars state that customer's knowledge also influences the amount of information search. Experts do less information search because of their previous knowledge and only the customers with intermediate knowledge of the target product do the most searching (Alba and Hutchinson, 1987; Beatty and Smith, 1987).

Evaluation of alternatives goes along with the information search. The evaluation process varies from one consumer or situation to another bases on consumer's conscious and rational judgment (Kotler and Kelle, 2016). Consumer see a product in several attributes, for example, a consumer would see a cell phone as a combination of memory capacity, graphics quality,

battery life, software system, size, appearance, and price. For each attribute consumers may have their personal beliefs and attitudes, so that set up a expectancy-value model for helping come up with decision (Green and Wind, 1973). Because of the time limitation, consumer cannot search for information and evaluate the alternatives endlessly. When the cost or difficulty of getting extra information outweighs the value of the information itself, the behavior of information search and evaluation of alternatives stop (Hauser, Urban, and Weinberg, 1993)

Purchase decision can be made out rationally or not. The expectancy-value model is a rational decision process that the good attributes of a product can help to compensate bad sides. But customers are also make irrational decisions like heuristics or rules of thumb because of the mental shortcuts (Kotler and Kelle, 2016). There are several factors that can nudge consumers away from thoughtful evaluations to impulsive purchases. The general two factors are attitude of others and unanticipated situational factors. The intensity of the other person's attitude and the closeness between the others and the consumer will affect and modify the final purchase decision (Fishbein, 1967). Just like the consumer reports or ratings on Amazon.com or a very close friend's opinion can profoundly influence our buying decisions. Unanticipated situational factors may occurs just at the point of purchase, like the persuasiveness of a salesperson, an unexpected discount of the competitive brand, or an urgent purchase of other things.

Postpurchase behavior is important because it defines whether a one-time purchase consumer can become a long-term loyalty customer. Kotler and Kelle (2016) divide postpurchase behavior into four parts - postpurchase satisfaction, actions, uses and disposal. Satisfaction depends on the distance between customer's expectations and the product's performance (Oliver, 2006). When the performance exceeds the expectation, consumers feel satisfied and may rebuy the product and broadcast good words for the brand probably. Postpurchase actions vary. When consumers are satisfied, they buy the product again and

speak good words to friends, while when they are dissatisfied, they may not just stop buying but also take many public actions to complain about their experience so to threat the product's or company's public image. This is also the reason why lots of companies start to focus on postpurchase service and postpurchase communication. Marketers also need to know how consumers use their products so to set promotion strategies to improve the product consumption rate and drive sales frequency. Knowing how consumers dispose products can prevent environment pollution for some product categories like batteries, electronic equipment, and so on.

2.1.2 Buying decision process of prescription drugs in pharmaceutical industry

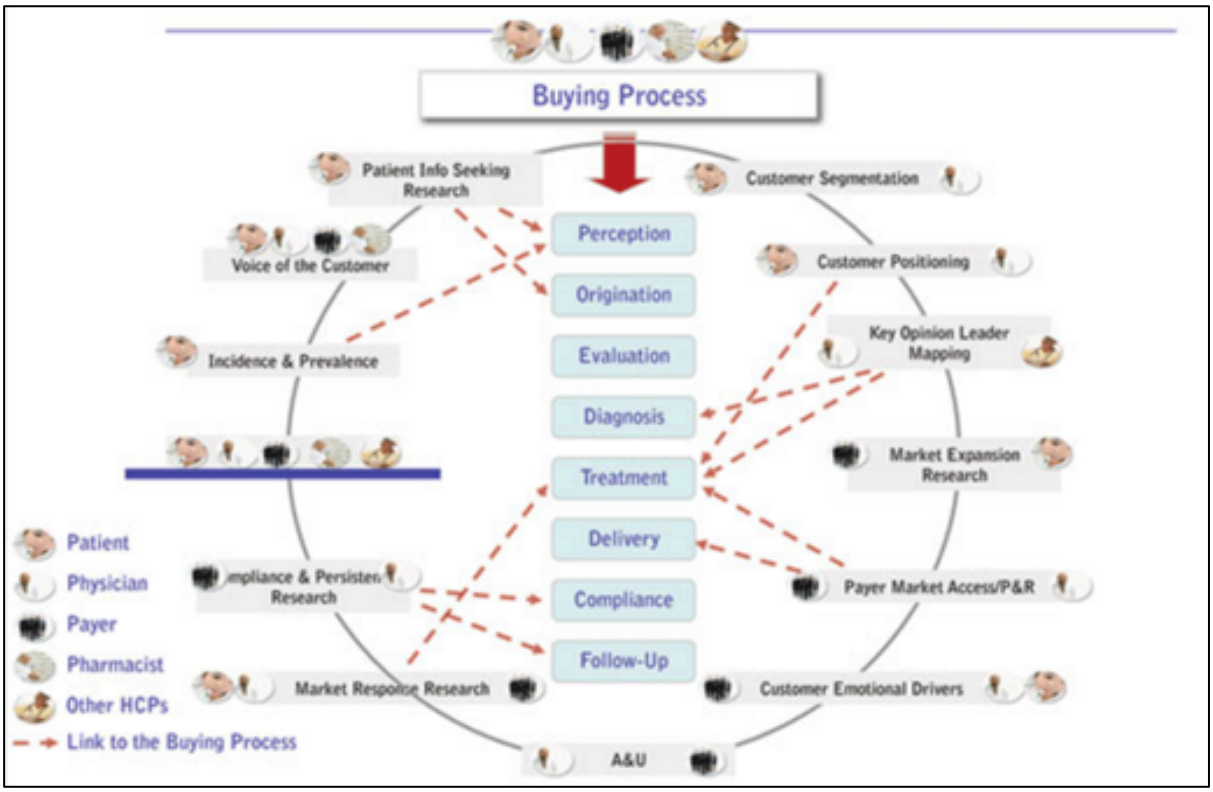
Consumer buying decision process varies in different industry and product categories. To understand the buying decision process in pharmaceutical industry can help us to draw a detailed picture of consumer's mind map when they purchase a specific prescription drug. Scholars have shown increasing interest in investigating on various pharmaceutical marketing strategies that focusing on consumer's aspect.

Unlike supplements and OTC drugs, consumers take prescription drugs when they get physical problems and have already been diagnosed. Findlay (2001) argues that prescription drugs, differently from any other consumer products, are not aiming at consumer's purchase and profit harvest, but public health improvement, pain reduction, and premature death prevention.

The consumer buying process of a prescription drug in pharmaceutical industry depends on not only brand features or customer benefits, but also many other parties like physicians, health care organizations, pharmacists, insurance companies, nurses, and any other health care or drug information providers. Usually physicians play an important role in prescription drugs marketing: they make the decisions for patients, or give patients several alternatives,

but it is the patients who use and pay for the choices which are already been done or largely affected by the physicians (Gönül, et al. 2001). There for, the buying decision model is also different from a traditional product. For prescription drugs in pharmaceutical industry, buying process can also be called "patient flow mapping", which combined with the two theories - consumer buying process model (the CBP model) and customer journey. Palk (2009) proposes that in order to understand the multiple players in the health care market, it is better to use "360° customer experience"(see in **Figure 2**).

Figure 2: 360° customer experience (Patient's flow)



Source: Sharon S. Paik (2009). "Go with the (patient) flow." *BHBIA Journal Article.* http://www.ipsos.com/marketing/sites/www.ipsos.com.marketing/files/pdf/IpsosMarketing-Articles-Hlth-Go_with_the_patient_flow.pdf (accessed: April 06, 2016).

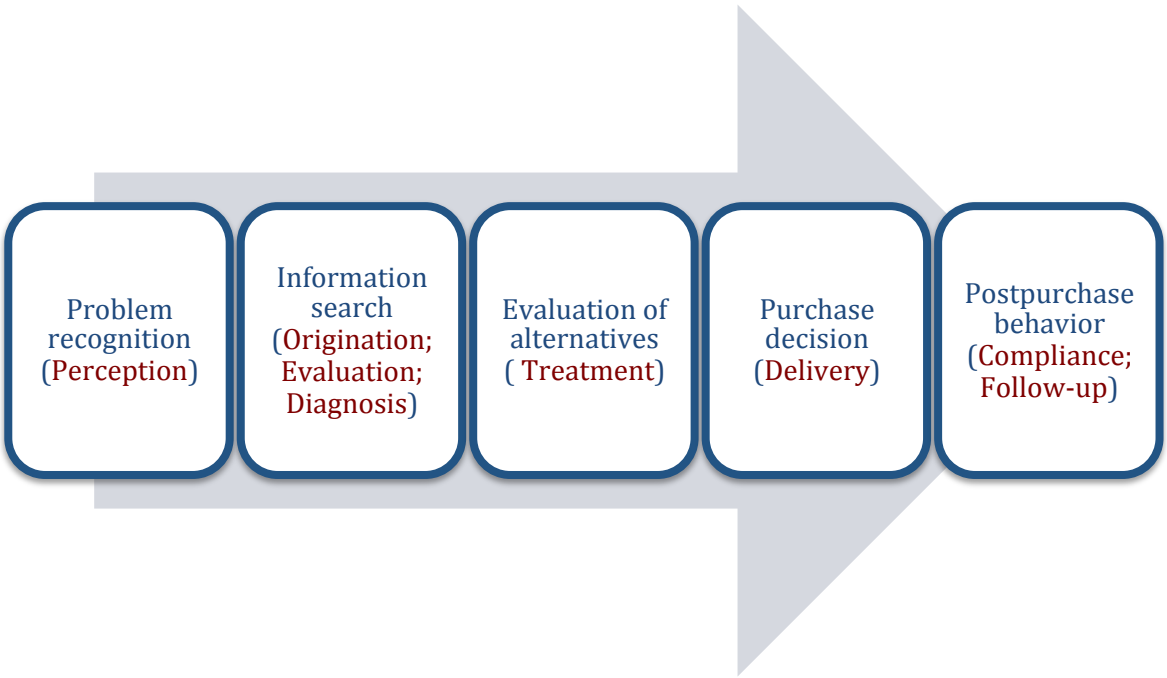
In this "360° customer experience" model, the patients buying process is standing in the middle and has been modified to fit with medical treatment procedure. Besides buying process, key players and their critical actions have been drawn into a circle that go around

and closely connect to the points of buying process. How these critical players and actions affect consumer's perceptions and decisions is highlighted by dotted red lines.

In the patients buying process, perception is when a person perceives a medical problem, which is equal to the need/problem recognition in a general buying process model. Once after the awareness of needs, they start to choose a possible and qualified place to solve their problems, which is, usually, hospital. Origination in **Figure 2** just means the place where costumers begin to solve their problems. Then they start to search for information about their problems and capable solutions. Evaluation is the process when they find professional healthcare takers to talk about their problems, and diagnosis is the time when problem has been identified and confirmed. After problem identification, patients start to accept treatment under the assistance of physicians, pharmacists, and other health care providers while concerning about their insurance conditions. Alternatives will be narrowed down at this process and make a buying decision. Then patients start to receive the treatment and follow prescriptions. Then we begin to evaluate the patient's post purchase behavior. Compliance examines if patients follow the treatment regularly and well, because whether patients complying treatment or not speaks aloud for the anticipated treatment effect. Lastly, the buying process ends up at follow up stage to see if the treatments have succeeded and if the original problems still exist.

Then we redraw a patient buying process of prescription drugs using the classical 5-stages model. Showing in **Figure 3**

Figure 3: Patient's buying process of prescription drugs

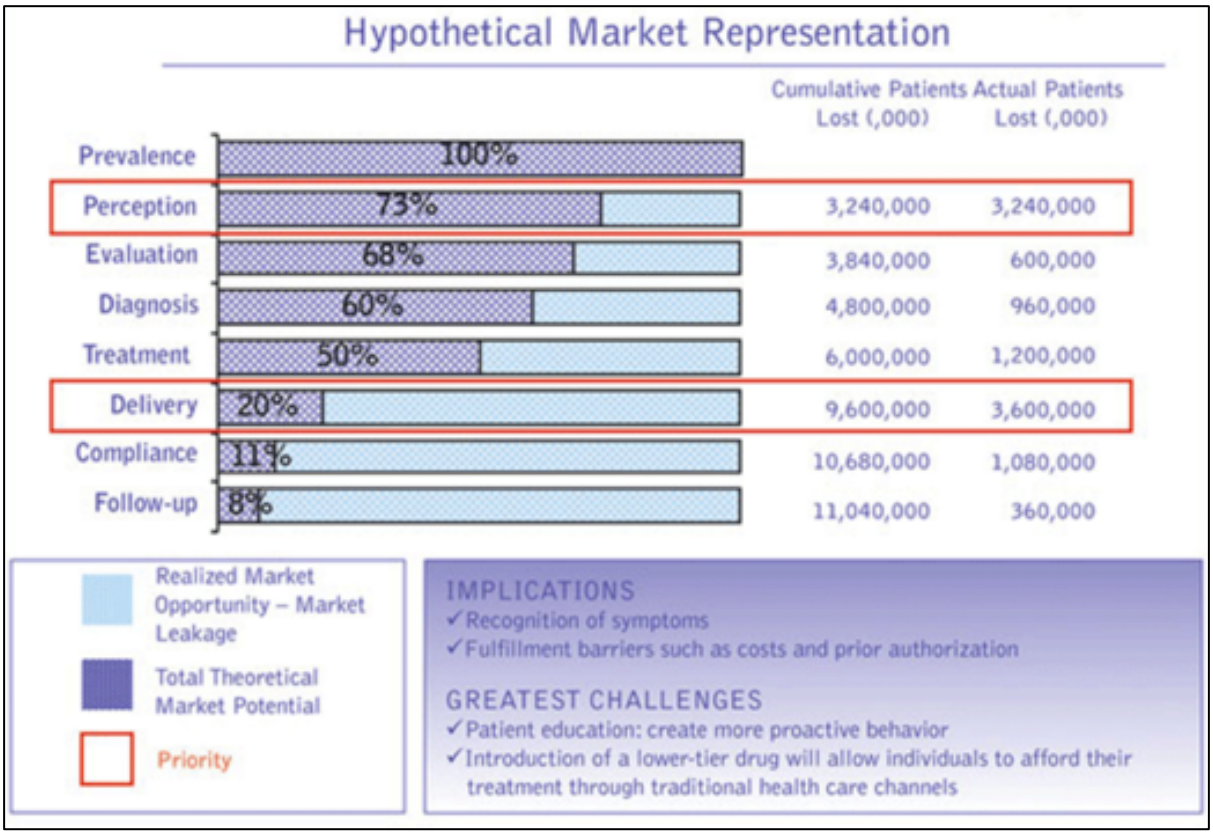


In the buying situation of prescription drugs, patients are consuming and experiencing in the health care system, while physicians are providing solutions to specific types of diseases. "360° customer experience" model is a developed situational CDP model about prescription drugs that allows pharmaceutical marketers to reflect both prescriber and patient's different standpoints and perceptions in each health care stage.

Patients finish the buying decision process of prescription drugs through completing all of the above steps. Any obstacles in any procedures may cause a certain amount of market leakage. For example, a patient might feel overwhelmed and anxious about the prescription drug's side effect that the physician just prescribed to him. He starts to reconsider and re-evaluate whether following the doctor's advice would serve better. Then he tries to gather information from other channels and eventually falls out at the treatment or delivery points of the buying process.

Data shows that patients have a large turnover rate at each stage of treatment (see **Figure 4**). The largest market leakage happens at the delivery point, and the perception point is close behind.

Figure 4: Patients turnover rate at each stage of treatment



Source: Sharon S. Paik (2009). "Go with the (patient) flow." *BHBIA Journal Article.* http://www.ipsos.com/marketing/sites/www.ipsos.com.marketing/files/pdf/IpsosMarketing-Articles-Hlth-Go_with_the_patient_flow.pdf (accessed: April 06, 2016).

2.2 PERCEIVED RISK IN THE BUYING DECISION PROCESS

The concept of risk was firstly introduced into economy was in 1920's (knight, 1921). And since 1960's, studying risk has taking a significant role in learning consumer behavior (Bauer, 1960; Dowling and Staelin, 1994). At the same time, psychologists Kogan and Wallach (1964) also start to investigate risk taking. In recent marketing research, perceived risk has been widely used in investigating consumer behavior as one of the explanatory variables.

Marketing practitioners and researchers are interested in studying consumer's perceived risk

for many reasons (Mitchell, 1999). First, it helps marketers to see the world through consumer's eyes. Second, perceived risk theory can be wildly used in many industries. Third, it can strongly explain consumer behavior because consumers often prefer to avoid risks than obtain utilities. Fourth, risk study can help to implement a more functional marketing strategy. Finally, it can help to develop new products.

In this part, I will illustrate one of the most important factors that influence consumer buying decision process – perceived risk. Definition, dimensions, and antecedents of perceived risk will be introduced based on previous research. And then, I will theoretically prove the relationship between perceived risk and buying decision process. At the last of this section, we will review the previous literatures to have a glance at the research progress about perceived risk of prescription drugs in pharmaceutical industry.

2.2.1 Definition of perceived risk

The definition of perceived risk is developed from the definition of risk. Slovic (2000) defines risk as public's concern on facing potential dangers of daily life. Dowling and Staelin (1994) review past literatures and conclude that most researchers define perceive risk in consumer buying process combining the perception of uncertainty and adverse consequence when consumer buying a product or service. Cox and Rich (1964) define perceived risk in consumer buying process as "the nature and amount of risk perceived by a consumer in contemplating a particular purchase decision" (p.33). Cox and Rich (1964) also argue that the perceived risk accrued because customers were not sure about whether they would achieve their purchase goal by choosing a specific product. In my thesis, considering the purchase environment of consuming prescription drugs, the perceived risk can be inferred to the uncertainty feeling and potential scarify when choosing a specific prescription drug.

2.2.2 Dimensions of perceived risk

Scholar's opinion on the dimensions of perceived risk never stopped. Since Cox (1967) proposes that perceived risk could be explained from the two aspects: the perception of loss on unwanted outcome and perceived certainty that the unexpected outcome would occur, the perceive risk theory has developed from originally two dimensions to nowadays commonly accepted six dimensions in the past decades. Jacoby and Kaplan (1972) discuss five of the six dimensions, argue that they are conceptually independent, and collectively explained 61.5% of the variance in the overall perceived risk measurement. In the five dimensions, performance risk takes more important role than any other risks to explain overall perceived risk. Other researchers also mention time as an important risk dimension (Roselius, 1971; George et al. 1984). Stone and Grønhaug (1993) prove that 88.8% of the variance in overall risk can be captured by the six dimensions model. The definition of each dimension can be organized and shown in Table 1.

Table 1: Definition of perceived risk dimensions

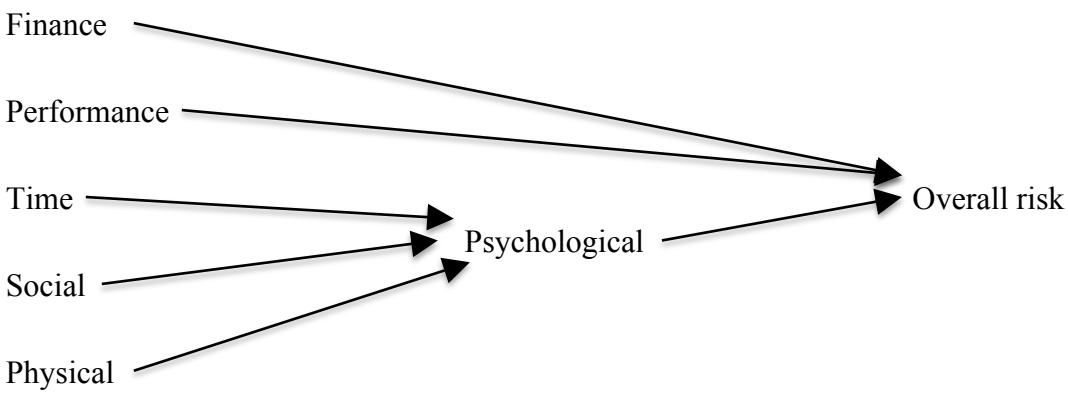
Dimensions of perceived risk	Definition	Researchers										
		Roselius (1971)	Jacoby & Kaplan (1972)	Stone & Grounbaug (1973)	Lutz & Reilly (1974)	Kaplan (1974)	Korgaonkar (1982)	Havlena & DeSarbo (1990)	Simpson & Lakner (1993)	Darley & Smith (1995)	Greenleaf & Lehmann (1995)	Mitchell (1998)
Financial risk	The product is not worth the price paid	X	X	X		X	X	X	X	X	X	X
Performace risk	The product does not perform to expectations	X	X	X	X	X		X	X	X	X	X
Physical risk	The product poses a threat to the physical well-being or health of the user or others	X	X	X		X		X	X	X	X	X
Social risk	The product results in embarrassment in front of the user	X	X	X	X	X	X	X	X	X	X	X
Psychological risk	The product affects the mental well-being of the user	X	X	X		X		X	X	X	X	
Time risk	The failure of the product results in an opportunity cost of finding another satisfactory product	X		X						X		

Sources: Linh, P. T. T. (2009). The effect of perceived risk on attitudes, intention and consumption of fish in Hanoi.
Kotler, P. and Kelle, K. L. (2016) Marketing Management (15th edn), Pearson, pp. 200.

