### TITLE

# BUYING BEHAVIOURAL PATTERN OF ETHICAL AND GENERIC DRUGS IN WESTERN INDIA: AN EMPIRICAL INVESTIGATION

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# BUYING BEHAVIOURAL PATTERN OF ETHICAL AND GENERIC DRUGS IN WESTERN INDIA: AN EMPIRICAL INVESTIGATION

### ABSTRACT

Changes in the prescription behavior of the doctors with socio-economic changes have affected many pharmaceutical companies in India. Pharmaceutical companies who were adopting old techniques of marketing have more or less stagnated. For the first time it was surprising to note that the pharmaceutical industry is cumulatively growing by more than 5 percent (Srivastava, 2003). Prescribing makes a considerable impact on health and budgets and yet remains a contentious issue (Carthy, et al., 2000). This research paper is an attempt to contribute to the overall knowledge of understanding regarding the factors that contribute to the buying behavior pattern of ethical drugs in Indian context.

Key words: prescription behavior, rational prescription thinking, Prescription method.

### INTRODUCTION

The most distinctive characteristics of pharmaceutical market are the dominant role of physicians. The physician provides authoritative advice on the role of drug therapy in the treatment of illness and medical conditions (Calfee, 2002). In less developed nations, with no prescription requirement largely because of the scarcity of physicians and trained pharmacists, consumers were reluctant to use drugs without professional guidance (Peltzman, 1987). A physician plays a central role in drug usage and is reflected in the fact that the bulk of pharmaceutical promotion is directed at physicians rather than consumers (Rosenthal,

2002). Physicians also, quite reasonably, pay more attention to diagnosing conditions when they know there are effective drug treatments (Pincus et.al., 1998; Elliott, 2002).

Prescriptions have been used to study treatment patterns and analyze markets for various therapeutic categories in many countries. In today's highly competitive pharmaceutical market, marketers are increasingly concentrating on studying the prescription trends and the prescribing behaviour of physicians (Chaganti, 2005). Physician's choice is more logical and rational while choosing a therapy but when it comes to selecting a particular brand of formulation, his decision may be more inclined towards emotional and less rational prescription. Some authors have also highlighted the possibility for better protection of the branded drugs versus generics from the legal perspective when they are branded (Blackett 2001). Brands will have a stronger influence on the behaviour and attitudes of patients and doctors. Doctors can be convinced by arguments other than the purely rational ones (Chandler and Owen 2002). Various studies have shown that doctors may get influenced in their prescription behaviour due to the factors such as 'trust' or the 'quality image' of the pharmaceutical manufacturer (Schuiling and Moss 2001). It may depend upon a number of factors like the confidence, pleasant mannered, friendly, and persuasive approach of medical representatives, reputation of the company, easy to remember brand name, and many more other factors.

Prescription is a reflection of a physician's choice set of drug for a treatment (Chaganti, 2005). There are some major factors that contribute to the prescription process like behavioural characteristics of the patient, expectations and attitude towards the prescriber's treatment, trust level on the prescriber's treatment, level of knowledge and expertise of the prescriber, and prescriber – patient relationship. Convenience and availability of information

sources are two crucial factors influencing the physician's prescription behaviour. For the first time it was surprising to note that the pharmaceutical industry is cumulatively growing by more than 5 percent (Srivastava, 2003).

Prescribing makes a considerable impact on health and budgets and yet remains a contentious issue. Newly established Primary Care Groups may need to reflect upon the difficulties facing prescribers, particularly when prescribing within cash-limited budgets, to avoid discord between prescribing behaviour and local policy development (Carthy, et al., 2000).

