CONFERENCE ARTICLE

EFFECT OF PATIENTS' ATTITUDE ON THEIR SATISFACTION AND SWITCHING INTENTION IN GENERIC MEDICINE INDUSTRY: AN EMPIRICAL ANALYSIS IN INDIA

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ABSTRACT

People are now more health-conscious to live safe and hazard-free lives in modern society. If people are affected by any disease, choosing doctor services and medicines involves many complex decisions. Generic drugs seem to be a significant and well-known source of competition for labelled drugs, but they can likewise be a major idea for lowering costs in the pharmaceutical industry. This might result in savings for either the government or the patients. Given this perspective, it is critical to understand a patient's preferences amongst both drug kinds (brand and generics) as well as to discover what are the attitudes of patients on those and whether this impacts the actual behaviour and purchases in future because of their satisfaction levels. In this context, this paper is an early effort to investigate patients' attitudes and their effect on their level of satisfaction and switching intention in the pharmaceutical industry (i.e., generic and brand choices).

Responses were collected from 537 patients residing in different cities of Odisha state of India by survey method and analysis. In line with the study's results, patient satisfaction and switching intentions were positively affected by their attitude. In addition to patient pleasure, introducing generic drugs creates competition, which is necessary for originator businesses to innovate. Because of their lower costs and the competition, they foster, generic medications contribute to constructing a more sustainable healthcare system.

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KEYWORDS

Effect of Patients' Attitude on their Satisfaction and Switching Intention in Generic Medicine Industry: An empirical analysis in India

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INTRODUCTION

The age-old adage that "Health is Wealth" holds true even today. Many of humankind's efforts seek ways and means to preserve and maintain our health. Even after centuries of understanding and paying importance to health and well-being, the worrying fact here is that we still haven't been able to design a mechanism by which we can provide primary health care facilities to everyone across the world irrespective of whether they belong to an underdeveloped, developing, or developed country. We are still unable to provide "Health" as a fundamental right [1].

The provision of health care is closely linked to the pharmaceutical industry and its development. The research and development functions of the pharmaceutical industry is the backbone of health care and it has silently provided solutions to many health-related problems that lead to the industry's sustainability [2]. The role of the pharma industry is to deliver these solutions to the public and make them accessible so that diseases and sufferings can be prevented, and the life span can be increased. This is where marketing plays a significant role. Any pharma company's marketing department aims to identify the consumer's needs and provide the relevant solutions [3]. Anticipating the help of Internet of Things (IoT) and the use of Artificial Intelligence (AI), the future needs of health care services and medications can be tracked easily and maintain a sustainable process [4], [5].

Data needs to be collected from the physician about the gap in any treatment which can be filled using a drug that is not available on the market, and this needs to be developed into a product. After the Research & Development team designs the product, this news needs to reach the consumers through a multi-pronged promotional strategy [6]. Assessing the technology in the health care sector is a difficult task to deal with but spreading the awareness and monitoring the efficiencies in several services of health care activities, say consultations, medicines, etc., needs the help of AI, the Internet of things, blockchain technology [7]. In the COVID-19 pandemic, while people were struggling badly to sustain their lives, the medical practitioners took the undue advantage of the people in the state of caring, helping, and treating the patients [8]. This is due to the lack of awareness amongst consumers [9].

Physicians need to be aware of the drug, and this can be done through active participation of medical representatives. This simultaneously needs to be followed up with introducing the drug into the company's distribution system through wholesalers, retailers, etc. Once the drug is prescribed and used by patients and is found to be effective, it leads to a demand for a drug.

Numerous studies have been conducted on the healthcare industry in India. The current research focusses on the generic medicine industry to determine their attitude towards the patient satisfaction analysis of India.

This study focused on this situation and this present paper aims to:

- study the effect of different purchasing decision factors on patients' attitudes towards the final purchase of Indian generic medicines.
- investigate the effect of patients' attitudes on their overall satisfaction level and switching intention.

LITERATURE REVIEW

The affordability of pharmaceuticals is among the most worrying aspects of rising medical prices [10]. Several of the critical purposes of marketing a generic medicine is to provide considerable monetary benefits to sick people due to higher prescription prices. India has among the largest expenditures for medicines [11, 12], such generic pharmaceuticals may conserve a substantial quantity of wealth, which may be utilised to treat various medical challenges. Considering economic benefits, there seems to be considerable disagreement between patients and doctors regarding the use of generic medications concerning therapeutic results or security aspects [13]. Result to which, it is critical to understand how much individuals believe and what satisfies them towards the generic drugs.