The six dimensions all affect the risk perception. Meanwhile, there are some degree of correlation between these six dimensions as well. Cunningham (1967) state that "the consumer can only react to the amount of risk she actually perceived and only to her subjective interpretation of that risk" (p.10). From Cunningham's statement, we can see that perceived risk are highly affected by consumer's psychological state. So when considering the structure of the six dimensions and the perceived risk, scholars found that several dimensions affected the overall perceived risks through psychology dimension. Stone and Grønhaug (1993) confirm the mediating function of psychology dimension. The research result of Stone and Grønhaug (1993) shows that except finance dimension, which has a large directly effect to overall risk, all the other five dimensions correlate strongly with psychological dimension. And financial and psychological dimensions are the predominant two factors to the overall risk. Other research outcomes also argue that performance dimension plays a significant, while physical dimension plays a mineral role to overall risk (Stone and Grønhaug, 1993).

By summarizing the precious academic discussions on perceived risks, scholars mentioned that within the six dimensions of perceived risks, finance risk and performance risk are playing relatively a strong role to overall risk, and the other risk dimensions are all together softly affecting overall risks through psychological risk. The construct of the perceived risk is shown in **Figure 5**.

Figure 5: The Perceived Risk Construct



2.2.3 Antecedents of perceived risk

Knowing what cause perceived risk can help scholars and market researchers to better understand the psychological linkage between many antecedents and perceived risk, and then marketers can set and develop relative strategies to deduct the amount of risk perceived by consumers and enhance their product's purchase probabilities (Laroche, Bergeron and Goutaland, 2003). Existing literatures provide various antecedents of perceived risk.

Uncertainty: the likelihood of occurrence of negative consequences is an important component to perceived risk (Dowling, 1986). Uncertainty can be classified as "subjective uncertainty" and "objective uncertainty", researchers define the perceived risk particularly means subjective uncertainty which is affected mostly by consumer's psychology (Mitchell, 1999).

Involvement: Situational involvement is responsible for the feeling of anxiety, and then further effectively evaluates the psychological risk (Dholakia, 2001). But for low involvement purchases, customers may not be aware of the potential risk at all, so they may not evaluate or have the motivation to search for more information. Dowling and Staelin (1994) define three types of involvement that relates to perceived risk in their study: ego involvement (focus on personal ego image), purchase involvement (focus on purchase occasion or situation), and product involvement (focus on product category). Any one of the involvements is high, perceived risk is high.

Knowledge: consumer's knowledge affects perceived risk (Dowling and Staelin, 1994), and it can help consumer to organize, analysis, and make judgment from large amounts of complex information relating to a targeting consumption (Grewal, Mehta and Kardes, 2004). We define consumers with high levels of product-relevant knowledge as experts and consumers with low levels of product-relevant knowledge as novices. The experts will be more successful on dealing with the product tasks (Alba and Hutchinson, 1987) because the prior

knowledge can efficiently help them do cognitive analysis and develop a well-organized consumption rules with firm beliefs of the product performance (Brucks 1985; Sujan 1985).

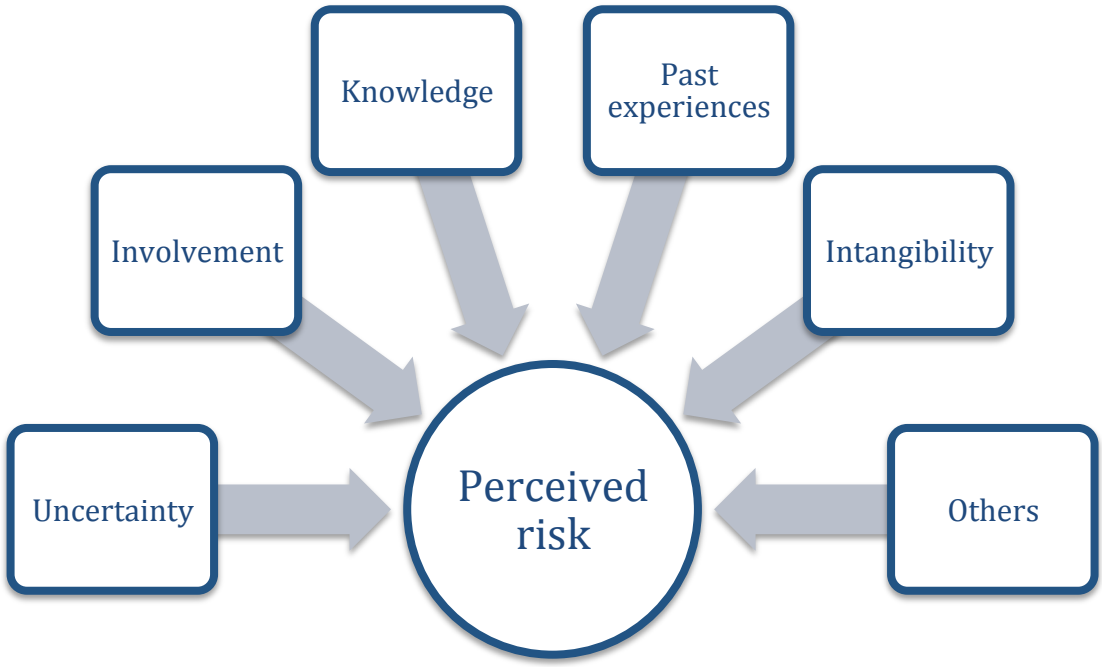
Past Experiences: consumer's past experiences is associated with perceived risk (Dowling and Staelin, 1994). Prior experiences in memory can also help consumers to evaluate new information and form judgments (Biek, Wood, and Chaiken, 1996). Experience can be categorized according to two aspects: the content of the experience and the amount of the experience and they both affects perceived risk (Srinivasan and Ratchford, 1991).

Intangibility: product intangibility is relating to perceived risk and it can be further divided into three dimensions: physical intangibility, mental intangibility, and generality (Laroche, Bergeron and Goutaland, 2003). Physical intangibility is mostly used in services marketing and defined as "impalpable", "not corporeal", and "dynamic, subjective, and ephemeral" (Shostack, 1977). Mental intangibility reflects that even physical tangibility cannot guaranty consumer's mental tangible feeling of an objective product, especially when consumer lacks using experience (Finn, 1985; McDougall and Snetsinger, 1990). Generality describes when consumer generally perceives a product and cannot precisely identify its definitions, features, or outcomes (Laroche et al., 2001). Some researchers argue that services are more difficult to be evaluated and perceived to be more risky because of their intangibility compared with products (Murray and Schlacter, 1990; Mitchell and Greatorex, 1993; Zeithaml and Bitner, 2000), while, some other researchers claim that mental intangibility explain more variance in overall perceived risks than the other two dimensions (Laroche et al., 2001; Laroche, Bergeron and Goutaland, 2003).

Other scholars and researcher also propose that gender and age, perceived sacrifice (likelihood of a negative outcome), and level of family income also cause different levels of perceived risks (Spence and Blackwell, 1970; Agarwal and Teas, 2001; Garbarino and Strahilevitz, 2004). Dowling and Staelin (1994) highlight that the specific antecedents of

overall perceived risk varied from situation to situation. All antecedents are summarized as follows (see **Figure 6**)

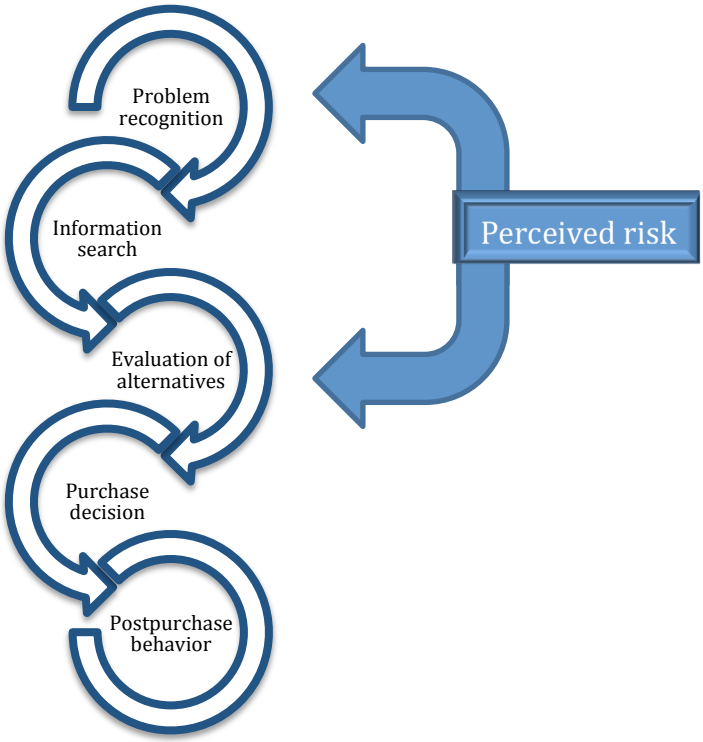
Figure 6: Antecedents of perceived risk



2.2.4 Perceived risk and buying process

In the 5-stages model of buying decision process, consumers evaluate of alternatives, and then make purchase decisions. Kotler and Kelle (2016) state that preference and purchase intention can facilitate consumer's buying behavior, but they are not the 100% predictors, the decision would be modified, postponed, or avoid by one or more types of perceived risk (p.200). But other scholars identify perceived risk as an influential factor in the earlier phases of the buying process (Dowling and Staelin, 1994; Cunningham, Gerlach and Harper, 2005). Risk has already been perceived at the stage of need recognition, and then consumers adopt risk reduction strategies in the information search and evaluation of alternatives (see **Figure 7**).

Figure 7. Relationships between perceived risk and the buying decision process



When consumer facing perceived risk, usually they seek ways to deduct this risk and facilitate reasonable buying decisions. Cox and Rich (1964) claim that the amount of risk is affected by two factors: the "amount at stake" and consumer's feeling of "subjective certainty" about if they will or will not get the amount at stake (partially or totally). There are two important elements that give value to the amount at stake: the level of goals and costs. Because of above analysis, Cox further argues that two ways can effectively reduce perceived risk – increase the certainty of the prediction on the purchase goal, or reduce the mount at stake. Cox finds that reducing uncertainty always go before reducing the amount at stake by seeking information or relying on exist information through his two cases of consumer studies (Cox, 1961). Dowling and Staelin (1994) also propose that in many problem-solving techniques to reduce negative feelings in uncomfortable situations, information search behavior is the most cited risk reduction strategies. It is believed that the increased level of perceived risk and the additional information search

behavior are positively correlated. The components of the concept of information search behavior include "the level of attention, perception and effort aimed at acquiring external information about the purchase" (Koklic, 2011 p.32). Dowling and Staelin (1994) also formulate a model of consumers' risk-handing behavior, which indicates that pronounced risk-handing activity increases when the risk level exceeds the individual's acceptable risk level.

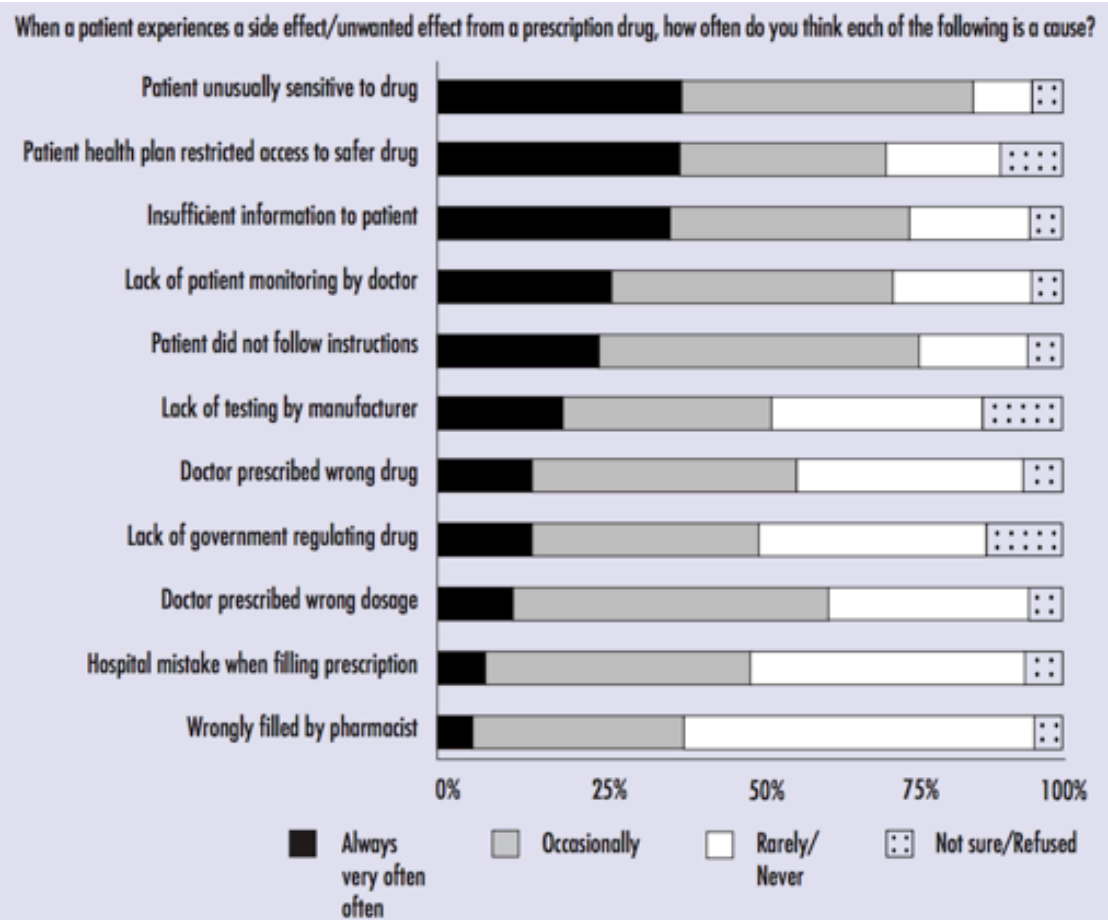
If consumers cannot find sufficient information to reduce their perceived risk, there are also many ways – avoiding decision, gathering information from friends, buying reliable brands, and relying on guaranties – to reduce the uncertainty and negative consequence of risk (Kotler and Kelle, 2016).

2.2.5 Perceived risk on prescription drugs in pharmaceutical industry

As one of "high-involvement" products, the perceived risk of prescription drugs is high (Sanchez 2000). Slovic et al. (1989, 1991, 2007) did surveys about "risk perception of prescription drugs" in three countries - Sweden, Canada, and United States – in the last thirty years. They narrowed the topic of how risk perceptions affected daily life, and focused on medicine area to investigate drugs' risk and benefit perceptions held by people across the three countries. They stated that drugs' perceived risks and benefits might influent patients' treatment choice, compliance with treatment plans, the tolerance of side effects caused by drugs, and the attitudes towards governments. They provided quantitative data about public's perceptions of risk from the use of various prescription drugs. Slovic et al. (2007) took the national survey in United States and found that the most negative image of drugs was bad taste, second one was safety, and the third one was side effects. Not like the results from Sweden and Canada, cost is also a negative association with prescription drugs in the United States. In all of the three countries, the prescription drugs' perceived risks are lower than

chemicals. Slovic et al. (2007) also investigated the causes of side effect – one of the main perceived risks of prescription drugs (see **Figure 8**).

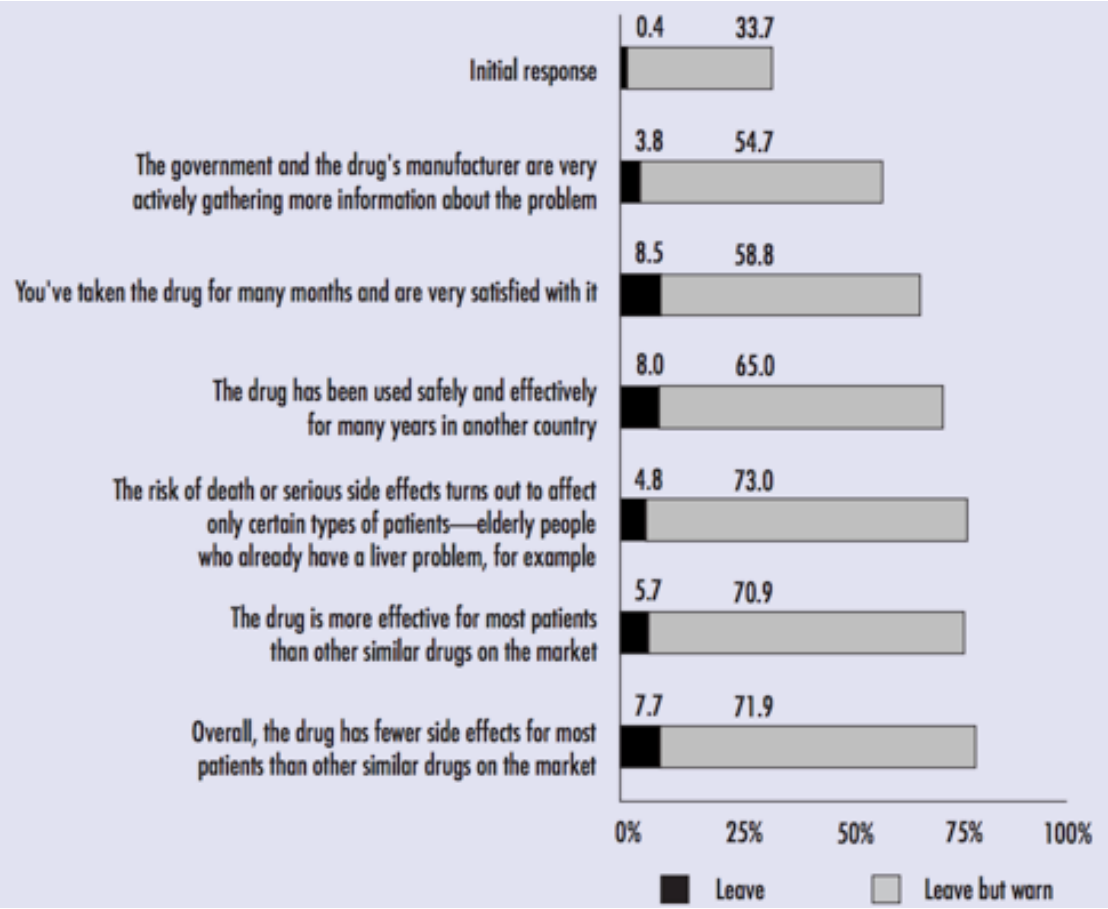
Figure 8: Cause of side effect: prompted responses.



Source: Slovic, P., Peters, E., Grana, J., Berger, S., & Dieck, G. S. (2007). Risk perception of prescription drugs: results of a national survey. *Drug information journal*, *41*(1), 81-100.