Physicians are often supplied with substantial amount of free products (i.e. samples) for direct assessment of the effectiveness of a drug, which can then dispense to patients at no cost (Gönül, et al. 2001). There are also factors where it is plausible that a change in doctor's behaviour or practice organization will result in modification of prescribing rates and costs. These include knowledge of drugs and drug costs and sources of information (Forster, 1991, Coleman, et al. 2000 and Ryan, et al. 1990), level of postgraduate medical education (Becker, et al. 1972), social and logistic factors such as role perception of GPs and time pressures (Carrin, 1987, Bradley, 1992 and Harris, et al. 1984), number of GPs in the practice (Carrin, 1987), and attitudes to generic and branded products (Carrin, 1987 and Zwanenberg, et al. 1987).

General practitioners (GPs) appeared to support cost reducing initiatives in principle (Carthy, et.al. 2000). Switching physicians on the basis of an unsatisfactory experience related to drug costs is unlikely, but still the potential loss of patients' patronage could be a reasonable concern to physicians (Gönül, et al. 2001). This research paper is an attempt to contribute to

the overall knowledge of understanding regarding the factors that contribute to the buying behavior pattern of ethical drugs in Indian context.

### **Research Methodology**

Physicians were the source for data collection as they are the ones who prescribe a brand to the patients, who in turn purchase the prescribed brand from the nearby pharmacist. As each pharmaceutical manufacturer tries to get the attention of the doctors mind share/ prescription share for their respective brands, thus their opinion and preferences were essential for this study.

The nature of the data relevant to the research was demographic and behavioural. The demographic profile of the respondents and their behavioural aspects were gathered for the fulfillment of the objectives of study. The opinion and attitudes of the medical practitioners were captured to know their preference variables which influence the prescription behaviour. The questionnaire method was adopted for data collection. A self-administered questionnaire was designed for doctors due to time constraints during visits but was personally executed for maximizing the response rate.

In order to select the representatives among the category of respondents i.e. doctors, convenience sampling method was chosen followed by judgment sampling method. Considering the large population of the respondents, 1 per cent sample was selected. Therefore, out of the total population of approximately 25,000 doctors around the selected cities in Gujarat and Maharastra, 1 per cent of the doctors (i.e. 250) were selected as the sample for the study. The data collection was planned in a sequential manner. The cities

selected from the state of Gujarat and Maharastra were Ahmedabad, Baroda, Surat, Pune and Mumbai. These cities were selected based on their business potential in their respective states.

### Validation of Data

Validation of data was carried out by checking whether accurate samples were drawn as per the guidelines. The internal consistency of the data was measured using Cronbach's Alpha. The questionnaire was pre-tested among few respondents and based on the initial response and matching it with the research objectives, necessary modifications were carried out in the questionnaires. The content of the responses were scrutinized for apparent inconsistencies, which were found to be minimal.

### **Sample Characteristics**

There were 67.7 per cent medical practitioners having MBBS qualification; 23.2 per cent were having MD and the rest holds other professional qualification. There were 4.3 per cent medical practitioners having up to 5 years of medical practice, 14.8 per cent with 6 to 10 years of practice, 16 per cent with 11 to 15 years of practice, 20.2 per cent with 16 to 20 years of practice, 14 per cent with 21 to 25 years of practice and 30.7 per cent with above 26 years of practice. There were 97.6 per cent of doctors having monthly income of more than one lakh rupees and the rest 2.4 per cent were having their monthly income between 2 lakh to 3 lakh rupees. There were around 98.8 per cent doctor's practices through their own clinic. Rest 1.2 per cent doctors practice through private/ government hospitals. There were 5.9 per cent doctors who give patients dispensed drugs. 11.9 percent doctors gave only prescription to

purchase drugs from pharmacist. Rest 82.7 per cent doctors gave drugs to the patients by combination of both the methods (Table 1 & 2).

### **Reliability Statistics**

The Cronbach's alpha or coefficient alpha value (0.709) shows fairly strong internal consistency reliability of the 26 scaled items used to construct the doctor's beliefs (Table 3).

### **Study Results**

*Six* composite variables and *twenty five* variables i.e. V1 to V25, were used separately for ANOVA (Table 4). Similarly, *six* composite variables and *twenty seven* variables i.e. V1 to V27 were used separately for Factor analysis (Table 5).