Generic medicines experienced an international 8.7% compound annual growth in the last five years, in an industry controlled by numerous businesses such as Sun Pharmaceutical, Dr. Reddy, Novartis, and Teva, representing a market share according to the Global Generic Drugs Market (2020) [14]. Assessing customer attitudes and desire to buy medical drug items [15, 16] is critical for businesses [17] because this is meant for establishing national healthcare policies and measures [18].

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The medical recommendations, previous experiences, product qualities, and perceived quality can all impact one's decision to purchase generic medications [12]. Value propositions might influence attitude and satisfaction. In this light, we may infer that comprehending the user's experience in acquiring generic pharmaceuticals in terms of attitude and satisfaction has shown to be difficult in the research [19].

This is defined by Shikiar and Rentz [20] as the "patient's opinion of the drug accepting procedure as well as the drug's consequences." Medicine compliance is influenced by the satisfaction of the patients with the drug. Patients' compliance might suffer unless individuals feel dissatisfied with given prescriptions [21].

In the context of this research, researchers characterize the satisfaction of patients as "patient values derived from patient satisfaction with certain aspects of generic pharmaceutical therapy, including as side effects, efficacy, and administration difficulty." [22, p2] Because the level of satisfaction of the patients would be a subcategory of therapeutic satisfaction [23], a regularly used generic assessment of drug satisfaction, the Treatment Satisfaction Questionnaire for Medicine (TQSM) [24], may be considered in this research to evaluate patient satisfaction with generic drug. The TSQM addresses four elements of user care with their treatment: overall satisfaction, convenience, side effects, and efficacy. As per the new study, TSQM seems to be the only model that is employed in both disease-specific and generic situations [23, 25]. Therefore, the present research used the TSQM approach to measure the satisfaction of patients with generic medicine in a growing economy such as India.

Based on past literature reviewed, empirical research was undertaken in relation to the hypotheses established for this study. The study was conducted to test how far quality, efficacy, effectiveness, convenience, perceived risk, and side-effects of generic medicines significantly influence the patient's attitude towards generic medicine. Also examined was to what degree the patient's satisfaction and attitude toward generic medicine influence substantially their intention to switch from branded drugs to generic medicine. Lastly, this study tests how patients' attitude towards generic medicine significantly influences their satisfaction with it.

RESEARCH METHODS AND DESIGN

The design of the current research study is purely survey-based and descriptive. In total, there were 537 numbers of patients whose responses were recorded after data validation out of 725 surveys which were collected through convenience and proliferation (Snowballsnow-ball) technique by visiting various medicine stores (Jan Ausadhi Medical Stores) situated in different major cities of Odisha state, India and through two social networks - LinkedInLinkedin and Facebook.

As this is social science research, about attitude and perceptions, the need of ethical clearance for this paper is waived by the Ethical Committee of Kalinga Institute of Industrial Technology, India and hence the research was continued.

The collection of primary data was done through a ready-made questionnaire referred to as Malhotra & Bricks [26] form that required to be coded to be analysed. All the responses were measured on a five-point Likert scale. The structural equation modelling method was adopted to test all formulated hypotheses through Amos-17. Some details of the factors extracted from the factor analysis: Factor analysis extracted various variables by using SPSS software like quality, efficacy, perceived risk, attitude, Switching intention, Effectiveness, Side effects, Convenience, and Overall satisfaction.

RESULTS AND DISCUSSION

Reliability analysis, using Cronbach's alpha (a), was conducted to estimate the study variables' reliability.

The reliability coefficient (Cronbach's alpha) values for the nine dimensions were computed (Table 1) to be higher than the minimum recommended value of 0.70, which is generally considered to be the criterion for demonstrating the internal consistency of the scales. Verifying construct validity entails "assessing both discriminant and convergent validity" (27 [p 259]).