From the above figure we see that the patient sensitivity, inferior health plan, insufficient information are the first three reasons cause the risk perceptions. This national survey not only investigated the antecedents of perceived risks of prescription drugs, Slovic et al. also recommended possible strategies for coping with the risks (commonly referred to side effects of prescription drugs). When a prescription drugs adventuring a risk scenario, for example, the possibility for some fatalities, offering more information to patients may help. The most accepted one is to prove the drug has fewer side effects for most patients than other similar drugs on market (see **Figure 9**).

Figure 9:Reactions to a drug crisis scenario: modification of opinion in view of additional evidence.



Source: Slovic, P., Peters, E., Grana, J., Berger, S., & Dieck, G. S. (2007). Risk perception of prescription drugs: results of a national survey. *Drug information journal*, *41*(1), 81-100.

Besides the amount and the content of information, there are also some other factors can affect patients' risk perception – education, experiences, perceived benefits, serious harm, and warning signals – proposed by the survey. People who experienced side effects of prescription drugs tend to perceive prescription drugs more risky. People who believed drugs have efficient effects also had high tolerance of prescription drugs and inversely thought drugs were less risky. And if the drug has serious harm or has an obvious warning signals, it will be perceived more risky. People believe most on pharmacists and doctors to perform better drug functions, but they think that the drug manufactories and governments are taking the most responsibilities to reduce the prescription drug's risk.

The way patients get information about prescription drugs is unique compared with other goods. Inadequate information about the prescription drugs has already become a consensus (Chareonkul, Khun, and Boonshuyar, 2002). People get the most medicine information from physicians or other health professionals. There is also some information on mass media, like TV, Newspaper, Internet, and so on. About 35% of Internet users search information of health and medicine on-line (U.S. Department of Commerce 2002) and around half of them search for specific information about prescription drugs (*Healthcare PR & Marketing News 2000*). Because the large population of "online information seekers", pharmaceutical companies have also greatly increased the budget on Internet advertising in the past few years (Jarvis 2001). But only the United States allows pharmaceutical companies to do advertisement of prescription drugs on mass media (McKee, 1999). Most of the sources of prescription drugs are unclear and without authority online (McKechnie 1999). Menon, et al. (2003) recommended that marketers should provide trustworthy and verifiable information on drug related websites. They also found that consumers with good health status are more likely to trust on-line information. While, patients may prefer to rely on health care professionals to get drug information. And the consumers who don't trust their health care professionals and are more concerned with drug's side effects are more willing to check on-line information as well (Menon, et al., 2003).

2.3 THE RELATIONSHIP BETWEEN TRUST, PERCEIVED RISK, AND BUYING DECISIONS

2.3.1 Trust in consumer's buying decision

Many scholars have argued that the buyer's trust to seller is the premise of a successful commerce. Howard & Sheth (1969) suggest that trust is one of the key issues for customers to consider whether they should make a purchase decision.

Trust is affecting the consumer buying decision is because trust has played an important role in transactional relationship, and in the marketing literature, trust has become a key factor affecting marketing relationships (Yoon, 2002). Yoon (2002) argues that trust is not only an important variable that initiates the relationship with consumers, but is also essential for customer retention and loyalty.

2.3.2 Trust and perceived risk in consumer's buying decision

Mayer, Davis, and Schoorman (1995) propose that trust help consumers to cope with perceived risk. In nowadays society, we are continuously facing with risk. The risk occurs because of the turbulent society and technology changing. Under such situation, trust has developed as a crucial factor to successfully manage risk (Rose, 2000). But the causal relationship between trust and perceived risk has been debated for quite a long time in the academic world.

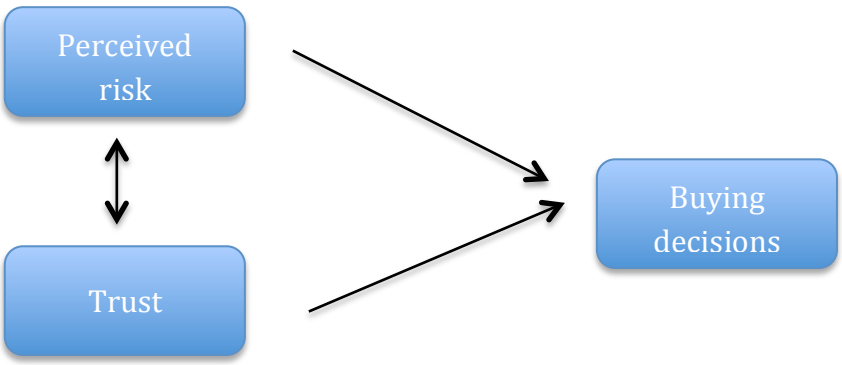
Some scholars agreed with Deutsch (1958) and debate that a risky situation is the prerequisite for trust's occurrence. Deutsch (1958) says trust occurs and plays an important role in expected behavior when people perceive negative situation but this situation has not been confirmed. Mitchell (1998) argues perceived risk is an antecedent for trust building and operating. This means if there is no perceived risk in the perception of human being, there might not be the concept of trust. In other words, Trust might not be needed if results can be achieved with complete certainty and no risk (Lewis and Weigert, 1985).

While Siegrist (1999, 2000) demonstrate that trust has a strong effect on risk perception and the level of trust in a situation is negatively related to perceived risk. Researchers say there is a path-dependent connection between trust and risk taking, that is, risk creates the opportunity for trust and trust determines the willingness of risk taking, which ends up with a common consumer behavior – consumers with high level of trust are easy to behave as risk

taking (Rousseau et, al., 1998). Siegrist, Gutscher and Earle (2005) also find that, compared with low levels of trust, high levels of trust reduce perceived risks.

By concluding the above literature reviews, the relationship between trust, perceived risk, and buying decisions can be illustrated clearly with **Figure 10**.

Figure 10: the relationship between trust, perceived risk, and buying decisions



2.3.3 Trust in pharmaceutical industry

Trust is important in the doctor-patient relationship. Skirbekk et al. (2011) debate that doctors are authorized by patients to execute medical treatment and they call it "mandates of trust". They find that more open mandates of trust results in more effective treatment with more complex disease and vice vasa. Trust is not only important in medical performance. It is also playing an important role for patients to adhere to doctor's treatment recommendations. Thorn, Bloch, and Segal (1999) confirm that patient's trust is a strong indicator in patient's decision making with accepting a new treatment. As prescription drugs is one part of medical treatment play, from these theoretical evidence we can see that trust should largely determine the patient buying decision when purchasing prescription drugs.

Kao et al. (1998a,b) develops a Patient Trust Scale and finds that patients with choices over doctors and with longer relationship with doctors are more likely to trust. It has long been acknowledged that information asymmetry between doctors and general patients may undermine the doctor-patient relationship. Researchers also find that caring, comfort, and good communication skills of doctors make significant differences in patient's trust (Krupat et al., 2001; Thorn, 2001).

CHAPTER 3 METHODOLOGY

The literature review generally introduced the overview of consumer buying process and the two important factors that might influence the buying decisions: perceived risk and trust. But the whole picture of perceived risk on prescription drugs, how trust becomes important in the prescription drug's buying decision making, and how pharmaceutical companies can reduce the negative influence of distrust in buying decision, have not been investigated by researchers. So firstly in this paper, I will base on the previous theoretical results and data from 5 pilot interviewees to exam the buying decision process, dimensions and antecedents of perceived risks in the process when consumer make decision to buy prescription drugs. Then, I will try to discovery and explore the relationship between trust, perceived risk and the buying decisions and discuss why trust is important in pharmaceutical market. And the last, I will stand at patients position, referring to exist and mostly in use pharmaceutical marketing methods, to see to what extent we can enhance the consumer's feeling of trust and influence their purchase behavior.

I conducted my research by using qualitative method. My aim is to develop a buying decision model and draw a detailed map of perceived risk under the real pharmaceutical market environment of prescription drugs. Elicit the key factors that influencing consumer buying decision process, and give proper advices that may improve the pharmaceutical company's marketing performance. Also hope to provide clues of ideas for feature further test by other scholars who investigating the relative domain. In this chapter, I will explain what research paradigms I use, why I choose to use qualitative method, how I collected the data, and discuss the reliability and validity of my research.

3.1 RESEARCH PARADIGMS

The concept of paradigm was introduced and made popular by Kuhn (1962). "A paradigm is what the members of a scientific community, and they alone, share (Kuhn, 1974 p.460)". This scientific community pursues the same set of shared goals, common beliefs and agreements, and how the problem should be understood and addressed (Kuhn, 1962). Creswell (2003, 1994) and Guba (1990) present 3 fundamental elements for the research paradigms: ontology, epistemology, and methodology. Ontology refers to the expression of reality - "how things really are" and "how things really work" (Denzin and Lincoln, 1998 p.201). While epistemology refers to the different forms and sources of the knowledge relating to that reality and the relationship between inquirers and the inquired, and methodology means the tools we used to know the reality (Guba, 1990). Researchers can decide how they see the world, what kind of research questions to investigate, and how the research question can be solved based on the three elements of paradigm. Guba and Lincoln (1994) distinguished four kinds of paradigms – Positivism, Postpositivism, Critical theory, and Constructivism. Details are showing in Table 2.

Table 2: Basic Beliefs of Alternative inquiry Paradigms

Item	*Positivism*	*Postpositivism*	*Critical Theory et al.*	*Constructivism*
Ontology	naive realism—"real" reality but apprehendable	critical realism—"real" reality but only imperfectly and probabilistically apprehendable	historical realism—virtual reality shaped by social, political, cultural, economic, ethnic, and gender values; crystallized over time	relativism—local and specific constructed realities
Epistemology	dualist/objectivist; findings true	modified dualist/objectivist; critical tradition/community; findings probably true	transactional/subjectivist; value-mediated findings	transactional/subjectivist; created findings
Methodology	experimental/manipulative; verification of hypotheses; chiefly quantitative methods	modified experimental/manipulative; critical multiplism; falsification of hypotheses; may include qualitative methods	dialogic/dialectical	hermeneutical/dialectical

Source: Guba, E. G., & Lincoln, Y. S. (1994). Competing paradigms in qualitative research. *Handbook of qualitative research*, *2*(163-194), 105.

Researchers can use paradigms to exam the aim, form, and content of their researches, so that they can find out the most proper research method to solve the research questions. In my paper, I am aiming at studying while in the process of consumer buying prescription drugs, what main factors are affecting the decision making results and how we can diminish the obstacle factors by modifying pharmaceutical marketing activities. It is also expected to know the characteristics particularly in prescription drug's buying behavior and decision making process deeply and profoundly through investigating consumer buying behaviors, emotions, and cognitions. From ontology, the focus of the paper is the information richness of consumer behaviors, and intangible mental constructions. The study is socially and experientially based, local and specific in nature. We focus on the pharmaceutical market in China and the limited numbers of Chinese prescription drug's consumers, but the elements and results of the research questions are often shared among many individuals and even across culture. The epistemology of my study will be transactional and subjectivist. Because of all the above reasons, I adopt the constructivism paradigm and use hermeneutical and dialectical techniques to perform my study.

3.2 THE QUALITATIVE RESEARCH APPROACH

Quantitative and qualitative are the most common methods researchers use to explore questions. Quantitative method is a natural science approach, using in positivism particularly, collecting data, and explaining the relationship between theory and research questions in a deductive way. The result shows the objective conception of social reality. While qualitative research is focusing on understanding social world, using in constructionist, concerning words rather than numbers, and explaining the relationship between theory and research questions in an inductive way (Bryman and Bell, 2007). Qualitative method exams the

interpretation of world on subjective and inter-subjective answers from its participants (Gill et al, 2010). So it will be possible to capture data through respondents' perceptions and empathetic understandings (Miles and Huberman, 1994).

Qualitative approach has been wildly used in consumer behavior researches. Since the late of 1940s, the study of consumer behavior has grown fast and varieties of qualitative research studies had been done by Alfred Politz before the *Association for Consumer Research* and the *Journal of Consumer Research* showed up. And later on, qualitative studies were being used in learning the lives of consumers, their life cycles, and their decision making in the post-World War Ⅱ period (Levy, 2005). Scholars declare the consumer behaviors are formed by the influences of multiple situations and forces (Lewin, 1931), and the influencing factors can be culture, environmental forces, reference group memberships, and psychological components (Engel, Kollat, and Blackwell, 1968). Levy (2005) says that "the more fully researcher want to understand consumer behavior", the more they "engage in the varieties of research activity called qualitative research" (p.343).

My paper is investigating a social world in which consumers doing purchase decisions on prescription drugs. Conducting a qualitative approach can help me to know how the buying process differ from general model, what factors influence the buying decision, how consumers overcome the decision obstacles, and develop better marketing strategies for pharmaceutical companies basing on consumer's interpretive answers.

3.3 DATA COLLECTION

In order to choose the proper interview social set and target participants, I conducted a pilot study and a field study with purposive sampling procedure – typical case sampling.

There are two different ways to collect data, one is random sampling method, and the other one is purposive sampling procedure (Neyman, 1934). Neyman (1934) defines the random

sampling takes at random population, while, the purposive sampling is "a special case of stratified random sampling by groups" (p. 572). Tongco (2007) introduces when determining the method of data collection, we consider the type of information we need. When the information from every individual in the community is potentially valuable, we use random sampling. However, when the information is held by only certain member in the community, we use purposive sampling.

Prescription drugs, as a special commodity to prevent and treat disease, should be well known and used among the populations who used to be or are being patients. So I conducted my study by carefully choosing environments and places. In order to meet the largest concentration of the population to be interviewed, I went straightly to the site – a large and famous hospital in a Chinese city named Shen Yang – without selecting or informing any participants in advance. All interviews are randomly chosen in the social sets near the hospital – hospital canteen and a bookstore nearby.

My interview procedure consists two parts. The first part is a pilot test (N=5) using the semi-structured interview questions, and, the second part is a field study (N=31) using the cognitive interview method. The two procedures' design can help me to firstly check out and specify the buying decision process of prescription drugs according to the general buying decision-making model, and then elicit proper tactics to optimize pharmaceutical company's marketing strategy and facilitate the consumer buying process.

In the first stage of my interview, I randomly choose five interviewees who had the experience of consuming prescription drugs. Some of the questions are open constructed, for example, "Please describe your procedure of buying a prescription drug", "What factors will affect your buying decision?" And some of the questions are semi-constructed, like "When do you perceive there is some risk while buying or using a prescription drug?" "What the risks are? To what extent there may be finance/social/psychological/time risks?" "What are the reasons make you feel there are risks in the buying process? Are there any reasons come from the intangibility, knowledge, experience, trust or other things affect the risk perception?"

and “What will you do to relieve the risk perception? To what extent you depend on personal, commercial, public, and experiential sources? And which source you believe most?” The first stage of my interview is also a pilot study for the purpose of investigating the buying decision model and proving the relationship between perceived risks, trust, and buying decision process. As the paper is aiming at providing practical meanings to pharmaceutical industries, during the process of the first stage of interviews, I will find out the key research questions that are going to be further investigated at the second interview stage.

After collecting and analyzing the pilot interview data, I identified a key factor – trust between patients and doctors - that need to be further investigated, and conducted a field interview focusing on this research target. In the field study, I randomly interviewed 31 people at the study site. Questions are “How often do you go to see doctors?” “What will you do after the doctor prescribing some drugs to you?” “In your opinion, why the doctor prescribe this/these drug to you?” “Do you believe in the drugs the doctor prescribed? Why?” and ask them to give 1 to 7 score on three groups of pharmaceutical marketing activities shown in pictures. In-depth interviews were given when they finishing activity’s evaluation. Reasons for the score and their feelings were carefully asked.

Problems encountered

Totally I interviewed 36 people, which used a lot of time and needed strong persistence. All the interviewees were found randomly in the field nearing hospital. It is hard to convince people to devote their precious time with a totally stranger and freely express their thoughts. I was refused for many times. Some people even took me as sales person who wanted to recommend some new products to them. And a few interviewees left in the middle of interview because of their personal calls or limited available time. Because of these challenges, the time of data collecting lasted for one month.

Confidentiality

I clarified the confidentiality of interview to every participant. I explained the interview voice records, their personal data, and any information they provided in the interview process are only for academic purpose. All materials relating to each people will be confidential. All my voice records were started with the permissions from interviewees.

3.4 RELIABILITY AND VALIDITY

Reliability and validity can help researchers to find out a good research with more credible and trustworthy findings and results (Brink, 1993). The use of reliability and validity are quite common in quantitative studies, while Golafshani (2003) argues that the terms defined in quantitative research cannot be used in qualitative research. The reason is that quantitative researches are looking at causal determination, prediction, and generalization of findings, while qualitative research are focusing on illumination, understanding, and extrapolation to similar situations (Hoepfl, 1997). Generally, "reliability" is an irrelevant matter when judging the quality of qualitative research because it is the consequence of the validity in a qualitative study, and the maximized or tested validity, or called "trustworthiness", is the criteria to a high quality qualitative research (Golafshani, 2003). Golafshani (2003) claims that the trustworthiness of qualitative research can be tested by adopting triangulation approach. Which means, "use multiple methods of searching or gathering data" and "involve several investigators or peer researchers' interpretation of data" (Golafshani, 2003, p.604).

In the study process of my master thesis, I designed the interview questions and choosing study sites basing on not only literature materials, but also my five years' working experience as representative in two famous international pharmaceutical companies. And I conducted two interview sections – a pilot interview with 5 participants and a field study with 31 participants. The research questions are generated based on the observation through working

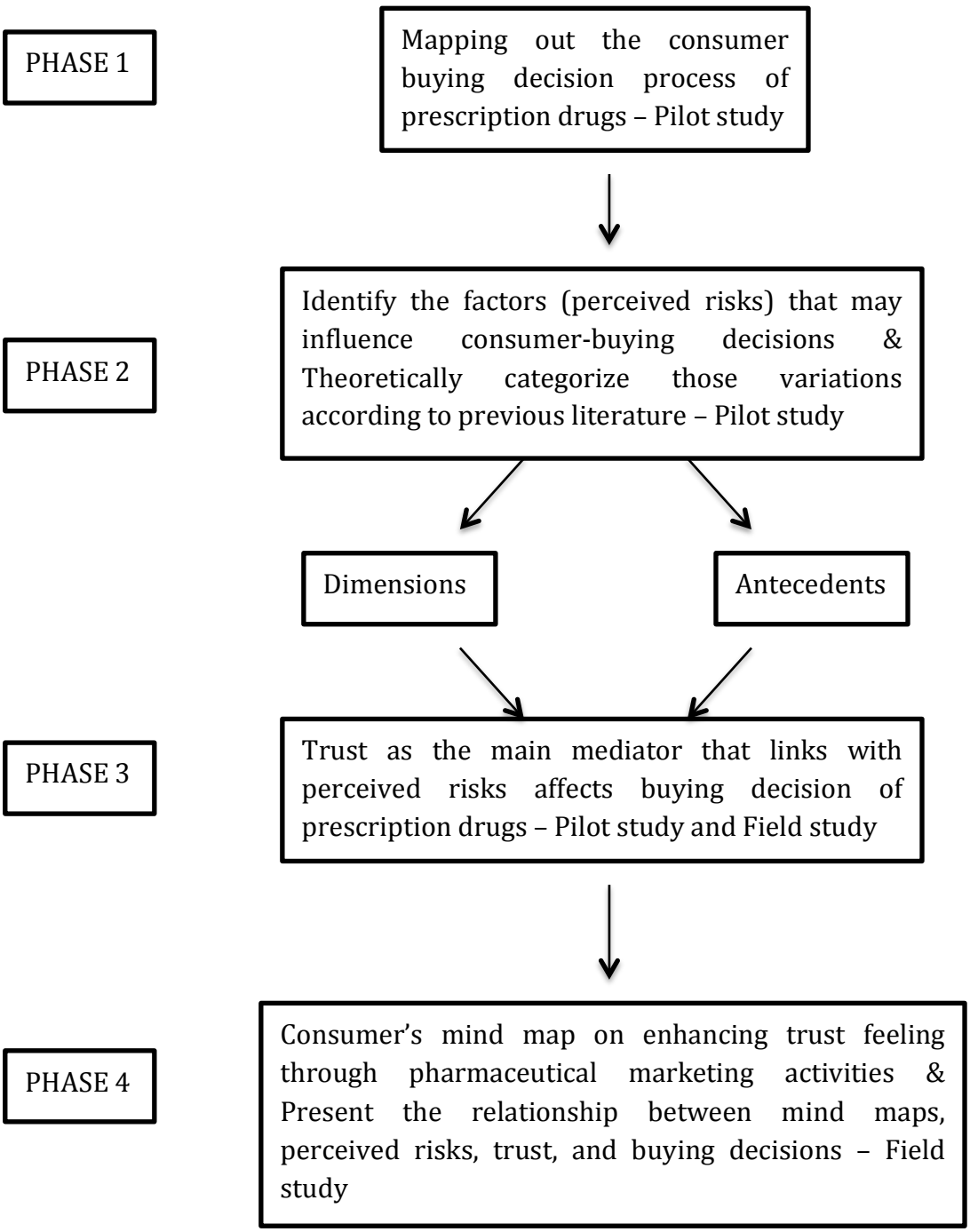
experience and ideas generated from interviews. I use multiple qualitative research techniques as well, for example, open questions, semi-constructed questions, in-depth interview, and cognitive interview methods. And one study peer from my same master major helped me examined the coding categories generated from transcripts to make sure that there was no bias on coding the transcripts.

