

## Brand Loyalty as a Strategy for the Competition with Generic Drugs: Physicians Perspective

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### Abstract

Like in other industries, the competition among companies in the pharma industry is high. Therefore, pharmaceutical companies have to design their strategies in order to achieve competitive advantage. Brand loyalty is a powerful tool in the development of pharmaceutical brands. Physicians play major role in the selection of drugs to consume and can also be considered as the consumer. This descriptive study examines the factors that influence physicians' choices of medication for their patients. Data was collected using a survey administered to specialists and trainees from Cardiology Department. Total 18 physicians participated in the study. Most of the respondents (85%) declared the scientific literature regarding the drug as their first priority in prescribing. Almost half of the respondents (46%) declared the published clinical trial results as a primary source of information about the launch of new drug. With respect to the inclusion of a newly launched drug in the daily prescribing routine, 85% of the respondents tended to prescribe a new drug after the publication of clinical trials. A vast majority of the participants indicated the patients' source of payment as a major factor for their preferences; meanwhile 92% of them also emphasized the therapeutic equivalency of the drug for their preferences. More than half of the participants (>70%) tended to prescribe original drugs to patients having chronic disease/comorbidity and special insurance coverage and/or self-payment. Regarding the physicians' familiarity to the original proprietary names, more than half of the respondents correctly predicted the original proprietary names. This study reflects the physician's perspective for the establishment of brand loyalty. From the physicians' standpoint belief in brand is crucial for the creation of brand loyalty and the key for building up trust is the scientific data regarding the effectiveness and safety of the drug obtained from large-scale clinical trials.

**Keywords:** Brand loyalty; Branded pharmaceuticals; Generic pharmaceuticals; Physicians perspective

### Introduction

Because of being one of the most valuable assets, brand is a key player in the business strategy of a leading organization [1,2]. It is well known that consumer loyalty can be created only through strong brands. Like in other industries, the competition among the companies in the pharma industry is high. Therefore, pharmaceutical companies have to design their strategies in order to achieve competitive advantage [3]. Due to rising cost of research and development, branding is important in the pharma industry and pharmaceutical companies have to build their brands [4].

Pharmaceutical industry is one of the most dynamic industries characterized by continuous new product launch. Although new product entrants have patent protection, they both have to compete with new improved therapeutic entrants before the patent expires and generic alternatives after the patent expires [5].

Brand loyalty can be defined as the extent of the faithfulness to a particular brand, and is a major indicator of a long-term financial performance of companies [6,7]. The main advantages of brand loyalty can be defined as: greater sales and revenue, a substantial entry barrier

to competitors, increase in a company's ability to respond to competitive threats and lower consumer price sensitivity [8].

The main goal of generic substitution is to reduce consumers' expenditure on medicines [9]. Therefore, creating of "brand loyalty" is the most important sale strategy of originator producers against price competition revealed by generic producers. Consumers who are brand loyal are not willing to compromise drug safety and efficacy for lower prices [10].

Pharma industry with its unique anatomical structure is differentiated from other industries. The decision on what drugs to consume is not determined by the patients' taste, but primarily by the preference of the physician. Therefore, physicians can also be considered as the consumer [11]. A brand gives confidence to the physician regarding effectiveness. The physician who believes the effectiveness of a certain drug will have the tendency of prescribing it. From this respect, brand loyalty is also seen as physician's trust. The aim of this study is to examine the prescribing behaviors of physicians and factors that influence the physician's choice to prescribe original or generic drugs.

## Materials and Methods

Total 18 physicians from the cardiology department were selected in the study. 12 were specialist, 6 were trainee. Data was collected using the 14 items “Physician Choice Survey” (PCS) developed by the researchers. An information sheet about the study was distributed to the respondents to enhance their understanding about the study. Respondents agreeing signed a written consent form to proceed to complete the survey.

The PCS had the following three sections:

Physician’s choice and prescribing behavior: this section included 12 multiple-choice questions examining the relationship between the physician’s choice of medication and the variables that may influence the physician’s prescribing behavior. The questions in this section seek information regarding patient and drug characteristics. Questions related to patient characteristics aim to collect information about age, gender, patient’s chronic condition/comorbidity, number of medications the patient is taking and insurance coverage. Questions related to drug characteristics aim to collect information about the price, length of time the drug has been on the market and quality of the drug. Quality was defined by the scientific literature (especially clinical trials conducted with the drug) and therapeutic equivalence.