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TABLE 1: CRONBACH'S ALPHA (A) SCORES OF RELIABILITY ANALYSIS

Study Variable	Alpha (a)	Study Variable	Alpha (a)	Study Variable	Alpha (a)	Study Variable	Alpha (a)
Quality	0.954	Efficacy	0.918	Perceived risk	0.931	Attitude	0.867
Study Variable	Alpha (a)	Study Variable	Alpha (a)	Study Variable	Alpha (a)	Study Variable	Alpha (a)
Switching intention	0.881	Effectiveness	0.786	Side effects	0.765	Convenience	0.832
Study Variable	Alpha (a) Score						
Overall Satisfaction	0.801						

TABLE 2: SCORES OF CONSTRUCT VALIDITY ANALYSIS

Study Variables	Discriminant validity	Convergent Validity	ASV	MSV	AVE	CR
Quality	*	*	0.302	0.329	0.703	0.902
Efficacy	*	*	0.308	0.311	0.857	0.963
Perceived risk	*	*	0.329	0.317	0.673	0.869
Attitude	*	*	0.301	0.306	0.719	0.911
Switching intention	*	*	0.358	0.432	0.833	0.956
Effectiveness	*	*	0.327	0.325	0.601	0.894
Side-effect	*	*	0.353	0.314	0.546	0.801
Convenience	*	*	0.311	0.338	0.712	0.927
Overall satisfaction	*	*	0.324	0.313	0.575	0.910

* Yes, it exists.

Table 2 displays the result of "maximum shared variance (MSV), average variance explained (AVE), and average shared variance (ASV), composite reliability (CR)," (28, p 235) which will be referred to test the construct's convergent and discriminant validity. To achieve "convergent validity: CR > 0.7, CR > AVE, and AVE > 0.5 (28, p 237)," the following criterion must be met. CR estimates for all constructs were found to be more than 0.7. Similarly, the projected AVE value for each construct exceeded the cut-off value of 0.5. Furthermore, each individual construct's CR value is greater than its associated AVE value, and it clearly depicts that the instrument that is considered is validating with an existing set of instruments that specifies quality, efficacy, convenience, and side effects. Likewise, in this analysis, ASV and MSV scores for each concept were calculated and shown to be meaningful for validating the constructs' discriminant validity, meaning the new measures do not relate to selected measures. Structural equation modelling (SEM) was performed to test the connection among the constructs namely, quality, efficacy, manufacturing process, attitude, switching intention, effectiveness, side-effects, convenience, and overall satisfaction. Path coefficient in SEM signifies an association between the theoretical constructs. These arrows represent the causal relationship existing in the model. Statistically, these arrows represent the regression coefficients (Figure 1).

The standardised regression weights in terms of the beta coefficient of constructs are represented in Table 3

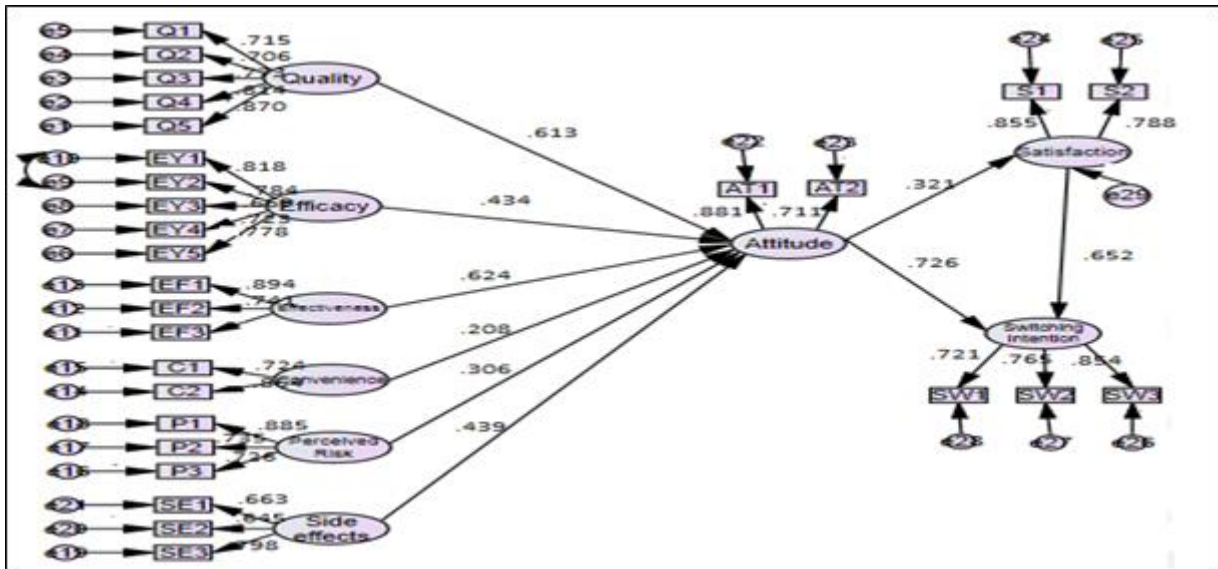Effect of Patients' Attitude on their Satisfaction and Switching Intention in Generic Medicine Industry: An empirical analysis in India 4