CHAPTER 4 DATA ANALYSIS AND FINDINGS

In this paper, my aim is to investigate the prescription drug's buying decision process model comparing and directed by the five-stage model of classical buying decision-making process. I focus on the relationship between perceived risk and trust while investigating the buying decision process model. As the analysis goes on, the key factor, trust between prescription drug's consumers and doctors, as an mediator affecting the degree of perceived risk becomes obvious. So the larger scales of interviews are done for further examining and eliciting practical ideas to cope with the "trust" problems. All of the interpretations of the data are done by adopting inductive analytical processes, which means the categories used to describe and explain the research questions are derived gradually from the data (Pope, Ziebland, and Mays, 2000). In this paper, I start with the classical theory model checked by using pilot interview data, and then explain key antecedents and dimensions of the perceived risk by further analyzing the data. Then I go on inducting and eliciting the main factors that influencing buying decisions on prescription drug. At the last, I categorize the way that may reduce the perceived risk and enhance a buying decision by analyzing field interview data.

So I conduct the data analysis in four stages. In the first stage, I develop a prescription drug's buying decision process model. In the second stage, I will illustrate the antecedents and dimensions of perceived risk in prescription drugs in detail. In the third stage, I will highlight the main factors inducted from perceived risk and other interview coding that mostly influence the buying decision. At the last stage, I will develop some coping strategies that pharmaceutical companies may adopt to facilitate consumer buying process in prescription drugs. The four stages' analysis is shown in **Figure 11**.

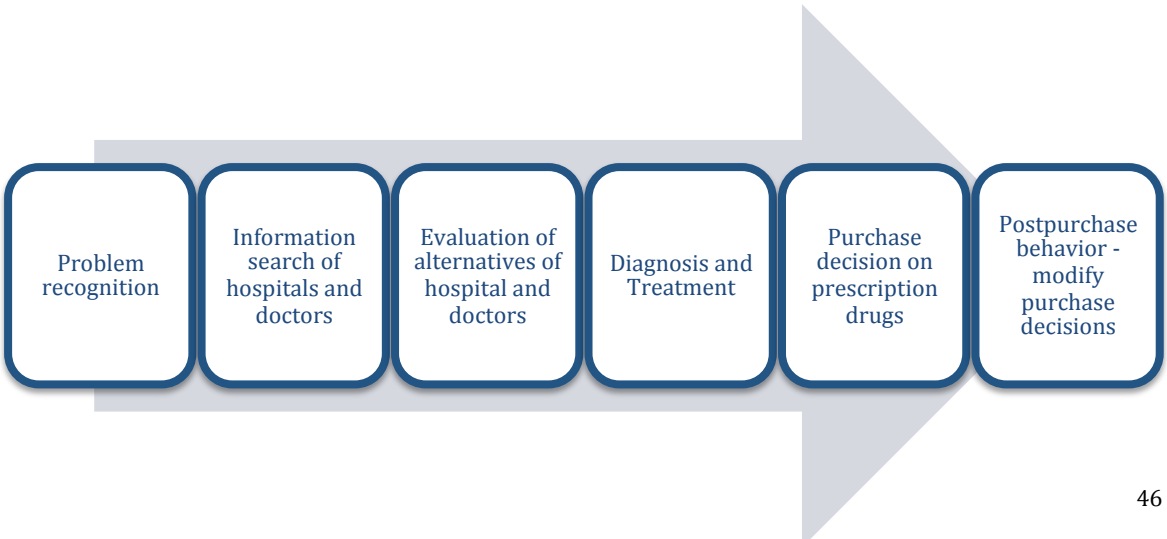
Figure 11: Stages of analysis



4.1 Stage 1- Mapping Consumer Buying Decision Process of Prescription Drugs

The first stage of analysis starts at looking at what is the consumer's buying decision process when they purchasing a prescription drug. I asked each interviewee in my pilot study to describe the process when they purchasing a prescription drug. All respondents start with a problem recognition – unpleasant feeling about body, then they move on to the getting diagnosis part through various evaluations from hospitals and doctors. After proper in-hospital treatment, most people will be prescribed drugs as further out-of-hospital treatment plan. Some respondents completely follow the doctor's advice, but some are still suspicious to the advice. Generally, the map of patient's buying decision process of prescription drugs is aligned with the model we reviewed from previous theory. But the process analyzed from interviewees shows that consumer do lots of evaluations in the whole buying process than in original theoretical models. Such evaluations happen not only when after diagnosis, but also before the diagnosis and even after the prescription's delivery. And the content of the evaluations is not just limited to prescription drugs, but also hospital's quality and doctor's reputations. All the evaluations help people a lot to make purchase decision. Details are shown in **Figure 12**.

Figure 12: interviewee's buying process of prescription drugs



I took my study on the set nearing a famous hospital in China, so my analysis result shows Chinese consumer's buying decision process, so the differences compared with previous theoretical model might come largely from the culture and system's differences of medical treatment in China.

Comparing with most developed countries, in which the primary care have been widely used, China is using "the three – tier organizations" medical system. Under the primary care system, patients can only visit specialists with a recommendation from their primary-care practitioner (Starfield, 1994). But in China, there is no such a rule that we can only see specialist with reference. The health care education system in China is specialist oriented. "The three – tier organizations" is designed for the convenience and broad delivery of health services in every region in China (Hsiao, 1995). But the health care service quality and resources are unevenly distributed in different tiers of health organizations. For example, the staffs working in village stations have only been trained for three to six months after junior middle school and have two to three weeks continuing education per year (Geyndt, Zhao, and Liu, 1992). But the county hospital's staffs are graduated with four to five years of medical school trainings, and the city or larger regional hospitals are containing with higher educated and more excellent skilled employees (Hsiao, 1995). The patients with adequate incomes are willing to pay more to go directly to large hospitals. And they are free to choose a particular specialist to examine for them.

Problem Recognition

This means when people physically feel wrong. In prescription drug market, consumers normally don't go directly for choosing and purchasing the targeted products. A sequence of medical services is before their purchase behavior.

Information Search and Evaluation of Hospital

Not like consuming other products and services, consumers can get lots of information from commercial tunnels. Most people know a hospital through a proactive information search behavior, like from past experience, word of mouth, comments from website… no matter what kind of information search and evaluation criterions they use, interviewees all described that they cognitively devoted a lot on considering which hospital to go.

> *"I will consider of which hospital I should go to get a reliable diagnosis… I usually go to tow hospitals. One is a district hospital near to my living place. The other one is the most famous and with highest reputation hospital in my disease domain…when the results are different, I will go to see a third hospital and trust the result from the largest hospital…"*

> *"I will choose to go to the kind of hospital depending on my disease, if I have an emergency, I will go to a relatively good hospital near by … I won't go to the best hospital of the city for a tiny problem…if what I need is just a treatment of cold, why I spent so much time between crowded and noisy people?"*

Information Search and Evaluation of Doctors

Besides hospital, consumers also see doctors quite important in health care. Satisfaction and health care searching behavior are closely related to each other (Ware and Davis, 1983). Consumers are concerned not only which hospital or emergency room they are going, but also which doctor they are going to see. In China, patients have lots of freedom on choosing physicians working for them. Every hospital has a introduction of their experts which shows their the education back grounds and medicine specialties.

"If I didn't get a clear diagnosis from the last doctor, I would go to choose an expert at the second time…I cannot tell which doctor is more trustable…I just ask nurses in the hospital …I think I choose expert just for psychological comfort…"

" I will consider which doctor I shall go to ask for help…I usually choose a doctor above medium level relying on word of mouth…I normally go to ask friends, or ask friends to ask their doctor friends… sometimes when I meet a young or an intern doctor, I will definitely change to a new one…"

Diagnosis and Treatment

Diagnosis is "a statement or conclusion that describes the reason for a disease, illness, or problem" (Merriam-Webster.com). A comprehensive and objective diagnosis analysis is the important prerequisite for treatment of disease or problems. When this part goes wrong, it will largely affect consumer's buying decision of prescription drugs.

"Once I felt the pain in my heart, I went to three hospitals for diagnosis, but no one can tell me exactly what was going on…the first district hospital said directly they cannot give out a statement and recommend me to go to a larger hospital…the second one diagnosed me as heart failure and told me I cannot do sport any more…but the third one told another story, they said I got a left ventricular hypertrophy (LVH) disease and started to prescript lots of drugs for me…I was confused at the diagnosis, so I didn't pick up any medicine they recommend…and now I am still alive…My heart become normal and healthy now all by itself…"

Purchase Decision

Rationally, a purchase decision is made based on previous buying decision process: problem recognition, information search, evaluation of alternatives, and follow the treatment plan. But the unique characteristics of the target purchasing product and events happened on the purchase point can also change the purchase result. Prescription drug is a special commodity with risks and benefits at the same time. The purchase decision is depending on the situation in which consumers perceive risk more or perceive benefit more. In my pilot study, interviewees said that they would stop follow the doctor's prescription in many cases: high price of drugs, don't relate to symptoms, side effects, not enough communications from doctors…I will divide the factors that influence consumer buying decisions of prescription drugs on tow clusters. The first factor is called "perceived risk" and the second factor is "trust". Details will be analysis in the stage 2 and stage 3.

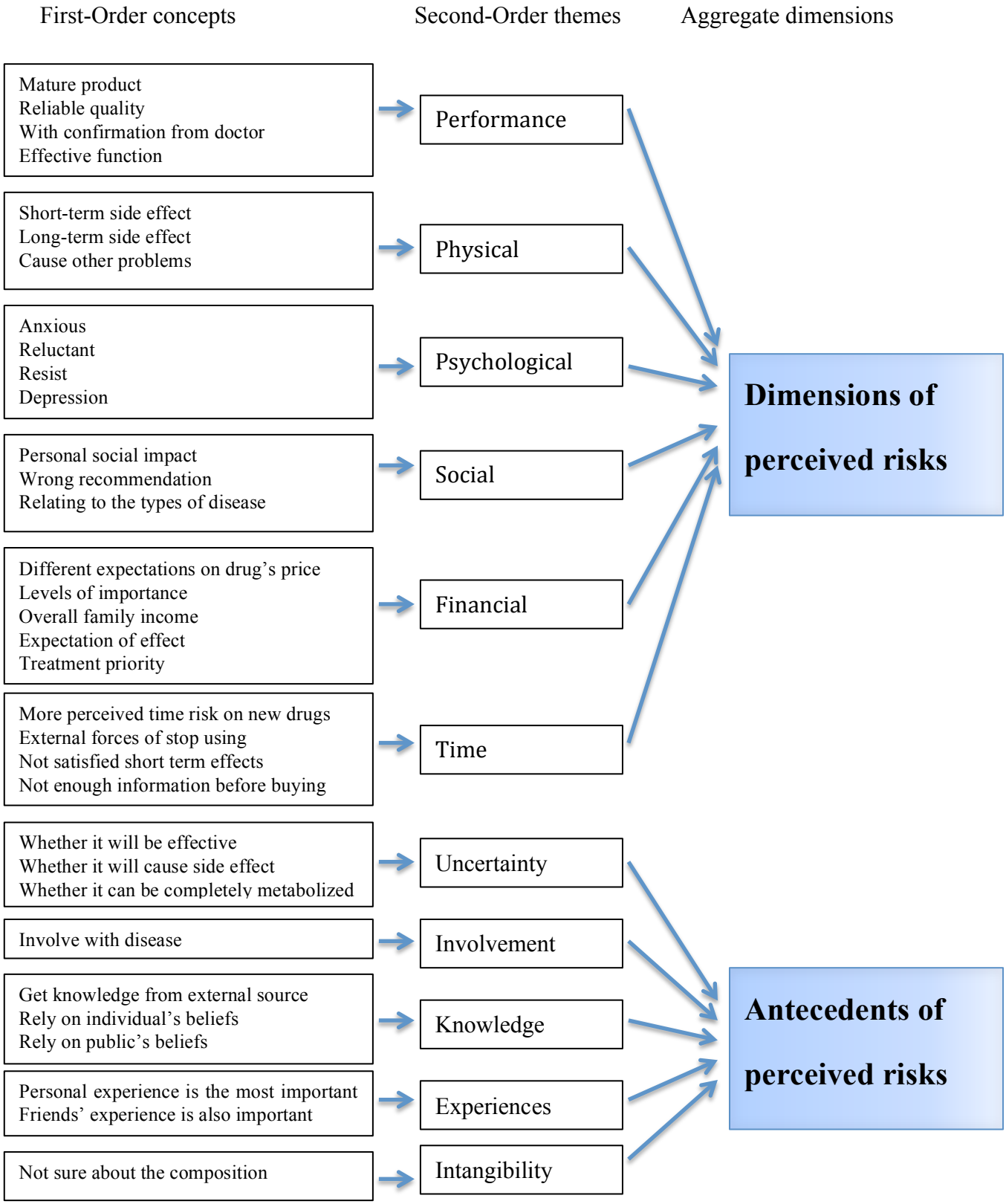
Post Purchase Behavior

In the journey of the consumption on prescription drugs, the drug's performance speaks loudly. The perceived risk and trust built up in the previous processes will be enhanced or totally changed at this point. Consumers are always cautious on the consumption of prescription drugs. They go little step by step to check out the effects of the drugs but also are worried about the risks at the same time. Many interviewees responded that they just eat some of the prescription drugs and see what reactions the body has.

4.2 Stage 2 – Perceived Risk of Prescription Drugs

Perceived risk is one of the variables that influence consumer's buying behavior. We go through the narratives information giving by our interviewees, and then code it to see if any of the narratives can be categorized into perceived risk. In order to test the detailed connotations and contents of perceived risk in the process of buying decision making on prescription drugs, I use template analysis in this research stage. In template analysis the researcher present an initial coding template according to exist theory, and then the template is modified by collected data from interviews (King, 1998). Previous literature gave out a broad conceptual framework of perceived risk. This framework provides a reference for further research on investigating how perceived risk affecting purchase decisions in pharmaceutical industry on prescription drugs. In this stage, we go further distinguishing each dimension and antecedents of perceived risk when buying prescription drugs. **Figure 13** shows the data structure that presents the three stages analysis. The first order shows the concepts summarized from narrative data, the second order is the themes relating to dimensions and antecedents of perceived risk, and the aggregate dimensions are the two aspects we investigated to understand and analysis perceived risk.

Figure 13. Data structure



Dimensions of perceived risks

Performance Risk

Performance risk means that the consumer's feeling of the probability that the product they are going to choose will not function as expected or will not have the desired benefits (Bauer 1960; Oglethorpe 1988). As a functional production aiming at helping patients to release pain from disease and restoring physical fitness, the performance of prescription drugs is highly important. The efficacy, safety, and quality control of developing and manufacturing the prescription drugs are strict. Thus the production procedures must follow the requirements of Good Manufacturing Practice (GMP) for drugs to keep good quality during drug manufacturing. Though the manufacturing standard in pharmaceutical industry is higher than in other industries, consumers still have lots of concerns. First, they don't want to be tested by new developed drugs, as the quotation 1.1 says. Second, though the GMP offers the manufacturing standard to pharmaceutical industry, consumers are still willing to buy drugs produced by famous pharmaceutical companies, just as the quotation 1.2 illustrates. Third, doctor's word always works more than consumer's self-evaluation on prescription drug. Like what says in quotation 1.3 and 1.4, consumers are look forward to get advices from doctors. Fourth, consumers care about the effective functions when they consuming the prescription drugs, just as the 1.5, 1.6, and 1.7 quotations highlight.

Data Table 1: Data supporting the perceived risk's dimensions of "Performance"

Associated First-Order Concepts	**Representative Quotations**
Mature product	1.1 " I will check if this drug has already been in market for quite a long time...(the drug) must has sufficient feedbacks of symptoms and effects…I don't feel safe about new drugs…"(Pilot interviewee 1)
Reliable quality	1.2 "The drug's manufacturer should be famous, the technique

	they use to produce the drug should be advanced, and the quality control must be strict…" (Pilot interviewee 1)
With confirmation from doctor	1.3 "I don't know quite much about medicines, so I must ask doctors to make sure the drug I choose can cure my disease…some people say that some health care production is safer than drugs…but I won't believe it without doctor's confirmation…" (Pilot interviewee 1)
	1.4 "I ask doctors to help me choose the most suitable prescription drug…" (Pilot interviewee 2)
Effective function	1.5 "When I choose a prescription drug, I will focus on the differences between different drug's functions…then ask doctors which one is the most suitable…" (Pilot interviewee 2)
	1.6 "I will choose well-known brand…best with recommendation from others…and they help me make sure the effective function." (Pilot interviewee 3)
	1.7 "I will firstly see whether the symptoms can be reduced after taking drugs…" (Pilot interviewee 5)

Physical Risk

When we say perceived physical risks of prescription drugs, we normally think of physical side effects. Horne and Weinman (1999) find through their research that over one third patients strongly worry about their medication and believed there is large chance of dangers relating to drug dependence or long-term effects. Interviewees talked a lot on the concerns about drug's side effects. These concerns can be divided into three categories – the short-term side effect, the long-term side effect, and other physical problems caused by drugs. The quotations of 2.1 and 2.2 talks about the short-term effects and according to the quotations we can see that the short-term effect determines whether patients are going to follow their

treatment plan. But the long-term effect and other problems caused by prescription drugs are the true horror for some consumers. Quotations are shown from 2.3 to 2.7.

Data Table 2: Data supporting the perceived risk's dimensions of "Physical"

Associated First-Order Concepts	**Representative Quotations**
Short-term side effect	2.1 " I think the side effect is the biggest risk of prescription drugs…I will check the happening probability of its side effects from instruction and make decision to use or not…"(Pilot interviewee 1) 2.2 "We cannot see the side effect only after observing it for a period of time while taking a prescription drug, for example, we observe the short effect for one or two months, and go to hospital often in this period of time…" (Pilot interviewee 2)
Long-term side effect	2.3 "Sometimes the prescription drugs also influence our bodies on a long term, but we cannot figure it out right away…and we even may not find it from instructions…" (Pilot interviewee 1) 2.4 "I don't care too much about the small side effect, like insomnia, but I believe the probability that some prescription drugs may cause tolerance in the long run…the present effect will decrease gradually, then we have to pay more for advanced drugs…" (Pilot interviewee 3)
Cause other problems	2.5 "Sometimes the patient takes both drugs and surgery, I will see if the drug I or my parents take are going to affect the other treatment…" (Pilot interviewee 2) 2.6 "I know the antibiotics kill the white blood cells, then will affect my whole body's immune system and cause my other organs wrong…" (Pilot interviewee 4)

	2.7 “I concern the chain reaction of prescription drugs, if the drug will cause a new disease, if the drug is against any food…” (Pilot interviewee 5)

Psychological Risk

Perceived psychological risk is one of the dimensions of the overall perceived risks, but is affected by several other dimensions all together. Just as what Stone and Grønhaug (1993) confirm, psychology dimension is taking a mediating function in between the relationship of perceived risk and all the other dimensions. The quotation 3.1 to 3.3 confirms that consumer’s anxious and reluctant feelings are caused by the worries of side effects. Quotation 3.4 says the resist attitude from some people and quotation 3.5 gives an example that patient will go depressed because of not satisfied effects.