Therapeutic class	Generic name*	Proprietary name	Approval date	Type
ACE inhibitors	Enalapril	Vasolapril	1989	Original
		Renitec	1992	Generic
		Enalap	1989	Generic
		Enapril	1991	Generic
		Converil	1993	Generic
	Lisinopril	Zestril	2000	Original
		Sinopryl	2007	Generic
		Rilace	2008	Generic
	Ramipril	Delix	2001	Original
		Blokace	2006	Generic
		Dicef	2010	Generic
		Race	2009	Generic
		Ralix	2009	Generic
Angiotensin Receptor Blockers	Irbesartan	Carvea	2009	Original
		Irda	2010	Generic
		Arbesta	2011	Generic
		Rebevea	2013	Generic
	Losartan	Cozaar	2003	Original
		Eclipse	2006	Original
		Sarilen	2006	Generic
		Hilos	2006	Generic

	Valsartan	Loxibin	2006	Generic
		Diovan	2005	Original
		Cardopan	2008	Generic
		Cerecard	2010	Generic
		Venaton	2011	Generic
		Valso	2012	Generic
		Valtensin	2013	Generic
		Wansaar	2013	Generic
Calcium Canal Blockers	Verapamil	Isoptin	2001	Original
		Veroptin	2012	Generic
		Ormil	2012	Generic
	Amlodipine	Norvasc	1991	Original
		Norvadin	1993	Generic
		Nipidol	1994	Generic
		Vasocard	1994	Generic
		Amlocard	1995	Generic
		Normopress	1997	Generic
		Amlodis	2008	Generic
	Nifedipine	Nidilat	2009	Original
		Cardilat	2013	Generic
		Nidicard	2013	Generic
Cardio Selective Beta Blockers	Metoprolol	Lopresor	1980	Original
		Beloc	2003	Original
		Problock	1999	Generic
Diuretics	Indapamide	Flubest	1990	Original
		Fludin	1991	Original
		Flupamid	1991	Generic
		Indapen	1996	Generic
	Furosemide	Lasix	1977	Original
		Furomid	1980	Generic
		Desal	2001	Generic
		Lizik	2001	Generic

**Table 1:** Generic and proprietary names according to the therapeutic classes. \*Combination and special pharmaceutical dosage forms (sustained release etc.) were not included.

Physician’s familiarity to original proprietary (brand) name: the second section aimed to determine the participants’ familiarity to original proprietary names. In this section participants were asked to

select the original drug name from the given list of proprietary names belonging to the therapeutic classes of: Angiotensin Converting Inhibitors (ACE), Angiotensin Receptor Blockers (ARB), Beta Blockers, Calcium Canal Blockers and Diuretics (Table 1).

Physician's prescribing frequency: the third section inquired participants' prescribing frequencies of the proprietary names given in section two. In this section participants were asked to indicate their prescribing frequencies on a 4-point scale ranging from "never" to "very often".

## Results

Participants declared performing 20 to 30 numbers of ambulatory patient visits daily. Regarding the patient profile, declared patients' financial situations was: 85% Social Security Institute (SSI) coverage, 12% private insurance coverage and 3% self-pay. In parallel with this patient profile, 85% of the participants reported the prescribing frequency of generic propriety names as "very often" (Figure 1).

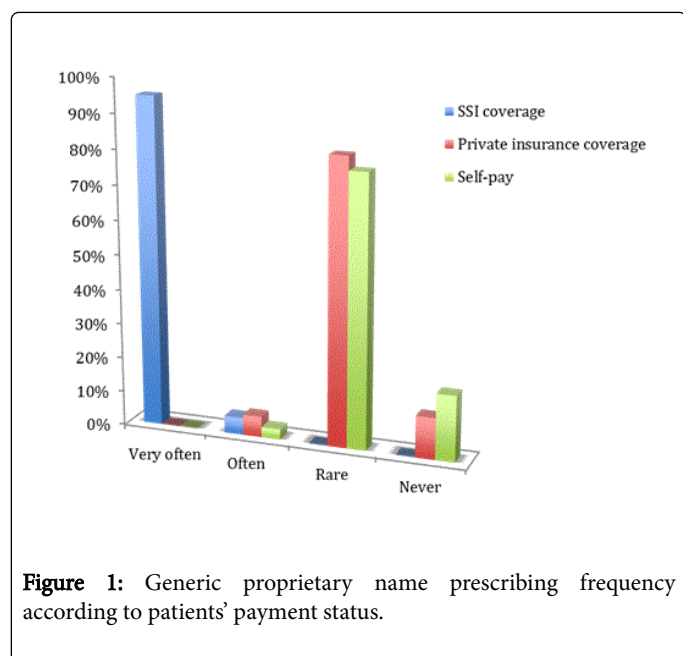


Figure 1: Generic proprietary name prescribing frequency according to patients' payment status.