The six composite variables used for ANOVA were:

- 1. The process of consultation. (Forster et al., 1991, Baker et al., 1991)
- Sources of information for prescribing medicine. (Forster et al., 1991, Coleman et al., 2000, Ryan et al., 1990, Carthy et.al., 2000)
- 3. Prescription behaviour. (Lagerløv et al., 2000, Berndt et al., 1994)
- 4. Cautiousness about fixed set of Medical Brands. (Carrin et al., 1987 and Zwanenberg et al., 1987, Audit Commission, 1996, Avery et al., 2000)
- 5. Relationship with Drug companies & Retail pharmacists. (Watkins et.al, 2003, Gönül et al., 2001)
- 6. Source of Inquiries. (Nelson et al., 1974, Milgrom & Roberts 1982, 1986)

Univariate Analysis (ANOVA) for qualification categories and six composite variables suggests that the medical practitioner evolves a specific approach for consultation, develops distinct prescription behaviour, a preference set of medicine brands for a specific disease and builds a healthy relationship with the drug companies and pharmacists due to factors other than the level of education. But level of education of a medical practitioner does affect their approach in gathering information about a medicine brand for a specific disease. ANOVA for the practicing years and six composite variables suggests that the six composite variables are affected by factors other than the prescription years of a medical practitioner.

ANOVA for qualification categories and twenty five construct variables suggests that the professional qualification does not have any impact over medical practitioner's belief on the set of brands for specific disease, use of new drugs, prescription criteria and relationship with drug companies and pharmacists. But professional qualification does have an impact over the prescription practice. ANOVA for practicing years and twenty five construct variables suggests that the practicing years do not have any impact over the medical practitioner's perception regarding new drug usage, personal beliefs, reading habits, rational thinking, probing habit about the developments in the medicines, and relationship with drug companies and pharmacists. But the practicing years does have an impact over the medicine brand choice, interest towards the promotional schemes, and prescription practice.

Multivariate Analysis (Factor Analysis) suggests that out of the original twenty seven constructs, ten factors were extracted which were named as reading habits, rational prescription thinking, probing habits, new drug inquiry approach, relationship with medical representatives and pharmacists, loyalty criteria, brand decision criteria, prescription method, brand comfort, and brand detailing (Table 6 & 7).

The medical practitioners normally read medical literatures besides looking at the drug advertisements to update with the latest drug developments. They are generally rational and cautious while prescribing a medicine brand for a specific disease. Before prescription, they normally prefer listening to the patient's personal belief about their illness besides referring the published finding regarding efficacy of the medicine brand. They usually refer multiple sources of information to check the efficacy of the medicine brand. Sometimes, they refer to the other medical practitioners to consult about the medicine brand for a specific disease. They believe that relationship with the medical representatives and pharmacists not only helps them in deciding a preference set of medicine brands but also assure them about the efficacy of drugs. They sometimes compare the cost of medicine brand of the drug companies, which offers regular gifts, samples, and promotional schemes. The frequent visits by medical representatives and pharmacists help prescribers to fix pre-determined set of medicine brands for a specific disease.

### Conclusions

Major conclusions drawn on the hypothesis were:

# H1: Relative influence of brand image of ethical drugs is more than the generic drugs on the prescription behaviour of medical practitioners.

The result of investigation shows that there is no difference in relative influence of generic and ethical drugs on the prescription behaviour of medical practitioners. Thus the *first null hypothesis* is rejected.

There are factors, proposed in various studies, having an impact over prescription behaviour of the doctor. These include knowledge of drugs, drug costs and sources of information (Forster, 1991, Coleman, 2000 and Ryan, 1990), level of postgraduate medical education (Becker, 1972), number of doctors in the practice (Carrin, 1987), and attitudes towards generic and branded products (Carrin, 1987 and Zwanenberg, 1987). This study supports the previous findings and suggests that the doctors normally prescribe a combination of both ethical and generic drugs with the same efficacy for a specific disease. This is based on the evidence that the Factor Analysis conducted on the doctors belief constructs provided *factor* '**brand decision criteria**' has relatively high coefficients for construct variables 'when I prescribe, I compare the costs of different medicine brands which have the same efficacy' (.467), 'I sometimes follow consultation from my known physicians in deciding the drug options for specific disease of my patients' (.528) and 'gifts, samples, promotional schemes and frequent visits by medical representative, helps me to decide my final choice of medicine brands for specific disease' (.769).