Data Table 3: Data supporting the perceived risk’s dimensions of “Psychological”

Associated First-Order Concepts	**Representative Quotations**
Anxious	3.1 “I am just worried about the long term side effect of having prescription medicine, maybe the side effect is more serious than my original disease, then I am going to take heavier pains…”(Pilot interviewee 1) 3.2 “I have a lot of worries about drug’s side effects…always have to take the potential risks…” (Pilot interviewee 5)
Reluctant	3.3 “I can't insist on taking prescription drugs regularly, I will forget, also because of I do not want to eat, unless my health condition is seriously poor…I know every drug has its side effect, some of them are hard to quit, like hypnotic and pain killers…they just reduce the surface symptom and temporary problem, but have no fundamentally treatment…and when I get

	addiction on them, I need to spend more on further treatment… ” (Pilot interviewee 3)
Resist	3.4 “My father is a kind of person that always avoid going to hospitals, and he also seldom take medicines, because he is afraid of being noticed about any negative information relating to his body…” (Pilot interviewee 2)
Depression	3.5 “I got a skin disease two years ago, it had not been cured after a long time of treatment. I took several kinds of drugs, they caused me diarrhea but brought no effects, I was really depressed in those days…” (Pilot interviewee 4)

Social Risk

Social risk was defined as lacking support from friends, or the peer group (Hodges, Malone, and Perry, 1997). Social risk also has been defined as the likelihood that life was negatively affected by the feeling of insecurity, isolation, inequity and inequality (Ranci, 2010; Sen, 1985, 1987). Nevertheless, in my study social risk means the negative effects on social relationships and reputations caused by taking a specific prescription drugs. Interviewees all responded that they don’t think there is too much social risk when they consuming prescription drugs, but they also said that the social risk is determined by several factors. The narratives from interviewees can be classified into three categories. First, the social risk when consuming a prescription drugs depending on the level of the personal social impact (see quotation 4.1). Second, the social risk relating to prescription drug may come from a wrong recommendation (see quotation 4.2). Third, some diseases are highly associated with social risks, like infectious disease or disease with social stigmas (see quotation 4.3 to 4.5).

Data Table 4: Data supporting the perceived risk’s dimensions of “Social”

Associated First-Order Concepts	**Representative Quotations**

Personal social impact	4.1 "For the average person in the world, they don't have too much social impact…maybe public won't care about what kind of disease he or she has… "(Pilot interviewee 5)
Wrong recommendation	4.2 "If I recommend a specific drug to my friend, but the drug doesn't work on him or causes serious side effect, I may take a social risk…" (Pilot interviewee 5)
Relating to the types of disease	4.3 "It is easy for people around to accept the patient's health status, everybody will get sick, especially when old people get chronic disease…" (Pilot interviewee 2) 4.4 "So many people are taking medicines for long terms, I don't think there is any social problem…" (Pilot interviewee 3) 4.5 "It depends on what kind of a disease…like contraceptive pills, maybe girls don't like others to know…or infectious disease…" (Pilot interviewee 4)

Finance Risk

When we mention finance risk of consumer's buying behavior, we are not saying the financial return after investing in specific financial products, but we are focusing on if the product satisfies the consumer's need. Financial risk in consumer behavior means weather the product is worth the money customer paid (Kotler and Kelle, 2016). Interviewees have lots of different criteria to value the level of prescription drug's finance risk. The quotations from 5.1 to 5.9 are the narratives that identifying the criteria. The perceived finance risk depends on expectations of drug's price, the importance of the drug in life, over all family income, expectations of drug's effect, and the priority of treatment.

Data Table 5: Data supporting the perceived risk's dimensions of "Financial"

Associated First-Order Concepts	**Representative Quotations**

Different expectations on drug's price	5.1 "I believe the price of a common and chronic disease drugs won't be too expensive…"(Pilot interviewee 1)
	5.2 "I will never spend all of my salary for a tiny disease's drug…but doctors may recommend expensive drugs to me… " (Pilot interviewee 4)
	5.3 "Some drugs for specific disease are really expensive…even hard to find in domestic market…but people accepted the price in anyway…" (Pilot interviewee 3)
	5.4 "I will compare the relationship between the disease and the drugs…If it is a serious disease, I would like to pay more for effective drugs…but if it is a chronic or normal disease, I will expect a low price of drugs…" (Pilot interviewee 5)
Levels of importance	5.5 "If I spend too much of money on prescription drugs and it is going to affect my children's living and education, I will stop buy them…" (Pilot interviewee 1)
Overall family income	5.6 "I will see my family's economy ability…when after deleting the mortgage and life living expense, I still have money left and it is enough for paying for the drug, I will buy it…" (Pilot interviewee 1)
Expectation of effect	5.7"If I spend a lot of money for my parents, but the medicine can give them ten years' extra survival time, I will spend the money…" (Pilot interviewee 2)
	5.8 "Even though I spend a lot of money, but my body is still suffering…" (Pilot interviewee 4)
Treatment priority	5.9 "If other treatments are important than prescription drug and also expensive, I will use money for that first…like surgery..." (Pilot interviewee 2)

Time Risk

In consumer behavior, the meaning of perceived time risk is similar to opportunity cost, which means the failure of present product results in the loss of trying another product instead (Kotler and Kelle, 2016). Consumers will perceive the time risk when they are trying new drugs, stop using by external forces, not satisfied with the drug's effects, and not offered by enough information. Details can be found from quotation 6.1 to 6.5.

Data Table 6: Data supporting the perceived risk's dimensions of "Time"

Associated First-Order Concepts	**Representative Quotations**
More perceived time risk on new drugs	6.1 "We have more experience with mature prescription drugs, I am afraid that the new drugs will waste patient's time if it doesn't work well…"(Pilot interviewee 1) 6.2 "New drugs and new treatments are lack of evidence… I prefer to choose conventional method…if I must choose new drugs, I must ask people with relative knowledge back ground, collect materials, and go to the web forum to see what opinions other patients have after using the new drugs…" (Pilot interviewee 2)
External forces of stop using	6.3 "I cannot perceive there is any time risks, except that I cannot buy the previous drugs anymore because the factory stopped produce it or the doctors forbid me to use it …" (Pilot interviewee 3)
Not satisfied short term effects	6.4 "I will change drug when I find it is not functional after using for around one week, until I find the one can cure the disease…" (Pilot interviewee 4)
Not enough information before buying	6.5 "I will take the time risk when I don't have enough information before buying the drug, like, I don't know what are

	the treatment options, who is the most compatible doctor, and what is the most suitable drug…" (Pilot interviewee 5)

Antecedents of perceived risks

Uncertainty

Uncertainty is the likelihood of negative consequences occurred (Dowling, 1986). In consumer behavior, perceived risk particularly means subjective uncertainty that is affected mostly by consumer's psychology (Mitchell, 1999). The uncertainties coded from interviewees are focusing on two aspects: whether the drug will function and whether it will cause negative result. The later one can be further illustrated as whether the drug will cause side effects and if the drug can be totally metabolized in body. Details are shown in data table 7.

Data Table 7: Data supporting the perceived risk's antecedents of "Uncertainty"

Associated First-Order Concepts	**Representative Quotations**
Whether it will be effective	7.1 "When I don't have too much information about the drug I am going to take, I will just take a little and see how it performs…"(Pilot interviewee 5)
Whether it will cause side effect	7.2 "I have a lot of worries about drug's side effects…always have to take the potential risks…" (Pilot interviewee 5)
Whether it can be completely metabolized	7.3 "Drug is not food, food can be digested after eating for a while, but people always say that 'drug is toxic'. We cannot easily die because of eating too much food, but we will die after eating lots of drugs …" (Pilot interviewee 4)

Involvement

Dowling and Staelin (1994) define three types of involvement that relates to perceived risk in their study: ego involvement (focus on personal ego image), purchase involvement (focus on purchase occasion or situation), and product involvement (focus on product category). The interviewees reported that how deep they involve in the consumption of prescription drug depending on the types of disease. Consumers involve more with prescription drug when getting serious disease and vice versa (see data table 8).

Data Table 8: Data supporting the perceived risk's antecedents of "Involvement"

Associated First-Order Concepts	**Representative Quotations**
Involve with disease	8.1 "I must use the drug for curing disease, so I would like to know more about the drug…"(Pilot interviewee 1) 8.2 "Having disease is a big event in life…everything should go around to deal with the disease. Drugs contribute a lot in fighting with the situation…" (Pilot interviewee 2) 8.3 "Most people neither go to hospital nor eat drugs just for small problems…" (Pilot interviewee 4)

Knowledge

Consumer's knowledge can help consumer to organize, analysis, and make judgment from large amounts of complex information relating to a targeting consumption (Grewal, Mehta and Kardes, 2004). But most prescription drug's consumers don't have medicine background. When they face the moment to choose a drug, they usually try to get access to external information, like searching on Internet or asking for friends who know drugs. If there is no such a chance, they may judge the drug according to their own or public beliefs that are already in mind. Interviewees reported three ways they get the knowledge about prescription

drugs. The first way is from external source, like doctors and Internet (quotation 9.1 and 9.2). The second one is the personal beliefs, but the beliefs may not be logically right (see quotation 9.3 and 9.4). The third knowledge source is from the public, or to say, word of mouth (see quotation 9.5 and 9.6).

Data Table 9: Data supporting the perceived risk's antecedents of "Knowledge"

Associated First-Order Concepts	**Representative Quotations**
Get knowledge from external source	9.1 "I will go to ask experts, for example, I will show my diagnosis and all clinical materials to a second doctor to check if they offered similar solutions…" (Pilot interviewee 2) 9.2 "I will go to internet to get the information I need, I don't have the knowledge personally…" (Pilot interviewee 5)
Rely on individual's beliefs	9.3 "I learned some traditional medicine, I believe that it is better to use nature treatment…"(Pilot interviewee 3) 9.4 "Some people believe medicine is good and can cure every disease, like my grandpa, eat a handful medicine a day…but some other people, just believe drugs are poisons, and eat none at all though they are seriously sick…" (Pilot interviewee 4)
Rely on public's beliefs	9.5 "We all know that having intravenous injection quite often is not good for our bodies …" (Pilot interviewee 3) 9.6 "Most people don't know medicine, we just concern what others say about it and what we have already believed in mind…" (Pilot interviewee 4)

Past Experiences

Prior experiences in memory can also help consumers to evaluate new information and form judgments (Biek, Wood, and Chaiken, 1996). Interviewees also confirmed that past

experience could help them a lot to figure out the perceived risk of prescription drug. Personal experience takes the first authority place, and then is the friends' experience (see data table 10).

Data Table 10: Data supporting the perceived risk's antecedents of "Past experience"

Associated First-Order Concepts	**Representative Quotations**
Personal experience is the most important	10.1 "Experience will largely help me reduce the feeling of risks…when there are many options, I will choose the one I am familiar with…"(Pilot interviewee 1)
Friends' experience is also important	10.2 "If I don't have the experience of using a drug, I will ask my friend…" (Pilot interviewee 2)

Intangibility

When we say intangibilities of a product, mostly we discuss service (Murray and Schlacter, 1990; Mitchell and Greatorex, 1993; Zeithaml and Bitner, 2000), but prescription drug is a unique product that people cannot see the detailed ingredients. Everything customer can see is just powder, tablet, or liquid (see data table 11).

Data Table 11: Data supporting the perceived risk's antecedents of "Intangibility"

Associated First-Order Concepts	**Representative Quotations**
Not sure about the composition	11.1 "Because the drug is made of chemicals, I don't know exactly what it is, but the composition must be accurate…even a tiny mistake happens in the production line will cause people's death…"(Pilot interviewee 1)

4.3 Stage 3 – Trust as the Main Mediator that Influence Buying Decision among Perceived Risk and Buying Process

When asking interviewees if perceived risk can affected their buying decision of prescription drugs, most of them were hesitated and didn't give out exact answer. However, when asking them if the trust on doctors can influence their buying decision, most of them said, "Yes!" The reason for the different answers is worth being analyzed when we try to investigate and understand the relationship between perceived risk, trust, and consumer's buying decisions. Scholars have stated that trust help consumer to cope with perceived risk and is one of the key issues for buying decision-making (Howard and Sheth, 1969;Mayer et al., 1995). Thom et al. (2002) confirm that the trust is important in the doctor-patient relationship through an observational study – patients with lower level of trust are less likely to follow their doctor's advice and report more medical requirements are not satisfied. Not following doctor's advice will largely infect prescription drug's buying decisions. Through the journey of pilot interviews in my study, interviewees reported they evaluate if the doctor is trustable based on following criteria.

The first, more familiar, more trust

Interviewees reported they are willing to believe the doctors who are familiar with. Luhmann (2000) claims that trust is an internal calculation of external risks, and familiarity acts as forms of self-reference which can help people to assess the level of risk. Then it is quite understandable that familiarity may breed trust.

> "I believe the drug prescribed by a trustable doctor…I trust the doctor that I have met for several times …"(Pilot interviewee 1)

The second, more communication, more trust

Cummings and Bromiley (1996) maintain that trust was generated by good-faith efforts on

behavior, honest commitments, and no extra advantage taking even when chance is available. Jarvenpaa and Leidner (1998) agree that repeated interactions and face-to-face encounters are considered important for building trust. But in the process of Chinese medical journey, patients don't get lots of chance to communicate a lot with physicians. Usually a clinic doctor have to examine dozens of patients a day, this also don't give them opportunities to sufficiently communicate.

> "If a doctor highly recommend a medicine, I will probably buy it, but it depends on how much the doctor communicate with me. If he explain the reasons well, I will believe it, or I will think he ask me to take the drugs just for his personal benefits…" (Pilot interviewee 2)
>
> "Some doctors explain to you why you should use this drug, they care about you and ask your past treatment experience… but some doctors don't explain, they even don't say anything, just prescribe drugs directly…I don't trust the unfriendly doctor…"(Pilot interviewee 3)

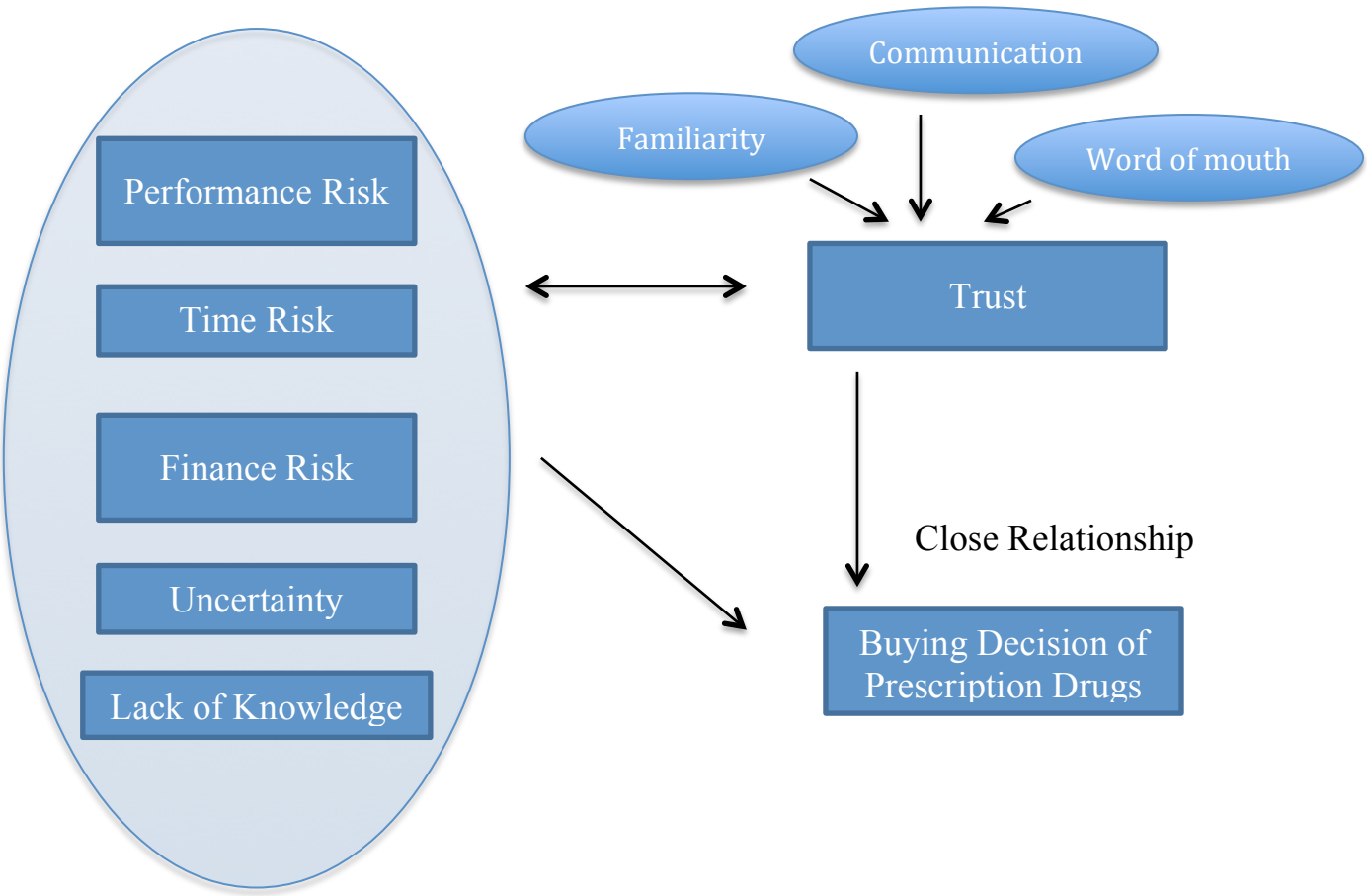
The third, depending on the word of mouth

When consumers don't have familiar experience for self-reference and don't have chance to communicate with physicians to build a trustable relationship, they will largely depend on other people's advice, or to say, the word of mouth, to stimulate a trust feeling.

> "Before I go to see a doctor, I will go to the hospital's website and check out the comments from previous patients, that will help me a lot to choose a doctor I believe…" (Pilot interviewee 5)

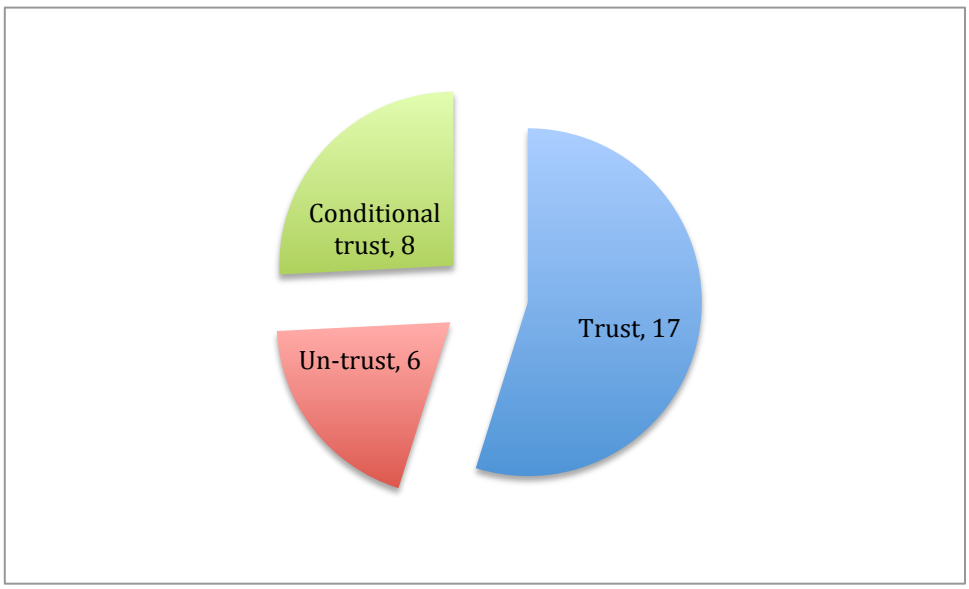
Then we reinvestigate the quotations from the dimensions and antecedents of perceived risk and sort out the items that relating to trust and buying decisions. We get the relationship between trust, perceived risk, and buying decisions as in **Figure 14**.