Most of the respondents (85%) declared the scientific literature regarding the drug as their first priority in prescribing. While 46% of the respondents reported their experience, 39% of them reported the patient's financial situation as prescribing priority. Only one physician declared the company name as the first priority.

Almost half of the respondents (46%) declared the published clinical trial results as a primary source of information about the launch of new drug. Besides clinical trials, while 30% of the respondents declared the pharmaceutical representative visits, 24% of them declared the company promotional meetings.

With respect to the inclusion of a newly launched drug in the daily prescribing routine, 85% of the respondents tended to prescribe a new drug after the publication of clinical trials, whereas only 7.5% of them tend to prescribe a drug after pharmaceutical representative visit and remaining 7.5% did so after the drug has been commonly used.

Regarding the patient characteristics, none of the respondents reported either age or gender as an important factor for their choice of original or generic drug prescribing.

Therapeutic class	Generic name	Proprietary name	Recognition rate (%)	
ACE inhibitors	Enarapril	Vasolapril	22.2	
	Lisinopril	Zestril	0.0	
	Ramipril	Delix	100.0	
Angiotensin receptor blockers	Irbesartan	Carvea	77.7	
	Losartan	Coozar	83.3	
	Valsartan	Diovan	72.2	
Calcium Canal Blockers	Verapamil	Isoptin	0.0	
	Amlodipin	Norvasc	94.4	
	Nifedipine	Nidilat	61.5	
Cardio Blockers	Selective Beta	Metoprolol	Lopresor	77.7
Diuretics	Indapamide	Flubest	77.7	
		Fludin	66.6	
	Furosemid	Lasix	100.0	

Table 2: Recognition rates of original proprietary names.

Generic name	Proprietary name	Prescribing Frequency			
		Very often	Often	Rare	Never
Enarapril	Vasolapril	2/18	3/18	8/18	5/18
	Renitec	5/18	11/18	2/18	-
	Enalap	-	-	8/18	6/18
	Enapril	-	8/18	2/18	-
Lisinopril	Zestril	-	-	7/18	1/18
	Sinopryl	-	9/18	-	3/18
	Rilace	10/18	6/18	2/18	-
Verapamil	Isoptin	-	-	13/18	-
	Veroptin	8/18	9/18	-	1/18
	Ormil	-	-	1/18	14/18

Table 3: Proprietary name prescribing frequencies of enarapril, lisinopril and verapamil.

However, a vast majority of the participants indicated the patients' source of payment as a major factor for their preferences, meanwhile 92% of them also emphasized the therapeutic equivalency of the drug for their preferences. More than half of the participants (>70%) tended to prescribe original drugs to patients having chronic disease/comorbidity and special insurance coverage and/or self-payment.

As for the physicians' familiarity to the original propriety names, recognition rates are given in Table 2. As seen in the table, recognition rates were mixed and showed no obvious trend. More than half of the respondents correctly predicted the original propriety names. However, original propriety names for enalapril, lisinopril and verapamil were not correctly predicted. In parallel with these results, participants tended to frequently prescribe these brand names (Table 3).

## Discussion

Physicians play an important role for the selection of medication or treatment methods in order to best fit the patients' health condition. Studies showed the physicians as a source of power in the physician-patient relationship [12]. As a part of this role, physicians decide which patients would receive original or generic drugs. According to the researchers these prescribing decisions could not be explained only by patient's characteristics [13]. Therefore, other parameters such as drugs characteristics must be considered together.

This study is based on exploratory research with small sample size and non-representative. The reason for studying with a small size population is purposive. To our knowledge, studies exploring the prescribing tendency of physicians in our context are scarce in number and for this reason first of all we need to explore whether such a case exists in our context. With this respect our research should be considered as a preliminary study [14,15].

This study was conducted with physicians from cardiology department since the three out of five brand names with high sales rate worldwide, known as "blockbuster", are cardiovascular group of drugs. Additionally, the patent protection period of these drugs ended in 2012. While preparing the generic and original propriety names to be included in the list the most frequently prescribed drugs were selected from the data obtained in an earlier unpublished study of the researcher.