# H2: Relative impact of ethical drug promotions to the medical practitioners is more than the generic drugs on the prescription process.

The result of investigation shows that there is no difference in relative impact of promotion of ethical drugs and generic drugs on the prescription process of medical practitioners. Thus the *third null hypothesis* is rejected.

Past studies suggests that detailing may enable physicians to make careful trade-offs between costs and benefits for each patient, thus offering a more customized service and enhanced social welfare (Berndt, et al. 1994). There may be a threshold level of detailing and samples

beyond which the effect becomes negative (Van Zandt, 1993). Physicians may show disinterest due to excessive detailing and samples and consequently unwilling to prescribe the drug. Detailing and samples have a mostly informative effect on the prescribers (Gönül, et al. 2001). Prescribing habits, today, tend to be more modern prescribing rather than old fashioned prescribing habits for cheap drugs (Carthy, et al. 2000). Switching physicians on the basis of an unsatisfactory experience related to drug costs is unlikely, but still the potential loss of patients' patronage could be a reasonable concern to physicians (Gönül, et al. 2001). This study suggests that the doctors while prescribing medicine brand for a specific disease, consider the combination of ethical drug promotions from the medical representative, regular visits of the local pharmacists and inquiry from company's promotional ads and materials. This is based on the evidence that the Factor Analysis conducted on the doctor's belief constructs provided *factor* 'brand detailing' comprises of construct variables 'my decision on final choice of brands, is based on the regular visits from local retail pharmacists to request me for prescribing certain set of brands' (.604), 'I mostly prefer prescribing the medicine brands that are effectively promoted' (.638) and 'make detail enquiry about the medicine brands from company promotional ads & materials' (.552).

### **Implications of the study**

The results of this study have clear implications for the Indian pharmaceutical manufacturers, consumer groups and the pharmacists. Furthermore, these findings have important implications for those interested in further understanding the impact of generic drugs on the buying behaviour pattern of ethical drugs.

### **Directions for the future research**

This study attempted to analyze various factors that motivate the prescription behaviour of the medical practitioners and measure the impact of generic drugs on the buying behaviour pattern of ethical drugs; and the benefits offered by them to the society.

During the course of this study, some areas had been identified, which offer scope for the further meaningful research that may stress upon the complexities of brand positioning of ethical drugs and its impact on the prescription behaviour of medical practitioners. A direction for future research might be more exhaustive investigation on segmenting the medical practitioners by their qualification and to assess their prescription behaviour and then integrating the information into a comprehensive and significant model to explain their collective and independent prescription behaviour. Similarly, a study segmenting the medical practitioners by their practicing years can be designed to assess their prescription behaviour and then integrating the information into a comprehensive and significant model to explain their and then integrating the information into a comprehensive and significant model to explain their behaviour and then integrating the information into a comprehensive and significant model to explain their practicions by their practicing years can be designed to assess their prescription behaviour and then integrating the information into a comprehensive and significant model to explain their their prescription behaviour.

### REFERENCES

Audit Commission 1996. A prescription for movement towards more rational prescribing in general practice, London: Audit Commission, pg. 9-12.

Avery, A. J., Wetzels, R. V., and Rodgers, S. 2000. Do GPs working in practice with high or low prescribing costs have different views on prescribing cost issues? Br J Gen Pract, 50:100–4. Baker, D., and Klein, R. 1991. Explaining outputs of primary health care: population and practice factors, BMJ, 303:225–9.

Becker, M. H., Stolley, P., and Lasagna, L. 1972. Correlates of physicians' prescribing behaviour, Inquiry, 9:30–42.