Figure 14: Trust as the mediator between perceived risk and buying decisions of prescription drugs



In order to go further to know the present physician-patient relationship in china, investigate how trust influences consumer's risk perception, behavior, and buying decision, and provide proper copping strategies for pharmaceutical marketing. I conducted a larger scale of field study, in which 31 interviews were done among the study period (19 males, and 12 females; age from 18 to 68).

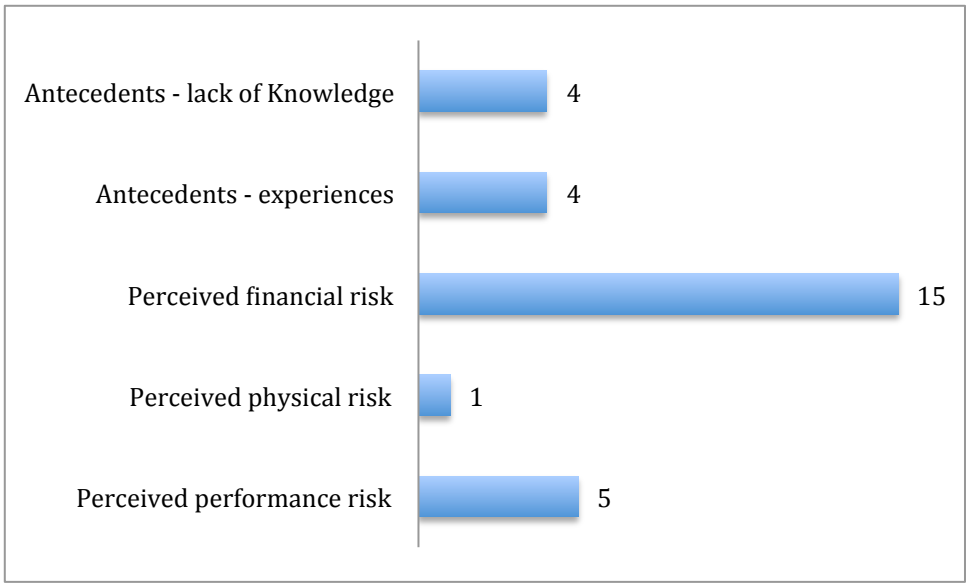
Figure 15: "Trust" report of field study (n=31)



From the **Figure 15**, we can see that in my field study, more than half interviewees reflected they trust on their doctors, but 6 people said they don't trust on doctors at all and nearly a quarter of the interviewees said they only trust on doctors under specific conditions, for example, they just trust on doctors from famous hospitals, or trust on the doctors who only prescript drugs that can be reimbursed. Among the 17 people who trusted on doctor, 5 people said they thought the prescription drugs they got from doctors were quite expensive.

Then we go through the interview transcript and categorize the perceived risks mentioned by interviewees when they were asked the reason why they don't trust on doctors (details are shown in **Figure 16**).

Figure 16: Perceived risks mentioned by interviewees in field study

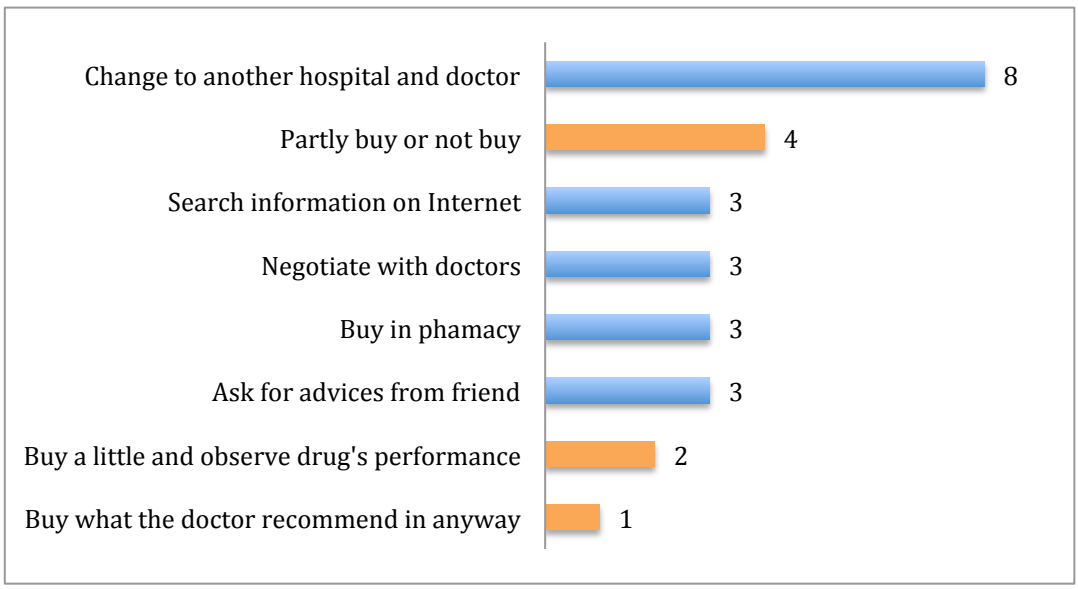


The perceived risks on prescription drugs reported by field study interviewees are mostly in consistent with the model developed from pilot study. But there exists differences between them as well. The reason for the differences may because of two aspects, the first is the sample size; the second is the structure of questions. I used lots of semi-structured interview questions in pilot study for examining the theory, but in field study, I used quite a lot of open questions to observe customer's mind. **Figure 16** showed us that in China, patients don't trust on doctors mostly because of the perceived finance risk. They think the prescription drugs they get from hospitals are extremely expensive than the same or similar prescription drugs in pharmacy.[1]

When consumers perceived the risk and don't trust on their doctors, they will adopt a lot of coping strategies and end up with several buying decisions. (See **Figure 17**)

[1] There are two ways to collect prescription drugs in China. The first way is to get the drugs directly from the hospital's pharmacy. The drugs will be the same with the recommendation on prescriptions. The second way is to pick up drugs with prescriptions at any pharmacy, but the brand of the drug may be different from the one getting directly from hospital. And the price policy is different between pharmacy and hospital. The markup rate of drugs in pharmacy is on average 3%, but in hospital it is 15%, although they are exactly the same products.

Figure 17: Behaviors resulted from "distrust" on doctors of prescription drug's consumption



From the data reported by interviewees, a lot of people will change to another hospital when they don't trust their doctors. And several people will go to search information on Internet, ask their friend's opinion, go to pharmacy to buy drugs, or talk about their concerns directly with doctor. On the perspective of buying behavior, 4 people reported they just buy some of the recommended prescription drugs or don't buy at all when they don't trust the doctor. 2 people are going to buy a little and observe the effect of the drugs. Only 1 interview reported she would buy what the doctor recommend in anyway. There are 27 responses in total. Except one person won't change, all the others may largely modify their purchase decisions. The data from field study speaks aloud that there are close relationships between perceived risk, trust, and buying decisions. Patients don't trust on doctors when they perceived risk, and modifying their buying decisions according to the situation.

4.4 Stage 4 – How Pharmaceutical Companies Can Reduce the Consumer's Distrust on Prescription Drugs

Despite the importance of trust, scholars didn't investigate it a lot with the relationship of prescription drugs consumptions through a pharmaceutical marketing perspective. Previous study focused on the role of trust in pharmaceutical buyer-supplier relationships, salesperson and physician's relationship, and wholesaler pharmacy relationship (Lagace, Dahlstrom, and Gassenheimer, 1991; Şengün and Wasti, 2007; Jambulingam, Kathuria, and Nevin, 2009). DeAngelis (2000) proposes that conflict of interest in researching relationship between pharmaceutical companies as sponsors and research institutions will affect the public trust. In sociological concept, trust is largely affecting consumer's buying behavior because trust is seen as a social relationship promise and combined with emotional and cognitive dimensions (Lewis and Weigert, 1985). So in this stage of my analysis, I will try to investigate how the feeling of trust will be enhanced through various marketing activities. I will start this research on classifying the types of marketing activities in prescription drug's industry and mapping out how customers think about these activities. Suggestions will be given out based on the customer's mind map and the coding of their qualitative data.

Pharmaceutical companies adopt various marketing strategies to promote prescription drug's sales performance. The most used marketing technique in pharmaceutical industry is direct-to-physician marketing (Cardarelli, Licciardone, and Taylor, 2006). Direct-to-physician marketing comprises representative selling, physician meeting and events, sampling, and advertisement in medical journals. However, the most marketing expenditure has been given to representative selling (Manchanda, and Honka, 2005). And later on, direct-to-patient marketing has been developed. It is even allowed to do direct-to-consumer advertisement on public media. Considering all the market techniques available in Chinese pharmaceutical industry and my previous 5 years' working experience in both state and international owned pharmaceutical companies, I clustered the marketing activities in

pharmaceutical industry into 3 groups: brand gifts, academic activities, and patients activities. Interviews' feeling and comments were asked when they seeing each activity's picture.

4.4.1 Customer's perception on pharmaceutical market activities

Brand gifts

Overall, pharmaceutical company's brand gifts using by doctors are perceived acceptable and understandable by consumers. But higher feeling of trusted was expressed when consumers saw the brand gifts relating to patients and medical care (e.g. stethoscope, heart structure model). On the contrary, brand gifts that serving for doctor's personal life will be perceived as untrusted. Detailed mind map is showing in **Figure 18**.

Figure 18: Customer mind map on pharmaceutical market activity – Brand gifts

More relating to medical care, more trusted

Some interviewees gave high score on stethoscope and heart model as gifts with prescription drug's brand names. They said the brand name showed on medical care equipment presents a professional and reliable image of doctors. Patients also perceive medical care equipment is necessary for diagnosis and treatment.

> "…As a medicine, it must be firstly connected with people's health…the 'heart model' shows a sense of professional…and 'stethoscope' is necessary for every doctor in their daily work…" (Interview 10)
>
> "…Because the medical industry is quite professional and need lots of professional knowledge and skills, so using some assistant equipment may make doctor's communication with patients easier…" (Interview 11)
>
> "…More relating to medical care is more reliable…" (Interview 15)
>
> "…The instrument used by doctors showing their professionals…" (Interview 25)

More serve for patients, more trusted

Caring about consumers, helping patients to clearly and intuitively know about their physical problems and treatment plans will kill the patient's feeling of unrested and let them feel well cared. Interviewees gave high praise on the items that serving for patients.

> "…The heart model is more likely to attract my attention and can help doctors explain well the problem of my heart…" (Interview 4)
>
> "…It will be much better if the promotion activities are based on the aim of serving for patients…patients will notice it (the product name) and recognize it (the product name)…even though it is doctor who are using it, but when it was used for patients, the effect will be good…" (Interview 7)

"…Both doctor and patient may not get access to 'medicine box', but I still have a good feeling with the product name printed on 'medicine box'. Because at least the medicine box is used for patients and I may see it when they are using it…I will prefer the product that are easy to be seen…" (Interview 19)

"…Doctors can use 'stethoscope' for every patient…it serves for public…it shows welfare and good care…" (Interview 21)

"…The 'heart model' can help doctors review what they have learned, and are also intuitive for patients to understand doctor's words…" (Interview 31)

More connecting with food, less trusted

Interviewees expressed they were uncomfortable and felt strange when they saw a drug's brand name on food. And this irrelevant combination is easy to prompt consumers to think of temptation and bribery.

" …I feel uncomfortable when I see food is connected with drug's name…food gives us the feeling of happiness…but drugs reflect bitterness…" (Interview 2)

"…It is strange to see drug's name on daily use things…especially on food…" (Interview 4)

"…It is common for business to do advertisement and put logo on stuffs…but drugs are irrelevant to food…I cannot accept it" (Interview 16)

"…Putting product name on foods shows temptation…it is only shows benefits to doctors…" (Interview 21)

More serve for doctors, less trusted

Most interviewees think it is normal and understandable that sales person gives doctor some small items for building better personal relationship. But some interviewees believe the gifts serving for doctors will help sales person to gain business favor.

> "…Something is good for doctor but is useless to patients… they (sales person) just want to gain favor from the doctor…" (Interview 11)
> "…It is acceptable and understandable that sales person give gifts to doctors and the gifts may assist doctors to finish more effective medical jobs…but if the gifts reflects too much personal benefit, it won't be good…" (Interview 28)

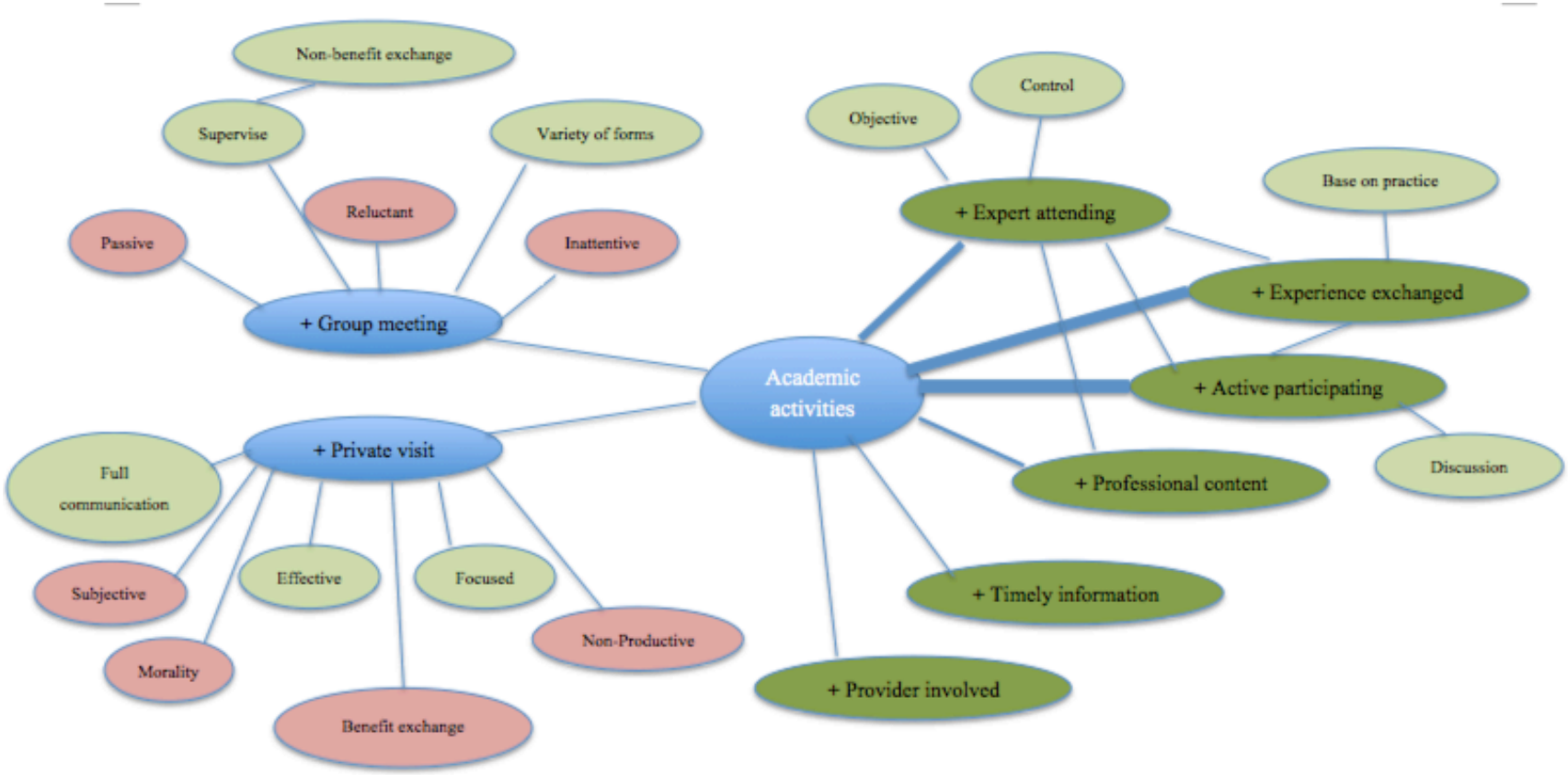
Mild attitude on daily use items

Most interviewees can accept the daily use items with drug names using by doctors, like a pen or notebook with a brand's name. But seldom interviewees say this promotion will help them build trust to doctor, they think gifts like these are also aiming at serving for physicians. But they didn't say it means a kind of bribery, because they think doctors as a high salary and well-educated social class cannot easily changed by such tiny benefits. And one interviewee said she might believe drugs showed on the items better, she thought at least a company with some market sense would not be too weak.

Academic activities

All of the interviewees gave positive evaluation on every academic activity. Among the seven forms of doctor meetings and events, the meeting with experts and the discussion meeting among local doctors are the most popular ones, followed by literature reading and two forms of introduction meeting given by representatives. The last welcomed and trusted academic activities are Internet and private meeting. Interviewees described the advantages and disadvantages of every meeting form, mostly from tow perspectives – group meeting and private meeting (see **Figure 19, Data table 12,** and **Data table 13**). Result shows that it is hard to figure out a perfect meeting form. Every academic activity has its pros and cons in consumer's eyes. But there are several elements that can make an academic event to be perceived trusted. By analyzing, categorizing and organizing the transcripts, coding elements – "expert attending", "experience exchanged", "active participating", "professional content", "timely information", and "provider involved" - are generated. Academic activities can be perceived more trusted by consumers when the activities meet some of the coding elements (see **Figure 19**).

Figure 19: Customer mind map on pharmaceutical market activity – Academic activities



Data table 12: Cons and pros of group meeting

Pros		**Cons**	
Coding	**Representative Quotations**	**Coding**	**Representative Quotations**
Supervise	"…In group meeting, everybody is paying eyes on the others…there is nearly no chance for some people to do private benefit exchange…I accept and trust this form…" (Interview 2)	*Passive*	"… A large-scale meeting may be mandatory...some people just attend mandatorily…and every participant may not in the same medical level…so it is not proper to just put them all together…" (Interview 27)
Non benefit exchange		*Reluctant*	"…Doctor is such a busy job…they may reluctantly attend some meeting because of the requirement from the person of a higher position…if it is the doctor's own initiative choosing and attending a meeting, I will trust it…" (Interview 6)
Variety of forms	"…Group meeting can have many fancy forms…like PPT presentation, video show, or online meeting…these can help audients to kill boring and enhance the memory of what they have learned…at least, they won't fall asleep easily…" (Interview 23)	*Inattentive*	"…Some group meetings are not attractive…I am afraid doctors are not listening carefully to the meeting given by medicine representatives … yes, they are there…but who knows what they are actually doing and thinking…" (Interview 5)

Data table 13: Cons and pros of private visit

Pros		**Cons**	
Coding	**Representative Quotations**	**Coding**	**Representative Quotations**
Full communication	"…For a moral doctor, I think private meeting is a good way for effective and full communication…he can ask for what he want to know directly from drug's	*Morality*	"…The private contact may cause some problem…some morality problem…" (Interview 30)
Effective		*Benefit exchange*	"…Once I accidentally saw a representative talking to a doctor…I don't trust them…

	developers…and he may also understand the features of drug profoundly…" (Interview 11)		I think they were just doing benefit exchange…the media has told us a lot corruption stories like this…" (Interview 2)
Focused	"…I think a small group meeting or even a private meeting is better…especially when experts are involved in…the topic will be focused and shows exclusive…" (Interview 27)	*Subjective*	"…The company's sales person may be subjective…they may just introduce the advantages and some significant side effects to the doctors they are meeting with…" (Interview 23)
		Non productive	"…Private meeting is not productive…there are so many doctors…" (Interview 31)

More experts attending, more trusted

Interviewees believe that experts are more probably to express objective opinions and will have a good control of the meeting in case some bias information appears.

> "…Doctors should have their own first-hand clinical experience…it's not good for them just listening to others…but after all, experts are more credible…so that what they share may be objective…" (Interview 16)
>
> "…After doctors get the drug's information, they may start to use the drug on patients and share experience…but the expert will control the meeting and to be a safe guard in case any wrong or inappropriate information spread…" (Interview 21)

More experiences exchanged, more trusted

Interviewees believe in the activity in which experiences are exchanged. They said experiences are based on clinical practice, so it is trustable.

