



Dissertation

Factors impacting the choice of generic vs. branded drugs among physicians in India

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#### DECLARATION BY STUDENT

I hereby declare that this dissertation titled “Factors impacting the choice of generic vs branded drugs among physicians in India” is the Bonafide record of my original research work. I declare that it has not been submitted to any other university or institution for the award of any degree or diploma. Information derived from the published or unpublished work of others has been duly acknowledged in the text.

MANSI GUPTA

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## **Abstract**

Generic drugs are the drugs that sold off the label which have same value as its branded counterparts and are less expensive. Drugs are important constituents of the healthcare system. With the global rise of non communicable diseases the access to affordable care holds utmost importance . medical care in event of illness depends on the availability of the affordable and quality medicines. According to national health accounts estimates of India 2017-18 report out of total health expenditure incurred , 33 percent incurs by the pharmaceutical products. India spends a major chunk of income out of pocket for pharmaceutical products. Utilizing generic medications instead of branded ones has the potential to lower out-of-pocket costs.. in India generic medicine use is not universally accepted due to mistrust in the effectiveness and quality of generic medicine by the Physicians, this study aims to map out the factors which affect the trust of physicians regarding the generic medicine. The study has tried to capture the beliefs and knowledge of the Physicians towards the generic medicine prescription practices along with the analysis of the factors which is important..in this study questions about preferences for generic and branded medicine, awareness related to pricing difference of generic medicine and questions about prescription practices has been asked. The study aims to gauze the factors that are important in determining the prescription practices of the physicians.

## 1.INTRODUCTION

Drugs supplied off-label as generics are equally effective and less expensive than their branded versions. Pharmaceutical businesses have access to global patent rights that allow them the sole authority to create a new drug for a predetermined amount of time which could continue for years after its development. There is just following the expiration of the patent on generic formulations authorized to be sold in accordance with the most recent drug laws of production.

Generic medications play a significant role in since they are more affordable and resemble the original medication in terms of the contents, dosage, and dose the bioequivalence of shape. They are perfect replicas of the original medications and share all of the same characteristics with them, including intended usage, effects and side effects, mode of administration, dangers, safety, and strength. Since doctors frequently refer to original medications by their brand names, even when less expensive bioequivalent generic substitutes are available, these medications are frequently recommended. Drugs have a significant role in the healthcare system. Access to inexpensive care is of vital importance given the rise of non-communicable diseases around the world. When giving medications to patients, doctors can choose between brand-name and generic medications. Since branded and generic medications are rarely compared in patient populations, it is crucial to understand how healthcare professionals view the variations between the two classes of medications. The cost of healthcare is increasing daily. According to the website Statista, branded medications account for 44% of all healthcare costs in India.

When compared to their branded counterparts, the usage of generic medications has the potential to significantly lower out-of-pocket drug costs for individuals with chronic illnesses. Generic substitution isn't generally practised in India, though. This is caused by a number of things, such as the lack of generic formulations, doctors' mistrust of generic medications due to their perceived lower quality, and drug fraud. However, institutional settings, where medications can be purchased in bulk and administered from the institutional inventory with suitable quality control methods, are still implementing the generic prescribing strategy. This study tries to

identify the elements that influence doctors' faith in generic medications.. The study has tried to capture the beliefs and knowledge of the Physicians towards the generic medicine prescription practices along with the analysis of the factors which is important..in this study questions about preferences for generic and branded medicine, awareness related to pricing difference of generic medicine and questions about prescription practices has been asked. The study aims to gauge the factors that are important in determining the prescription practices of the physicians.

## **2.Review of Literature**

Most of the literature have revealed about the perception of both the physicians and patients regarding generic medicine prescription. Most of the physicians doubt about the efficacy of generic medicine as not much studies have been conducted in order to prove the efficacy of generic medicine as much as its branded counter part. “A comparative evaluation of price and quality of some branded versus branded-generic medicines of the same manufacturer in India”. Year 2017 by GL Singal, Arun Nanda, Anita Kotwani lays emphasis on the necessity to change the medicine pricing policy, control markups in the generic supply chain, conduct and widely disseminate generic quality testing for stakeholders' knowledge. Similarly in the study “ comparative effectiveness of branded vs generic versions of antihypertensive , lipid-lowering and

hypoglycemic substances” by Yuxi Tian ( year 2011) did a research on the rate of hypoglycemic treatment termination at six months that predicted the rate for generic medicine higher than the branded one. This clearly , demonstrate the difference in efficacy between the generic medicine and branded medicine. In the article “ choice of better medicine in India: branded vs generic medicine year 2017” by Vrsha Galani ( year 2017) talks about the obstacles to the use of generic pharmaceuticals that Indian market is facing , the study addresses the need of pharmaceuticals companies to invest in the equipments and approved procedures to meet the quality standards. This would eventually raise the price of generic medicines. In the study “opinions Opinion of patients seeking primary care regarding prescription of generic drugs: A cross-sectional study year 2015” by Jaykaran charan , highlights the level of awareness about the generic drugs among physicians and patients of the primary care. The young age and primary and secondry education levels were significantly associated with the awareness regarding generics. In the study “Generic versus branded medicines: An observational study among patients with chronic diseases attending a public hospital outpatient department year 2013” , highlights the the policy implemented by the government of west Bengal which promoted drug efficacy ,safety and adherence of the generic drugs . “Perceptions of the quality of generic medicines: implications for trust in public services within the local health system in Tumkur, India year 2016” stresses the negative perception about the generic drugs and suggested the generic pharmaceutical need to promote the generic medicine among the physicians and the patients.