Berndt, Ernst R., Linda T., Bui, Reiley, David H., and Urban, Glen L. 1994. The roles of marketing, product quality, and price competition in the growth and composition of the U.S. Anti-Ulcer drug industry, Working paper No. 19-94, Program on the Pharmaceutical Industry, Massachusetts Institute of Technology.

Blackett, T. 2001. Brand medicine: Use and future potential of branding in pharmaceutical markets, International Journal of Medical Marketing.

Bradley, C. 1992. Factors which influence the decision whether or not to prescribe: the dilemma facing general practitioners, Br J Gen Pract, 42:454–8.

Calfee, John E. 2002. The role of marketing in pharmaceutical research and development, Pharmacoeconomics, 20 Suppl., 3: 77-85.

Carrin, G. 1987. Drug prescribing: a discussion of its variability and (ir)rationality, Health Policy, 73–94.

Carthy, P., Harvey, I., Brawn, R., and Watkins, C. 2000. A study of factors associated with cost and variation in prescribing among GPs, Family Practice, 17: 36–41.

Chaganti, Subba Rao. 2005. Pharmaceutical Marketing in India, GITAM Institute of Foreign Trade, 1st edition, pg. 39-46.

Chandler, J. and Owen, M. 2002. Developing brands with qualitative research, London: Sage.

Coleman, J. S., Katz, E., and Menzel, H. 2000. Medical innovation: A diffusion study, Indianapolis: The Bobbs-Merril Company Inc.

Elliott VS. 2002. New osteoporosis treatments offer diagnosis incentives: more options to prevent brittle bones and multiple fractures and imperative for treatment, Am Med News, April 1, 2002, from http://www.ama-assn.org/sci-pubs/amnews/pick\_02/ hlsb0401.htm.

Forster, D. P., and Frost, C. E. B. 1991. Use of regression analysis to explain the variation in prescribing rates and costs between family practitioner committees, Br J Gen Pract., 41:67–71.

Gönül, Füsun F., Carter, Franklin, Petrova, Elina, and Srinivasan, Kannan. 2001. Promotion of prescription drugs and its impact on physicians' choice behaviour, Journal of Marketing, Vol. 65, July, pg. 79-90.

Harris, C. M., Jarman, B., and Woodman, E. 1984. Prescribing: a suitable case for yreatment, London: Royal College of General Practitioners.

Malhotra, Naresh K. 2005. Marketing Research: An applied orientation, 4e, Pearson education, pg. 296.

Milgrom, Paul, and Roberts, J. 1982. Limit pricing and entry under incomplete information: an equilibrium analysis, Econometrica, 50, pg. 443-459.

Milgrom, Paul, and Roberts, J. 1986. Price and Advertising Signals of Product Quality, Journal of Political Economy, 94(4), pg. 796-821.

Moss, G. and Schuiling, I. 2001. A brand logic for pharma – a possible strategy based on FMCG experience, International Journal of Medical Marketing.

Nelson, Paul. 1974. Advertising as information, Journal of Political Economy, 24 July-August 1974, pg. 729-745.

Peltzman, S. 1987. By prescription only....or occasionally, Regulation, 11 (3/4), 23-8.

Per, Lagerløv, Mitchell, Loeb, Marit, Andrew, and Per, Hjortdahl. 2000. Improving doctors' prescribing behaviour through reflection on guidelines and prescription feedback: a randomized controlled study, *Qual. Health Care*, 9; 159-165.

Peterson, Robert A. 1994. A Meta-analysis of Cronbach's Coefficient Alpha, Journal of Consumer Research, Vol. 21, September 1994, pg. 381-391.

Pincus HA, Tanielian TL, Marcus SC, et al. 1998. Prescribing trends in psychotropic medications: primary care, psychiatry, and other medical specialties, JAMA. 279: 526-31.

Rosenthal MB, Berndt ER, Donohue JM, et al. 2002. Promotion of prescription drugs to consumers, N Engl. J Med, 346: 498-505.