"…I give the highest score to the regional doctor salon because meeting like this is based on rich clinical practice…many drugs' effects are tested mainly from clinical treatment…that forms doctor's experience…" (Interview 4)

More active and interactive participating, more trusted

Interviewees held the opinions that active and interactive activities were important. Doctors should attend meetings according to their own wish and had lots of free discussions during meeting.

"…No matter how the pharmaceutical companies do promotions and push doctors to prescribe their medicine, doctors can not recommend the drugs with clinical evidence…meetings with experience communication and discussion can help doctor's clinical practice…" (Interview 12)

"…If doctors don't want to learn actively, then all the meetings are just promotion tactics…" (Interview 18)

More professional content, more trusted

Interviewee believes content is more important than a meeting's forms.

"…It doesn't matter what form the meeting uses as long as the meeting is a professional training or workshop…this doesn't mean they must invite famous and respected experts to the meeting…but at least the content should be professional…" (Interview 13)

More timely information, more trusted

Medical technique changes fast with times, interviewees emphasized that academic meetings should deliver timely information.

> "…I believe timely information is very important to a responsible and motivated doctor…so I think the Internet and sales person from the pharmaceutical company can deliver the fast and new information…reading books or other attending meetings may be not good at receive lately progress…" (Interview 14)

It is acceptable that providers involved in academic activities

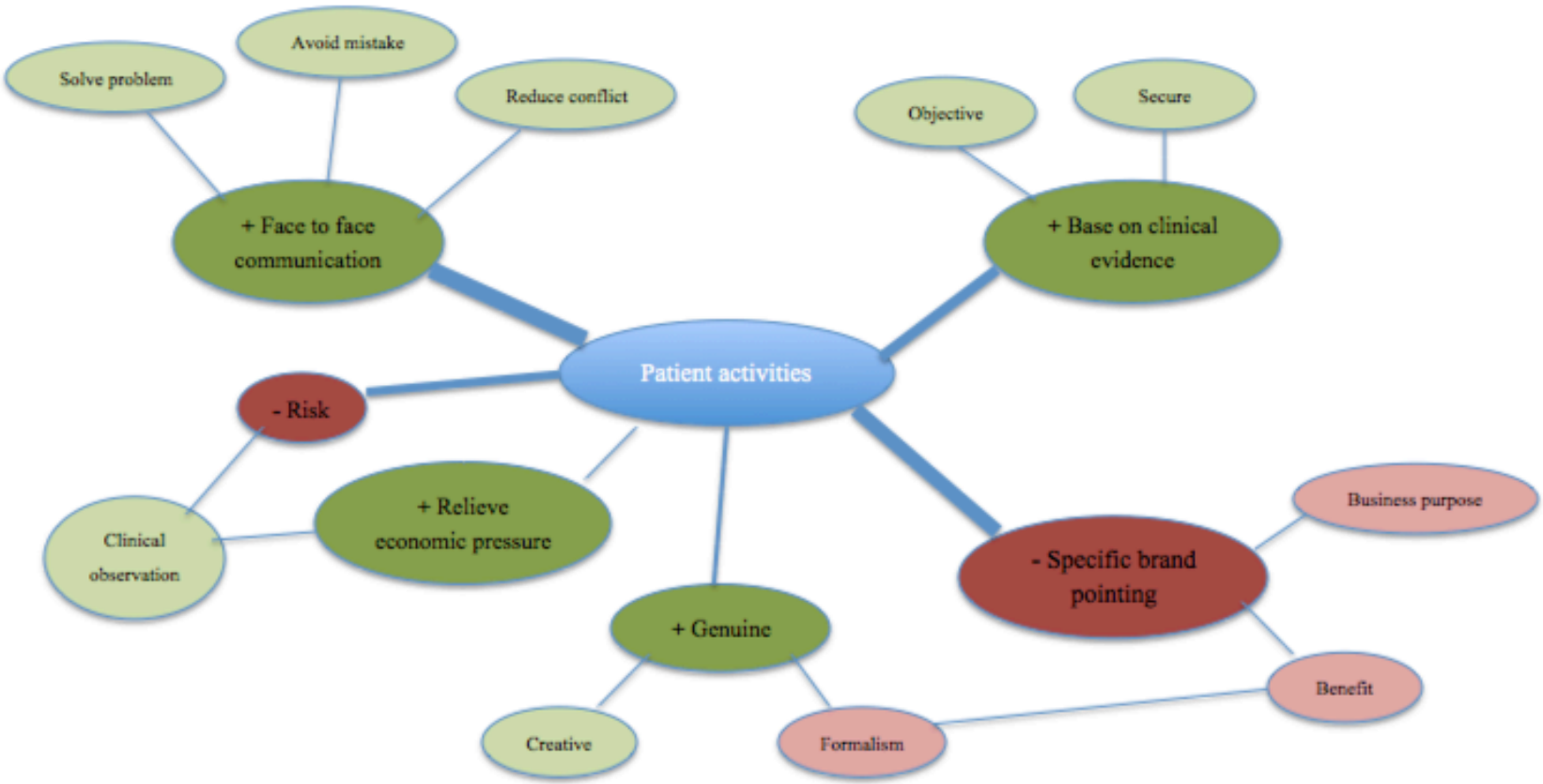
Some interviewees mentioned that providers are necessary in academic activities. They have the first hand information and can develop their product according to market responses.

> "…Drugs are closely related to their developers…they should attend in the meetings…get timely information of the drug's performance or problems…then they may help doctor to cope with many difficulties…" (Interview 10)
>
> "…If there is a new drug, it must be a pharmaceutical company to firstly introduce it to market…then the doctors can start to know it and use it…" (Interview 17)

Patient activities

Though direct-to-consumer advertisement of prescription drugs is prohibited in China, pharmaceutical companies are using lots of patient activities to enhance the awareness of prescription drug's brand or even company's names. Pharmaceutical companies often sponsor Patient Educations, Clinical Trials, Free On-site Clinics, and Health Promotions. Most interviewees support patient activities and have positive comments about this. Positive elements like "face to face communication", "based on clinical evidence", "relieve economy pressure", and "genuine" are generated from transcripts. Meanwhile, interviewees are reluctant to see brand's name and don't want to be exposed to unknown risks in these activities (see **Figure 20**).

Figure 20: Customer mind map on pharmaceutical market activity – Patient activities



More face to face communication, more trusted

Interviewees think the face-to-face communication between patients and doctors can improve the feeling of trust because sufficient communication can help to reduce patient-doctor conflicts, solve treatment problems, and avoid drug-using mistakes.

> "…I believe every doctor-to-patient activity is useful (for public health serve)…it will be even better when the doctors can learn some useful and practical things from the interaction and communication with patients…" (Interview 5)
>
> "…I just believe in what I experienced, more communications improve the trust and increase the credibility…most for-patient activities are formalism…we have already seen a lot in the park…" (Interview 11)
>
> "…Patient's questions can be answered, and needs can be served directly at on-site clinic…" (Interview 13)
>
> "…Doctors should communicate often with public…to modify the wrong health belief or avoid drug abuse…like lots of people are still using expired drugs in daily life…" (Interview 14)
>
> "…Communication can help to avoid conflicts and shorten the distance between doctors and patients…" (Interview 27)

Less specific brand pointing, more trusted

If participants hear specific prescription drug's name in patient activities, they will feel untrusted and uncomfortable. The brand name is easily to be connected with business purpose and benefit.

> "…When we judge if a doctor-to-patient activity is trustable, we can check if there is any profit exchange between the different parties…I will trust the doctors who

recommend several drugs in the same class that all work on the problems…if the doctors just mention one drug or broadcast biased information, the activity will be obviously a fraud…" (Interview 6)

"…I never go to a patient educational meeting, I am not sure they are for selling things or for serving the patients…" (Interview 7)

More base on clinical evidence, more trusted

Clinical evidence is the basic element of objective treatment and can reduce the risky probability for patients.

"…The free clinic should also be based on reliable diagnosis…should have sufficient evident…" (Interview 15)

Less risky to patients, more trusted

Risky is closely connected with clinical practices. Interviewees who were worried about clinical trials were concerning its insufficient precious evident.

"…Patients should voluntarily participate in clinical trials…because it is risky…" (Interview 16)

"…I don't support clinical trials, it is so risky…why ask patients to be the guinea pigs…" (Interview 17)

"…Clinical trials are great…but they should be well reviewed…or it is risky…" (Interview 23)

More relieve economic pressure, more trusted

Interviewee expressed that they would like to see more patient activities that can help people from lower social class.

> "…Free clinic is good for public, especially for poor people…"(Interview 12)

Genuine activity is more attractive

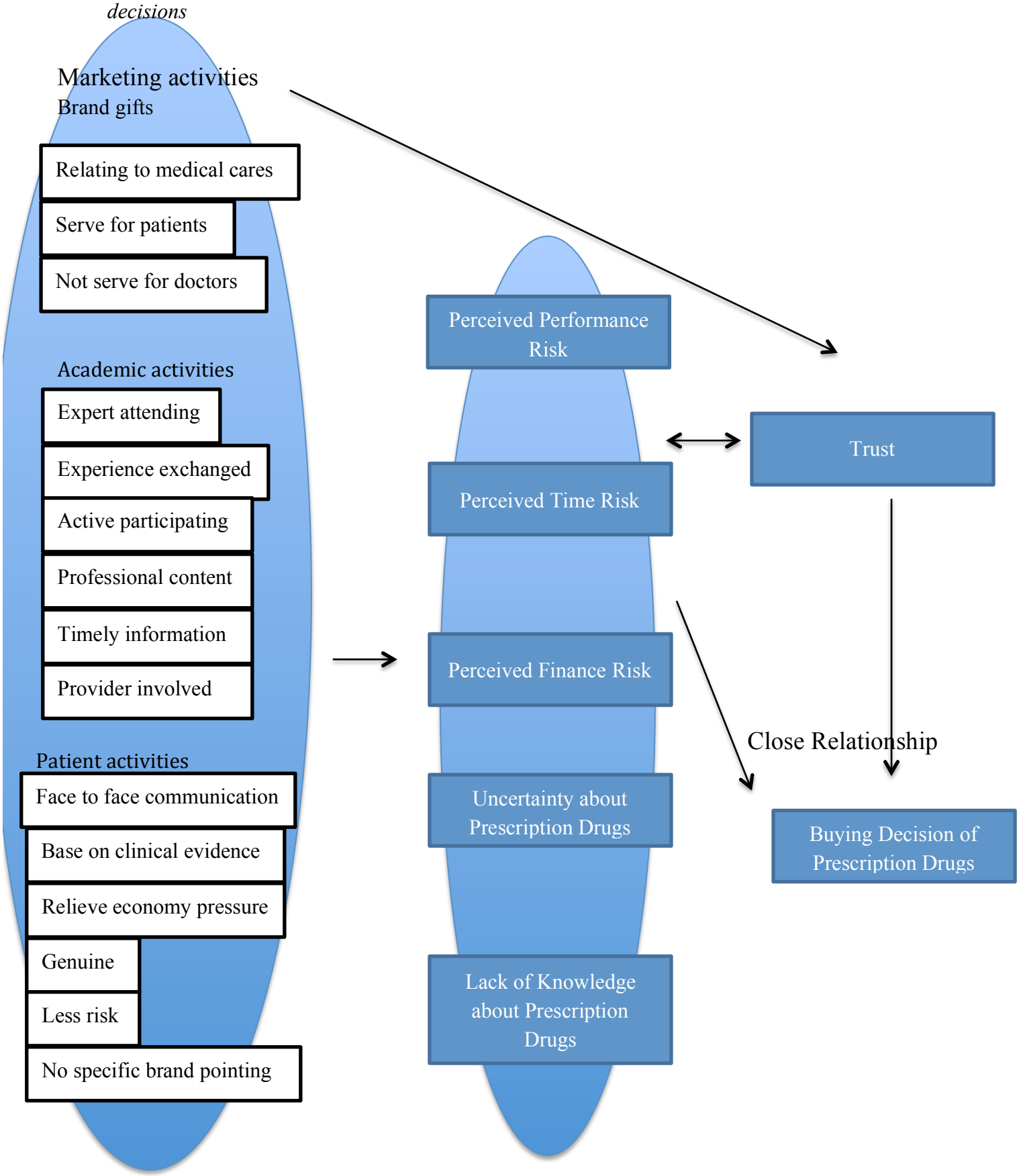
Innovative and creative activities are always a magic to attract consumer's eyeballs.

> "…Posters are boring…nobody would like to see them unless they are creatively designed and have special visual impact…" (Interview 11)
> "…Seldom people would like to stop and reading text from poster-board…" (Interview 25)

4.4.2 The relationship between pharmaceutical company's marketing activities, perceived risks, and trust in consumer buying decisions

Now we have clustered and categorized the coding concepts, or to say, key messages, from the above consumer mind maps. Then we compare the coding concepts with the dimensions and antecedents of perceived risks. And then the reason of why the trusted feeling raised when the marketing activities satisfied the coding concepts can be explained (see **Figure 21**). From **Figure 21**, we can see that the key messages generated from consumer's mind maps in my research are associated with the model I developed in analysis stage 3. This means the key messages given by consumers have close relationship with perceived risks, trust, and buying decisions when consuming prescription drugs. Because of the close relationship, we can infer that these key messages may facilitate customer-trusted pharmaceutical marketing methods.

Figure 21: The relationship between marketing activities, perceived risks, trust, and buying decisions



Findings and Thoughts

There can be three groups of summarized findings of this research. The first one is the theories of buying decision process and perceived risk both exist in consumer behavior when they consuming prescription drugs. But except just considering the prescription drugs, consumers also do a lot of evaluations and information search on choosing hospitals and doctors. The inspiration for pharmaceutical companies is that, the pharmaceutical company should not only focus on the company-physicians relationship to build a prosperous market environment, they might also need to participate in the contribution of establishing public resources for consumers to conveniently find the information they want. The job can also be done by a third party, for example, website companies focusing and providing trustable and professional medical market information about hospitals, doctors, Diagnostic criteria, treatment guidelines, and even dosing regimens.

The second finding is that trust is playing an important role in consumers buying decision when choosing prescription drugs. Interviewees reported that trust is the primary factor that influencing their decision making when they are visiting a doctor. But from the analysis in this research, we can see that trust is not independently, but associating with several dimensions and antecedents of perceived risk, affecting consumer's final decision making. This means the efforts on diminishing the sense of risk can also enhance the feeling of trust when buying prescription drugs. Or to say, building a trustable relationship between physicians and patients can also help drug consumers to reduce the intensity of perceived risks.

The third thoughts is that, because of the interrelationship between trust, perceived risks, and buying decision, the pharmaceutical companies should strategically design their market advertising media (brand gifts) and marketing activities (academic activities and patient activities). Brand gifts should be carefully chosen. The gifts relating to medical care and

serving for patients should be firstly considered. Private meeting (can also be named representative field visit) and group meeting are both positively acceptable by consumers as long as one or more of the following conditions – expert attending, experience exchanging, active participating, timely and professional contents are giving - are met. Actually, consumers almost always have positive attitudes to most academic physician meetings, though they know the meetings might are sponsored by pharmaceutical companies. Compared with to-doctor-activities, consumers are looking forward to have more access to useful patient or public activities. They expressed a useful patient activity should give participants the chance to communicate sufficiently with doctors, base on clinical evidence, and relieve patient's finance pressure. Consumers don't want to attend in risky activities or to be given lots information of specific brand names. Though consumers are prefer to see genuine patient activities, the present marketing and society haven't given enough chance to publics. Most interviewees expressed that they seldom went to a patient meeting because they thought it was just a fraud or a show. To pharmaceutical companies, this is a good chance to create and develop practical and welcomed market activities for patients. These activities are beneficial to company and hospital's public reputations, so to facilitate the trust feeling hold by consumers.

Overall, previous pharmaceutical marketing activities are focusing on changing doctor's prescribing behavior, but they should also balance the doctor-patients relationship and promote public welfare levels, or the pharmaceutical market will constantly encounter with government regulations, not only in china, but all over the world.

CHAPTER 5 CONCLUSION AND FINAL THOUGHTS

This research is to identify prescription drug's buying decision process, and find out how perceived risk and trust affecting the buying decision process. One of the findings is that trust is playing an important role in consumers buying decisions when choosing prescription drugs. However, trust is not independently, but associating with several dimensions and antecedents of perceived risk, affecting consumer's final decision making.

First, understanding patient's buying decision process on prescription drugs is helping pharmaceutical companies to profoundly see their consumer's behavior. Final buying decision is largely decided by each step and behavior in the process. So being aware of the detailed processes and supplying resources to fill up the information gaps that might exist in the processes can give pharmaceutical industry a new perspective to do business. As the research results showed that patients probably evaluate reputations and search for information of hospitals and physicians they are going to visit, pharmaceutical companies should take the responsibilities along with hospitals or other pharmaceutical market participants, for example – third party of medical service agent, online medical information platforms, or medical social media, to provide trustable and professional medical market information about hospitals, doctors, Diagnostic criteria, treatment guidelines, and even dosing regimens. The sufficient and professional information will make the purchase process much more smooth. When there is no huge gap between each purchase stage and no significant information missing, customers will perceive less risky and more likely to follow a convinced medical service.

Also, trust and perceived risk have close interrelationships that both affecting consumer's final buying decision-making. Knowing the specific contents that affecting trust and each dimension and antecedent of perceived risk can also offer pharmaceutical industry new ideas on developing valuable market activities. Pharmaceutical companies are always and only

focusing on their relationships with physicians, but seldom think of they should also participate in building a trustable relationship between doctors and patients. Previous pharmaceutical marketing activities have tendencies to pursue the maximization of interest and sales volume, resulting in moral hazard problems and even worse patient-physician relationships. Therefore, we recommend pharmaceutical companies switch the "product focus marketing" to the "patients focus marketing", which means pharmaceutical companies are not just push representatives to repeat their drug's information to doctors constantly, they should also design market activities satisfying patient's potential needs through considering "patient in hospital journey" or "patient's medical journey".

Finally, to build a trustable patient-physician relationship has indirect benefits to pharmaceutical industries. Pharmaceutical companies can help to build such a trustable relationships by strategically design their market advertising media (brand gifts) and marketing activities (academic activities and patient activities). Research result shows that patients are fond of brand gifts relating to medical cares and serving for patients. But we seldom see pharmaceutical companies in China offer doctors with refined and practical medical models. Some companies did it, like Pfizer, who offered heart model to cardiology department, but the practical functions and utilities of those models' design can be largely improved. Pharmaceutical companies are dedicating to variety of meetings, which is good, but patient activities are relatively not frequent. Pharmaceutical companies may design patient activities as a part of their public reputation programs, aiming at offering patient's opportunities of face-to-face communication to physicians and helping people in undeveloped areas with free diagnosis and treatment.

Pharmaceutical industry is closely related to humanity's living benefits and social welfares. This profound meaning always makes marketing behaviors in the pharmaceutical industry section sensitive and complicated. Hope this thesis may have a positive reference value to marketers who want to healthily explore the Chinese prescription drug's market.

Limitations

However, there are some limitations of the thesis. One of my study purposes was to investigate what factors might influence consumer-buying decision of prescription drugs. I got approach to the research question by investigating the interrelationship between perceived risks, trust, and buying decisions. But there can be other factors that also affecting the researching question, for example, the government policy and words from social media. The consumer behavior in pharmaceutical industry, especially under the environment of china, is not only a marketing topic, but also social and political results. Researchers who are interested in the area can further investigate the questions.

Another limitation is that I just gave out general ideas about designing customer trusted marketing activities. But pharmaceutical companies are now still mainly focusing on the company-doctor relationships. Though I have emphasized the importance of the company-patient relationship, but the search result should be better not to affect relationship between pharmaceutical companies and doctors. The practical advises and thoughts on developing new marketing activities should be double checked with doctors to make sure there won't be significant negative effects on doctor's feeling, cognition, and treatment behavior.

REFERENCE

Agarwal, S., & Teas, R. K. (2001). Perceived value: mediating role of perceived risk. *Journal of Marketing theory and Practice*, *9*(4), 1-14.