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FIGURE 1: SEM (PATH DIAGRAM)

TABLE 3: SCORES OF STANDARDIZED REGRESSION WEIGHTS (HYPOTHESES TEST RESULTS)

Hypothesis	Path	P-Value	t-Statistics	Estimate	Remark
H1	Quality ⟶ Attitude	0.001	8.643	0.613	*
H2	Efficacy ⟶ Attitude	0.001	7.614	0.434	*
H3	Effectiveness ⟶ Attitude	0.001	3.342	0.624	*
H4	Convenience ⟶ Attitude	0.072	1.643	0.208	**
H5	Perceived risk ⟶ Attitude	0.116	0.775	0.306	**
H6	Side-effects ⟶ Attitude	0.001	11.341	0.439	*
H7	Attitude ⟶ Satisfaction	0.001	6.213	0.321	*
H8	Attitude ⟶ Switching intention	0.001	5.003	0.726	*
H9	Satisfaction ⟶ Switching intention	0.001	4.342	0.652	*
R^2 Attitude=0.63; R^2 Satisfaction=0.43; R^2 Switching intention=0.47					
* Supported, ** Not Supported					

As the computed value of p is less than the significant alpha value of 0.05, H1, H2 and H3 are accepted, and it was concluded that product quality, efficacy, effectiveness, and side effects had a significant influence on attitude towards generic drugs.

Convenience and perceived risk are not significantly related to attitude toward generic drugs as the computed p-value is higher than the significant alpha value of 0.05 for this it can be said that patients accept that generic drugs also have a similar response to the branded medicines as the generic drugs are manufactured with utmost good quality and work exactly the same like the branded drugs with similar or no significant side effects. Similarly, it is also

observed that patients' attitude toward generic drugs is positively related to overall satisfaction and switching intention from branded to generic drugs statistically, as the p-value is less than 0.05.

Finally, overall patient satisfaction with generic drugs and switching intention from branded to generic drugs are also significantly related as the computed p-value of less than 0.05. Thus, it can be inferred from the above analysis that the entire hypotheses ranging from H1 to H9 are accepted except for H4 and H5, meaning patients also have a reverse attitude towards the risk and how far it is convenient to consume the generic drugs.

TABLE 4: SEM FIT SUMMARY

Indices	Recommended value	Model Value
Absolute Fit Measures		
χ2		2204.051
Df		932
(χ2/df)	<3	2.366
GFI	> 0.9	0.904
AGFI	> 0.90	0.901
NFI	> 0.90	0.923
CFI	> 0.90	0.913
IFI	> 0.90	0.910
RMSEA	< 0.08	0.057

The confirmation of the model as to whether it is fitting well or not, the SEM model provides a summary, meaning the aggregate indications revealed that the model was well-fitting since the values obtained of the goodness fit index, and comparative fit index, normal fit index were all more than the cut-off value of 0.9. (Table 4). The root mean square of error approximation was less than 0.1, indicating that the measurements are robust because all the indicators fulfilled their respective thresholds.

CONCLUSION

Doctors and pharmaceutical corporations must be aware of the attitude and satisfaction of patients with both types of the same formulary drugs. Within the framework of the generic drug, the construction of such a reliable and valid TSQM model for India and other emerging nations can act as a significant instrument for pharma businesses in boosting the satisfaction of patients, even also in maintaining the organization's ultimate sustainability. The present research offers persuasive support in favour of the TSQMs as a model for understanding the patient satisfaction and attitudes towards generic pharmaceutical companies in India, especially in Odisha. Furthermore, the study findings demonstrated a positive relationship between efficacy, the satisfaction of patients, and simplicity in using generic medicine.

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