Ryan, M., Yule, B., and Bond, C. 1990. Scottish general practitioners' attitudes and knowledge in respect of prescribing costs, BMJ, 300:1316–8.

Srivastava, R. K. 2003. Death Knelt to Ulta Marketing – Generic Market, The Economic Times, December 22, 2003.

Van Zandt, William. 1993. How much sampling is enough, Pharmaceutical Executive, Sept. 1993, pg. 92-96.

Van Zwanenberg, T. D., Grant, G. B., and Gregory, D. A. 1987. Can rational prescribing be assessed? J R Coll Gen Pract, 37:308–10.

Watkins, C., Harvey, I., Carthy, P., Moore, L., Robinson, E., and Brawn, R. 2003). Attitudes and behaviour of general practitioners and their prescribing costs: a national cross sectional survey, Qual. Saf. Health Care, 12, pg. 29-34.

Background Information	Ahmedabad	Baroda	Surat	Pune	Mumbai	Total
Qualification						
MBBS	65.0	65.0	65.0	70.0	75.0	67.7
MD	25.0	25.0	25.0	20.0	20.0	23.2
Other professional qualification	10.0	10.0	10.0	10.0	5.0	9.1
Year of Practice						
Up to 5 years	0.0	0.0	6.0	6.0	10.0	4.3
6-10 years	20.0	10.0	15.0	20.0	10.0	14.8
11-15 years	10.0	29.0	15.0	10.0	15.0	16.0
16-20 years	25.0	16.0	19.0	25.0	15.0	20.2
21-25 years	16.0	20.0	10.0	0.0	25.0	14.0
26 and above years	29.0	25.0	35.0	39.0	25.0	30.7
Average duration of practice (Years)	21.2	21.4	20.7	20.7	19.9	20.8
Monthly income						
>1,00,000/month	94.0	94.0	100.0	100.0	100.0	97.6
2,00,000-3,00,000/month	6.0	6.0	0.0	0.0	0.0	2.4
Total N =	50	50	50	50	50	250

## Table 1: Percent distribution of background information of doctors by cities

### Table 2: Percent distribution of mode of practice by cities

Mode of Practice	Ahmedabad	Baroda	Surat	Pune	Mumb	oai	Total	
Type of Practice								
Own clinic	94.0	100.0	100.0	100.0 100.0		0	98.8	
In a hospital setting	6.0	0.0	0.0	0.0	0.0 0.0		1.2	
Methods adopted while suggesting						•		
medicines for a specific disease								
Give patients dispensed drugs	6.0	6.0	6.0	6.0		6.0	5.9	
Only prescribe medicines to patients to purchase from local	16.0	6.0	10.0	16.0		10.0	) 11. 4	
Use combination of both	78.0	88.0	84.0	78.0		84.0	) 82. 7	
Total N =	50	50	50	5	0	50	250	

## Table 3: Reliability Analysis

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	Number of Items
.709	.696	26