Alba, J. W., & Hutchinson, J. W. (1987). Dimensions of consumer expertise. *Journal of consumer research*, 411-454.

Angell, M. (2004). Excess in the pharmaceutical industry. *Canadian Medical Association Journal*, *171*(12), 1451-1453.

Bauer, R. A. (1960). Consumer behavior as risk taking. *Dynamic marketing for a changing world*, ed. Robert S. Hancock, Chicago: American Marketing Association, 389-398.

BBC. 2014. GlaxoSmithKline fined $490m by China for bribery. September 19. Retrieved June 12, 2016 (http://www.bbc.com/news/business-29274822)

Beatty, S. E., & Smith, S. M. (1987). External search effort: An investigation across several product categories. *Journal of consumer research*, Vol. 14, No. 1, 83-95.

Belk, R. W. (1974). An exploratory assessment of situational effects in buyer behavior. *Journal of marketing research*, Vol. 11, May, 156-163.

Biek, M., Wood, W., & Chaiken, S. (1996). Working knowledge, cognitive processing, and attitudes: On the determinants of bias. *Personality and Social Psychology Bulletin*, *22*(6), 547-571.

Blackwell, R. D., Miniard, P. W. and Engel, J. F. (2001) *Consumer Behavior* (9th ed.), Harcourt College Publishers, Forth Worth.

Brink, H. I. L. (1993). Validity and reliability in qualitative research. *Curationis,16*(2), 35-38.

Hoepfl, M. C. (1997). Choosing Qualitative Research: A Primer for Technology Education Researchers. *Journal of Technology Education, 9*(1).

Brucks, M. (1985). The effects of product class knowledge on information search behavior. *Journal of consumer research*, 1-16.

Bryman, A. and Bell, E. (2007). *Business Research Methods*. 2rd ed., Oxford University Press

Cardarelli, R., Licciardone, J. C., & Taylor, L. G. (2006). A cross-sectional evidence-based review of pharmaceutical promotional marketing brochures and their underlying studies: Is what they tell us important and true?. *BMC Family Practice, 7*(1), 13.

Carolyn Gauntlett and Sarah Rickwood. (2012) The changing face of the top 10 pharmaceutical companies. *The IMS health*. Retrieved June 18, 2016 (https://www.imshealth.com/files/web/Asia%20Pac/Asia%20Pacific%20Insights/Asia%20Pacific%20Insights%20Archive/Top10-Pharma-Companies-WP.pdf)

Chareonkul, C., Khun, V. L., & Boonshuyar, C. (2002). Rational drug use in Cambodia: study of three pilot health centers in Kampong Thom Province. *Southeast Asian Journal of Tropical Medicine and Public Health, 33*(2), 418-424.

Cox, D. F., & Rich, S. U. (1964). Perceived risk and consumer decision-making: The case of telephone shopping. *Journal of marketing research,1*(4): 32-39.

Cox, Donald F., ed. (1967), *Risk Taking and Information Handling in Consumer Behavior*. Cambridge, MA: Harvard University Press.

Cummings, L. L., & Bromiley, P. (1996). The organizational trust inventory (OTI). *Trust in organizations: Frontiers of theory and research*, 302, 330.

Cunningham, S. M. (1967). The major dimensions of perceived risk. *Risk taking and information handling in consumer behavior, 1967*, 82-108.

DeAngelis, C. D. (2000). Conflict of interest and the public trust. *Jama,284*(17), 2237-2238.

De Geyndt, W., Zhao, X., & Liu, S. (1992). *From Barefoot Doctor to Village Doctor in Rural China*. World Bank-Technical Papers.

Denzin, N. K., & Lincoln, Y. S. (1998). The landscape of qualitative research: Theories and issue.

Deutsch, M. (1958). Trust and suspicion. *Journal of conflict resolution,* 265-279.

Dholakia, U. M. (2001). A motivational process model of product involvement and consumer risk perception. *European Journal of marketing, 35*(11/12), 1340-1362.

“Diagnosis." *Merriam-Webster.com*. Merriam-Webster, n.d. Web. 10 May 2016.

Cox, D. F. (1961). Consumer Behavior as Risk Taking-an Intensive Study of Two Cases. *Harvard University*, Graduate School of Business Administration, Boston.

Dowling, G. R. (1986). Perceived risk: the concept and its measurement. *Psychology & Marketing, 3*(3), 193-210.

Dowling, G. R., & Staelin, R. (1994). A model of perceived risk and intended risk-handling activity. *Journal of consumer research, 21*(1),119-134.

Drug. Dictionary.com Unabridged. Random House, Inc. Retrieved April 04, 2016 (http://www.dictionary.com/browse/drug)

Engel, J. F., Blackwell, R. D., & Kollat, D. T. (1968). *Consumer Behavior*, New York. Eşi, M., Nedelea, A.-M.,(2014) Mission of business organiyations and the social-economic entrepreneurship, 252.

Findlay, S. D. (2001). Direct-to-consumer promotion of prescription drugs. *Pharmacoeconomics, 19*(2), 109-119.

Finn, A. (1985). A theory of the consumer evaluation process for new product concepts. *Research in Consumer Behavior, 1*, 35-65

Fishbein, M. E. (1967). *Readings in attitude theory and measurement*, John Wiley, N.Y, 477-92

Garbarino, E., & Strahilevitz, M. (2004). Gender differences in the perceived risk of buying online and the effects of receiving a site recommendation.*Journal of Business Research, 57*(7), 768-775.

George, W. R., Weinberger, M., Tsou, B., & Kelly, P. (1984). Risk Perceptions: A reexamination of services versus goods. *Southern Marketing Association Proceedings,* Florida Atlantic University, Boca Raton, FL.

Golafshani, N. (2003). Understanding reliability and validity in qualitative research. *The qualitative report, 8*(4), 597-606.

Green, P. E. and Wind, Y. (1973) Multiattribute decisions in marketing. *DrydenPress*, Hinsdale. Chapter 2.

Gönül, F. F., Carter, F., Petrova, E., & Srinivasan, K. (2001). Promotion of prescription drugs and its impact on physicians' choice behavior. *Journal of Marketing, 65*(3), 79-90.

Grewal, R., Mehta, R., & Kardes, F. R. (2004). The timing of repeat purchases of consumer durable goods: The role of functional bases of consumer attitudes. *Journal of Marketing Research, 41*(1), 101-115.

Guba, E. G. (Ed.). (1990). *The paradigm dialog*. Sage Publications.

Guba, E. G., & Lincoln, Y. S. (1994). Competing paradigms in qualitative research. *Handbook of qualitative research, 2*(163-194), 105.

Harris,G. 2009. Pfizer pays $2.3 billion to settle marketing case. *The New York Times*, September 02. Retrieved June 11, 2016 (http://www.nytimes.com/2009/09/03/business/03health.html?_r=0)

Hauser, J., Urban, G. and Weinberg, B. (1993). How consumers allocate their time when searching for information. *Journal of Marketing Research*, Vol. 30, No. 4, pp. 452–466.

Healthcare PR & Marketing News. (2000). *Consumers get drug information online. 9*(13), 1.

Hodges, E. V., Malone, M. J., & Perry, D. G. (1997). Individual risk and social risk as interacting determinants of victimization in the peer group. *Developmental psychology, 33*(6), 1032.

Howard, J. A. S., & Jagdish, N. (1969). *The theory of buyer behavior.* New York: John Wiley & Sons, Inc.

Hoyer, W. D. (1984). An examination of consumer decision making for a common repeat purchase product. *Journal of consumer research*, Vol. 11, No. 3, pp. 822-829.

Hsiao, W. C. (1995). The Chinese health care system: lessons for other nations. *Social science & medicine, 41*(8), 1047-1055.

IMS Health. Global Pharmaceuticals Marketing Channel Reference 2015. Retrieved June 05, 2016 (file:///Users/jinmeina/Downloads/IMSH%20GPMCR_2015_GlobalExtract.pdf)

Ingram, D. & Krasny, R. 2013. Johnson & Johnson to pay $2.2 billion to end U.S. drug probes. *Reuters*, November 04. Retrieved June 11, 2016 (http://www.reuters.com/article/us-jnj-settlement-idUSBRE9A30MM20131104).

Jacoby, J., & Kaplan, L. B. (1972). The components of perceived risk.*Advances in consumer research, 3*(3), 382-383.

Jambulingam, T., Kathuria, R., & Nevin, J. R. (2009). How fairness garners loyalty in the pharmaceutical supply chain: role of trust in the wholesaler-pharmacy relationship. *International journal of pharmaceutical and healthcare marketing, 3*(4), 305-322.

Jarvenpaa, S. L., & Leidner, D. E. (1998). Communication and trust in global virtual teams. *Journal of Computer&Mediated Communication, 3*(4).

Jarvis, S. (2001). Scripted Response. *Marketing News, 35*(8), 3-4.

Kao, A. C., Green, D. C., Davis, N. A., Koplan, J. P. and Cleary, P. D. (1998a) Patients' trust in their physicians: effects of choice, continuity, and payment method, *Journal of General Internal Medicine, 13*, 681–6.

Kao, A. C., Green, D. C., Zaslavsky, A. M., Koplan, J. P. and Cleary, P. D. (1998b) The relationship between method of physician payment and patient trust, *JAMA*, 28, 1708–14

Kelton, E. 2015. Who's up next? More pharma companies expected to settle foreign bribery cases *Forbes*, October 14. Retrieved June 12, 2016 (http://www.forbes.com/sites/erikakelton/2015/10/14/whos-up-next-more-pharma-companies-expected-to-settle-foreign-bribery-cases/#71c33510fe2e)

King, N., Cassell, C., & Symon, G. (2004). Using templates in the thematic analysis of texts. *Essential guide to qualitative methods in organizational research*, 256-270.

Kinnear, T. and Bernhardt, K. (1986) *Principles of Marketing* (2nd edn), Scott, Foresman and Co., Glenview, IL, p. 146.

Knight, F. (1921), *Risk, Uncertainty and Profit*, New York: Harper & Row

Kogan, N., & Wallach, M. A. (1964). *Risk taking: A study in cognition and personality*. New York: Holt, Rinehart & Winston.

Koklic, M. K. (2011). The Consumer's Perceived Risk When Buying a Home: The Role of Subjective Knowledge, Perceived Benefits of Information Search and Information Search Behavior: RESEARCH PAPER. *Privredna Kretanjua i Ekonomska Politika, 21*(126), 27.

Kotler, P. and Armstrong, G. (2005). *Marketing: An Introduction*. Prentice Hall, Upper Saddle River, NJ, p. 165.

Kotler, P. and Kelle, K. L. (2006). *Marketing Management* (12th edn), Prentice Hall, Upper Saddle River, NJ, pp. 191–199.

Kotler, P. and Kelle, K. L. (2016). *Marketing Management* (15th edn), Pearson, pp. 194-205.

Krupat, E., Bell, R. A., Kravitz, R. L., Thorn, D. and Azari, R. (2001) When physicians and patients think alike: patient-centered beliefs and their impact on satisfaction and trust, *Journal of Family Practice*, *50*, 1057–62.

Kuhn, T. S. (1974). Second thoughts on paradigms. *The structure of scientific theories, 2*, 459-482.

Kuhn, T. S. (2012). *The structure of scientific revolutions*. University of Chicago press.

Lagace, R. R., Dahlstrom, R., & Gassenheimer, J. B. (1991). The relevance of ethical salesperson behavior on relationship quality: the pharmaceutical industry. *Journal of Personal Selling & Sales Management, 11*(4), 39-47.

Laroche, M., Bergeron, J. and Goutaland, C. (2001), A three-dimensional scale of intangibility. *Journal of Service Research,. 4* (1). 26-38.

Laroche, M., Bergeron, J., & Goutaland, C. (2003). How intangibility affects perceived risk: the moderating role of knowledge and involvement. *Journal of services marketing, 17*(2), 122-140.

Levy, S. J. (2005). The evolution of qualitative research in consumer behavio. *Journal of Business Research, 58*(3), 341-347.

Lewin, K. (1931). The conflict between Aristotelian and Galileian modes of thought in contemporary psychology. *The Journal of General Psychology,5*(2), 141-177.

Lewis, J. D., & Weigert, A. (1985). Trust as a social reality. *Social forces,63*(4), 967-985.

Luhmann, N. (2000). Familiarity, confidence, trust: Problems and alternatives.*Trust: Making and breaking cooperative relations, 6*, 94-107.

Manchanda, P., & Honka, E. (2005). Effects and Role of Direct-to-Physician Marketing in the Pharmaceutical Industry: An Integrative Review, *The. Yale J. Health Pol'y L. & Ethics, 5*, 785.

Mayer, R. C., Davis, J. H., & Schoorman, F. D. (1995). An integrative model of organizational trust. *Academy of management review, 20*(3), 709-734.

McDougall, G. H., & Snetsinger, D. W. (1990). The intangibility of services: measurement and competitive perspectives. *Journal of Services Marketing,4*(4), 27-40.

McKechnie, S. (1999). Health on the Internet: A mixed blessing. *Consumer Policy Review, 9*(3), 86-91.

McKee, M. (1999). Direct to consumer advertising of prescription drugs. *BMJ,318*, 1301-2.

Menon, A. M., Deshpande, A. D., Perri III, M., & Zinkhan, G. M. (2003). Trust in online prescription drug information among Internet users: The impact on information search behavior after exposure to direct-to-consumer advertising.*Health Marketing Quarterly, 20*(1), 17-35.

Mitchell, V. W. (1998). A role for consumer risk perceptions in grocery retailing. *British Food Journal, 100*(4), 171-183.

Mitchell, V. W. (1999). Consumer perceived risk: conceptualisations and models. *European Journal of marketing, 33*(1/2), 163-195.

Mitchell, V. W., & Greatorex, M. (1993). Risk perception and reduction in the purchase of consumer services. *Service Industries Journal, 13*(4), 179-200.

Murray, K. B., & Schlacter, J. L. (1990). The impact of services versus goods on consumers' assessment of perceived risk and variability. *Journal of the Academy of Marketing science, 18*(1), 51-65.

Neyman, J. (1934). On the two different aspects of the representative method: the method of stratified sampling and the method of purposive selection. *Journal of the Royal Statistical Society, 97*(4), 558-625.

Oglethorpe, J. E. (1988). *An examination of the determinants of perceived risk and acceptability of hazardous products and activities*. Virginia Polytechnic Inst. and State Univ., Blacksburg, VA (USA).

Oliver, R. L. (2006) 'Customer satisfaction research'. *The handbook of marketing research: Uses, misuses, and future advances,* Sage Publications, pp.569-87

Pope, C., Ziebland, S., & Mays, N. (2000). Analysing qualitative data. *Bmj,320*(7227), 114-116.

Ranci, C. (2010). Social vulnerability in Europe. In *Social Vulnerability in Europe* (pp. 3-24). Palgrave Macmillan UK.

Rose, H. (2000). Risk, trust and scepticism in the age of the new genetics.*The risk society and beyond: Critical issues for social theory*, 63-77.

Roselius, T. (1971). Consumer rankings of risk reduction methods. *The journal of marketing*, 56-61.

Rousseau, D. M., Sitkin, S. B., Burt, R. S., & Camerer, C. (1998). Not so different after all: A cross-discipline view of trust. *Academy of management review, 23*(3), 393-404.

Sanchez, P.M. (2000). The potential of hospital website marketing. *Health Marketing Quarterly, 18*(1/2), 45-57.

Scheepers, R. (2001). Supporting the online consumer decision process: electronic commerce in a small Australian retailer. *ACIS 2001 Proceedings*, 75.

Sen, A. (1985). *Commodities and Capabilities*, Amsterdam: North Holland

Sen, A. 1987, *The standard of living*, Cambridge: Cambridge University Press

Şengün, A. E., & Wasti, S. N. (2007). Trust, Control, and Risk A Test of Das and Teng's Conceptual Framework for Pharmaceutical Buyer-Supplier Relationships. *Group & Organization Management, 32*(4), 430-464.

Sharon S. Paik (2009). "Go with the (patient) flow." BHBIA Journal Article. Retrieved April 06, 2016. (http://www.ipsos.com/marketing/sites/www.ipsos.com.marketing/files/pdf/IpsosMarketing-Articles-Hlth-Go_with_the_patient_flow.pdf).

Siegrist, M. (1999). A causal model explaining the perception and acceptance of gene technology. *Journal of Applied Social Psychology, 29*(10), 2093-2106

Siegrist, M., Gutscher, H., & Earle, T. C. (2005). Perception of risk: the influence of general trust, and general confidence. *Journal of Risk Research,8*(2), 145-156.

Siegrist, M. (2000). The influence of trust and perception of risks and benefits on the acceptance of gene technology. *Risk analysis, 20*(2), 195-204.

Siegrist, M., Gutscher, H., & Earle, T. C. (2005). Perception of risk: the influence of general trust, and general confidence. *Journal of Risk Research,8*(2), 145-156.

Skirbekk, H., Middelthon, A. L., Hjortdahl, P., & Finset, A. (2011). Mandates of trust in the doctor–patient relationship. *Qualitative Health Research, 21*(9), 1182-1190.

Slovic, P. E. (2000). *The perception of risk*. Earthscan publications.

Slovic, P., Kraus, N. N., Lappe, H., Letzel, H. T., & Malmfors, T. (1989). Risk perception of prescription drugs: Report on a survey in Sweden. In *The perception and management of drug safety risks* (pp. 90-111). Springer Berlin Heidelberg.

Slovic, P., KRAUS, N., LAPPE, H., & MAJOR, M. (1991). Risk perception of prescription drugs: report on a survey in Canada. *Canadian Journal of Public Health/Revue Canadienne de Sante'e Publique, 82*(3), S15-S20.

Slovic, P., Peters, E., Grana, J., Berger, S., & Dieck, G. S. (2007). Risk perception of prescription drugs: results of a national survey. *Drug information journal, 41*(1), 81-100.

Spence, H. E., Engel, J. F., & Blackwell, R. D. (1970). Perceived risk in mail order and retail store buying. *Journal of marketing research*, 364-369.

Srinivasan, N., & Ratchford, B. T. (1991). An empirical test of a model of external search for automobiles. *Journal of Consumer research, 18*(2), 233-242.

Starfield, B. (1994). Is primary care essential?. *The Lancet, 344*(8930), 1129-1133.

Stone, R. N., & Grønhaug, K. (1993). Perceived risk: Further considerations for the marketing discipline. *European Journal of marketing, 27*(3), 39-50.

Sujan, M. (1985). Consumer knowledge: Effects on evaluation strategies mediating consumer judgments. *Journal of Consumer Research*, 31-46.

Thom, D. H., Kravitz, R. L., Bell, R. A., Krupat, E., & Azari, R. (2002). Patient trust in the physician: relationship to patient requests. *Family practice, 19*(5), 476-483.

Thorn, D. H. (2001) Stanford trust study physicians, physician behaviors that predict patient trust, *Journal of Family Practice, 50*, 329–30.

Thorn, D. H., Bloch, D. A. and Segal, E. S. (1999) An intervention to increase patients' trust in their physicians, *Academic Medicine, 74*, 195–8.

Tongco, M. D. C. (2007). Purposive Sampling as a Tool for Informant Selection. *Ethnobotany Research and Applications, 5*, 147-158.

Ware, J. E., & Davis, A. R. (1983). Behavioral consequences of consumer dissatisfaction with medical care. *Evaluation and program planning, 6*(3), 291-297.

Yoon, S. J. (2002). The antecedents and consequences of trust in online-purchase decisions. *Journal of Interactive Marketing, 16*(2), 47.

Zaichkowsky, J.L., (1985). Measuring the involvement construct. *Journal of Consumer Research, 12*, 341-52.

Zeithaml, V.A. and Bitner, M.J. (2000). *Services Marketing: Integrating Customer Focus across the Firms*, 2nd ed., McGraw-Hill, New York, NY.

Zhang, R. 2014. September 03. Retrived June 16, 2016. (http://finance.people.com.cn/n/2014/0903/c66323-25591783.html)

Zhou, T. Y. (2013). why only 10% patients trust doctors. March, 08. Retrieved June 12, 2016. http://www.gov.cn/2013lh/content_2349189.htm