Regarding the physicians' sensitivity to prices, participants indicated the price of drug as the least priority. Similar to us, the findings of the study by Aves et al. suggest that physicians have limited information about the price of drug and they do not have incentive to prescribe cheaper medicines [16]. However, other experts propose that physicians may be affected by the patients' financial situation and can infer the patients' willingness to pay through the type of insurance they hold [17,18]. In general, patients with extensive insurance programs are less sensitive to the price of prescribed drugs. However, Coulson et al. assert that rather than direct price of the drug, patients are more sensitive to the cost-sharing scheme because of insurance coverage [19]. Interestingly, according to the results of a randomized controlled trial designed to determine the effect of cost sharing on demand for health services, individuals with more generous insurance buy more drugs, but the proportion of original drugs within the all purchased drugs in pharmacies was not a correlated with the coverage of insurance [20]. In our study, physicians tended to prescribe generic drugs to patients with SSI coverage. Similar to other countries, SSI in Turkey tries to control the national health care expenditures by controlling the price and setting the limits on the usage of drugs for specific conditions. To control the price, SSI negotiates discounts from drug manufacturers and uses generic substitution program. Therefore, even if the original drug is prescribed to patients with SSI coverage, community pharmacist has to dispense the generic substitute unless the patients accept to pay the over price.

Price is sometimes used as a measure of quality [12]. According to Ziethalm and co-workers, this may happen when drug efficacy is of prime consideration or when there is no great variance in the nature of the products across the brand names [21]. In our study physicians' tendency for selecting original drugs to patients with chronic condition/comorbidity and self-pay and/or special insurance coverage indicate the consideration of price as a measure of quality by the physicians. We believe that phenomenon of "generic paradox" is arising from this perception. This generic paradox refers to increasing the price of the branded products when generic competition emerges to exploit brand differentiation and market segmentation [22]. The main reason for generic substitution is to reduce the consumers' expenditures on medicines [23]. Generic medicines face two difficulties in the market. First, although more than 15 years passed over the case of "generic scandal" caused by FDA reviewers' accepting bribes from generic drug manufacturers for the approval of ANDAs, and violating manufacturing procedures and using fabricated supported documents for application, there is still a prejudice against the quality of generic drugs which impairs the reputation of generic drug manufacturers worldwide [24]. The second is the view that in certain circumstances generic substitution is not always appropriate [25]. The approval of generic drug requires showing its biological equivalence (bioequivalence) to the reference (original) drug. FDA defines bioequivalence as, "the absence of a significant difference in the rate and extent to which the active ingredient or active moiety in pharmaceutical equivalents" and uses the "plus or minus twenty percent test" for evaluation. This means that at a certain point in time the blood concentration of generic drug can be 20% higher and/or lower than that of the reference (original) drug. This can create problem for drugs with narrow therapeutic index [26]. According to the Adrade [27], this is because bioequivalent brands of drugs may differ in their excipient content, which can result in variations in safety profiles. In our study, vast majority of the participants emphasized the therapeutic equivalence of the drug for their preferences. This reflects the sensitivity of physicians towards effectiveness and safety of the drug in prescribing behavior.

In general physicians don't tend to compromise drug safety and efficacy for lower prices [28]. Similarly, Ganther and co-workers showed the perception of generic drugs as riskier than the original ones by consumers were varied and depended on the medical condition being treated. According to that study, more than half of the respondents thought that generics were riskier than the original drugs for heart problem, however for medical conditions like sore throat, pain and cough they were as riskier as the originals [29]. In the same study, it was concluded that consumers did not choose generic alternatives with higher perceived risk unless significantly larger cost savings were obtained [24].

Brand loyalty is a powerful tool for the development of pharmaceutical brands. When brand loyalty established, consumers are willing to pay higher prices for the brand. According to Griffiths, the main reason for physicians to prescribe more expensive branded medicines rather than inexpensive generic alternatives is due to brand loyalty [30]. It was observed that "brand recognition" has been created largely by the original brand manufacturer. Compared to the others, original propriety names of three generic names that were not recognized by the physicians (enalapril, lisinopril, verapamil) were found to be the agents that were placed on the marker earlier than the others, and for this reason the clinical trials conducted with these drugs were relatively outdated [31-33]. The frequency of generic propriety names prescribed instead of these three original propriety



names might either evidence the success of marketing strategy of the generic brand manufacturer, or the decreased investment of the originator manufacturer.

## Conclusion

Although numerous researches have been conducted to identify and establish consumer loyalty, further research regarding the development and existence of consumer loyalty within the pharmaceutical industry is needed. This study reflects the physician's perspective for the establishment of brand loyalty and helps pharmaceutical companies to design their strategic management plans for achieving competitive advantage. From the physicians' standpoint belief in brand is crucial for the creation of brand loyalty and the key for building up trust is the scientific data regarding the effectiveness and safety of the drug obtained from large-scale clinical trials.

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