### Table 4: Twenty five construct variables used for ANOVA

- V1: I prescribe fixed set of brands for specific disease
- V2: To use the drug on few patients and monitor
- V3: To seek information from published findings on the efficacy of new drug
- V4: Believe on medical representative briefs on the information about the new drug
- V5: When I take a history of my patients, I elicit their personal health beliefs about their illness
- V6: My normal practice is to seek regular information of updates about the promotional schemes and samples from the medical representatives
- **V7**: Frequency of visits by medical representative provide me the confidence on the authenticity and efficacy of specific medicine brand
- V8: Frequency of visits by medical representative helps me in deciding the preference set of brands of medicine for specific disease
- V9: When I receive written promotional material from drug companies, I read it thoroughly
- V10: I refer medical journals to update myself with the latest developments in my field
- V11: I read drug advertisements while reading medical journals
- V12: When I prescribe, I compare the costs of different medicine brands which have the same efficacy
- **V13**: When I am uncertain about an aspect of drug treatment, my first action, before I write prescription is to check the medical literatures
- V14: My decision on final choice of brands, is based on the regular visits from local retail pharmacists to request me for prescribing certain set of brands
- V15: I sometimes follow consultation from my known physicians in deciding the drug options for specific disease of my patients
- V16: I mostly prefer prescribing the medicine brands that are effectively promoted
- V17: I normally prescribe my patients the pre-determined set of medicine brands for specific disease
- V18: Gifts, samples, promotional schemes and frequent visits by medical representatives, helps me to decide my final choice of medicine brands for specific disease
- V19: I prescribe medicine brands of drug companies with which I am most comfortable
- **V20**: I feel that relationships with drug companies can be build based on the frequency of launch of promotional schemes, gifts, sample of new drugs and visits from company's medical representative
- V21: Relationship with local retail pharmacist also plays major role in deciding final set of medicine brands for specific disease for my patients
- V22: Make detail enquiry about the medicine brands from medical magazines
- V23: Make detail enquiry about the medicine brands from medical representative's brief
- V24: Make detail enquiry about the medicine brands from company promotional ads & materials
- V25: Make detail enquiry about the medicine brands from other medical practitioners

# Table 5: Twenty Seven construct variables used for Factor Analysis

Coding	Description
V1	How do you practice
V2	Methods adopt while suggesting medicines for a specific disease to
	your patients
V3: The process of consultation	I prescribe fixed set of brands for specific disease
V4: When a new drug become	To use the drug on few patients and monitor
available, what I do most commonly is	
V5	To seek information from published findings on the efficacy of new
	drug
V6	Believe on medical representative briefs on the information about
	the new drug
V7	When I take a history of my patients, I elicit their personal health
	beliefs about their illness
V8: Sources of information for	My normal practice is to seek regular information of updates about
prescribing medicines	the promotional schemes and samples from the medical
	representatives
V9	Frequency of visits by medical representative provide me the
	confidence on the authenticity and efficacy of specific medicine
	brand
V10	Frequency of visits by medical representative helps me in deciding
	the preference set of brands of medicine for specific disease
V11	When I receive written promotional material from drug companies, I
	read it thoroughly
V12	I refer medical journals to update myself with the latest
	developments in my field
V13	I read drug advertisements while reading medical journals
V14: Prescription behaviour	When I prescribe, I compare the costs of different medicine brands
	which have the same efficacy
V15	When I am uncertain about an aspect of drug treatment, my first
	action, before I write prescription is to check the medical literatures
V16	My decision on final choice of brands, is based on the regular visits
	from local retail pharmacists to request me for prescribing certain set
	of brands
V17	I sometimes follow consultation from my known physicians in
	deciding the drug options for specific disease of my patients
V18	I mostly prefer prescribing the medicine brands that are effectively
	promoted
V19: Cautiousness about fixed set of	I normally prescribe my patients the pre-determined set of medicine

medicinal brands	brands for specific disease
V20	Gifts, samples, promotional schemes and frequent visits by medical
	representatives, helps me to decide my final choice of medicine
	brands for specific disease
V21: Relationship with drug firms	I prescribe medicine brands of drug companies with which I am
and retail pharmacists	most comfortable
V22	I feel that relationships with drug companies can be build based on
	the frequency of launch of promotional schemes, gifts, sample of
	new drugs and visits from company's medical representative
V23	Relationship with local retail pharmacist also plays major role in
	deciding final set of medicine brands for specific disease for my
	patients
V24	Make detail enquiry about the medicine brands from medical
	magazines
V25	Make detail enquiry about the medicine brands from medical
	representative's brief
V26	Make detail enquiry about the medicine brands from company
	promotional ads & materials
V27	Make detail enquiry about the medicine brands from other medical
	practitioners

## Table 6: Factor Analysis - Total Variance Explained

	Initial Eigenvalues			Extr. S	Extr. Sums of Squared Loadings			Rot. Sums of Squared Loadings		
Component		% of	Cumulative		% of	Cumulative		% of	Cumulative	
	Total	Variance	%	Total	Variance	%	Total	Variance	%	
1	4.478	16.584	16.584	4.478	16.584	16.584	2.252	8.342	8.342	
2	2.543	9.417	26.001	2.543	9.417	26.001	1.964	7.273	15.614	
3	1.968	7.288	33.289	1.968	7.288	33.289	1.961	7.262	22.876	
4	1.819	6.735	40.024	1.819	6.735	40.024	1.960	7.259	30.135	
5	1.654	6.126	46.150	1.654	6.126	46.150	1.954	7.236	37.372	
6	1.488	5.510	51.661	1.488	5.510	51.661	1.830	6.776	44.148	
7	1.264	4.681	56.342	1.264	4.681	56.342	1.752	6.488	50.636	
8	1.221	4.522	60.864	1.221	4.522	60.864	1.717	6.361	56.996	
9	1.190	4.408	65.272	1.190	4.408	65.272	1.643	6.085	63.081	
10	1.036	3.839	69.111	1.036	3.839	69.111	1.628	6.030	69.111	
11	.933	3.456	72.566							
12	.801	2.967	75.533							
13	.788	2.918	78.451							
14	.695	2.575	81.027							
15	.629	2.331	83.358							
16	.617	2.284	85.642							
17	.562	2.081	87.723							
18	.532	1.972	89.695							
19	.461	1.708	91.403							
20	.448	1.659	93.062							
21	.421	1.560	94.622							
22	.316	1.169	95.791							
23	.279	1.032	96.822							
24	.255	.945	97.767							
25	.233	.862	98.629							
26	.198	.733	99.362							
27	.172	.638	100.000							

(Extraction Method: Principal Component Analysis)

	Component										
	1	2	3	4	5	6	7	8	9	10	
V1	.045	025	.074	048	.004	.036	071	818	.091	027	
V2	.201	024	467	278	153	188	164	.318	177	102	
V3	125	.006	.011	118	050	.797	024	071	.128	.055	
V4	.015	.273	.058	.765	.057	167	003	.130	017	133	
V5	.096	.749	.087	.060	.003	.001	.180	.196	059	038	
V6	.056	.203	.078	.711	.098	131	309	.094	.105	.117	
<b>V7</b>	.089	.765	025	.106	.061	.027	.008	102	.131	.041	
V8	.007	.010	.109	106	.666	.362	.081	.236	.084	030	
V9	118	.156	.614	.027	.356	099	.068	.445	.122	.174	
V10	.000	.148	039	.079	.847	146	.069	191	.091	.161	
V11	.273	111	.676	168	.104	141	.271	098	101	161	
V12	.219	.125	.757	.130	130	.050	148	035	.163	.050	
V13	.570	063	.180	.120	.357	241	074	129	.305	.028	
V14	.404	.353	.136	118	.125	126	.467	226	181	.206	
V15	.581	.327	.290	186	.056	004	078	118	.189	.128	
V16	.019	.031	.082	.195	.230	.020	.393	.093	.109	.604	
V17	.431	.186	.060	.047	.204	033	.528	225	.120	.055	
V18	.084	.295	.076	039	.106	.165	.082	175	.260	.638	
V19	.060	.042	.108	.134	.095	.204	.225	080	.690	045	
V20	065	.083	.031	107	.012	.132	.769	.310	.171	.139	
V21	.117	.061	.102	065	.126	.054	065	065	.694	.334	
V22	.387	.056	249	041	.200	.625	.295	.078	.141	.182	
V23	.339	161	.194	008	.443	.387	.151	.368	.019	.029	
V24	854	088	024	134	.154	088	107	107	.022	.056	
V25	.019	.021	102	.038	140	455	.135	.219	.472	422	
V26	020	345	109	040	106	.040	.007	.214	058	.552	
V27	.042	315	046	.732	165	.078	.159	201	.012	.078	

# Table 7: Factor Analysis - Rotated Component Matrix