### **3.Research question**

1.What is the attitude and beliefs of physicians regarding branded vs generic prescription in India?

### **4.Objectives**

1.To examine the beliefs and attitude of health-care providers in a tertiary-care hospital toward generic and branded drugs.

## **5. Methodology**

### **5.1 Study design**

This is a descriptive study.

### **5.2 Sample size**

69

### **5.3 Nature of respondents**

For this study the respondents were practicing doctors (MBBS/BDS/BAMS/PG)

### **5.4 Sampling technique**

Convenient sampling

### **5.5. Methods of data collection**

The questionnaire contains questions to examine, beliefs and attitudes, knowledge about the generic and branded medicine use.

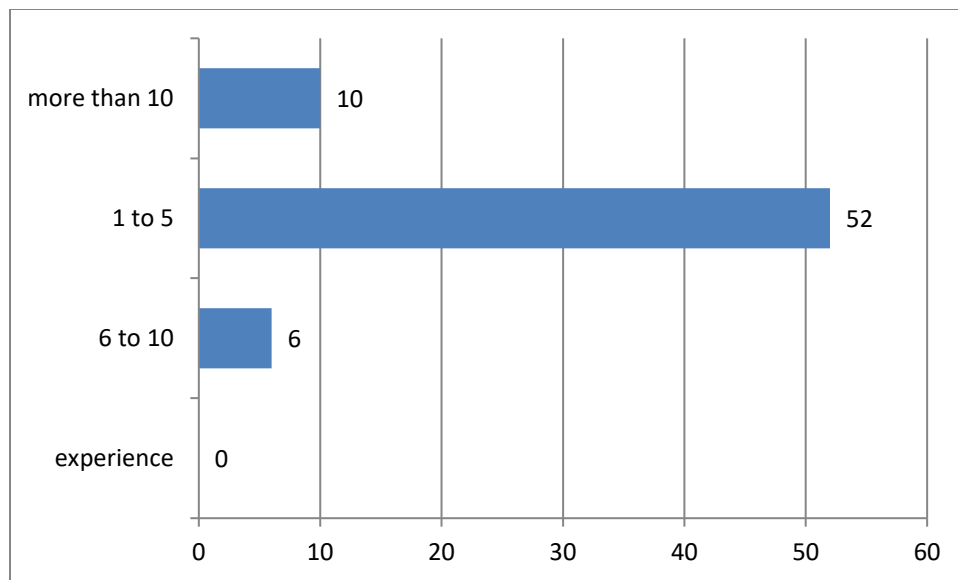
### **5.6 Statistical Analysis**

The data was entered into the Microsoft Excel and descriptive statistics was applied to evaluate the socio-demographic characteristics, educational qualifications and to measure knowledge, attitude, and perceptions of the physicians.

### **5.7 Ethical Considerations**

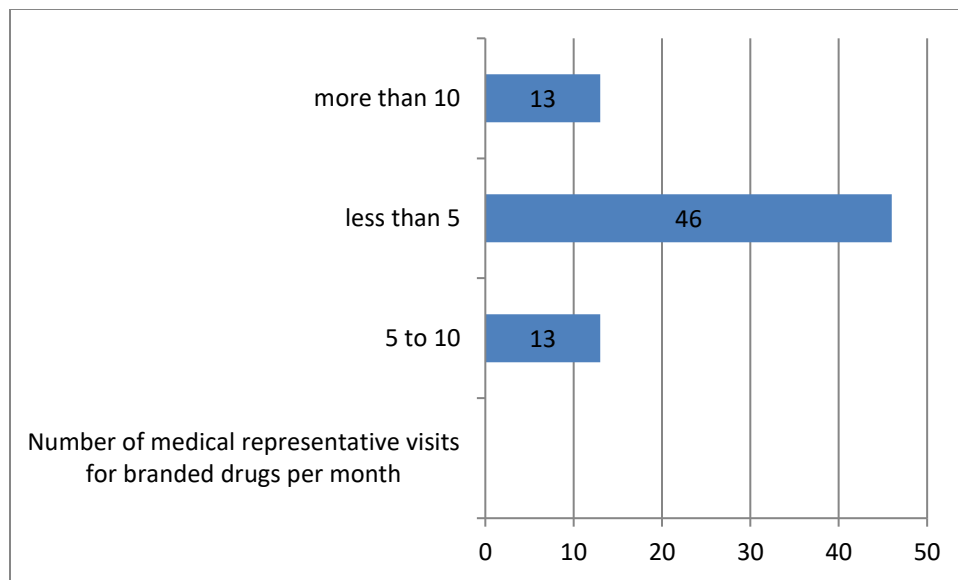
The study was carried out with proper permissions and ethical clearance from the respective authorities. All the key information of the patients would be de identified

## **6. Results:**



**Figure 1-number of medical representatives visits for generic drugs per month by number**

Fig 1 nstates about 26 respondents claimed that the number of medical representatives visited are less than 5 , 10 respondents claimed it to be between 5 to 10 and 9 claimed more than 9.this is the major factor which is important in the promoting the generic medicine as the physician would prefer to promote the medicine in which they would get commission.

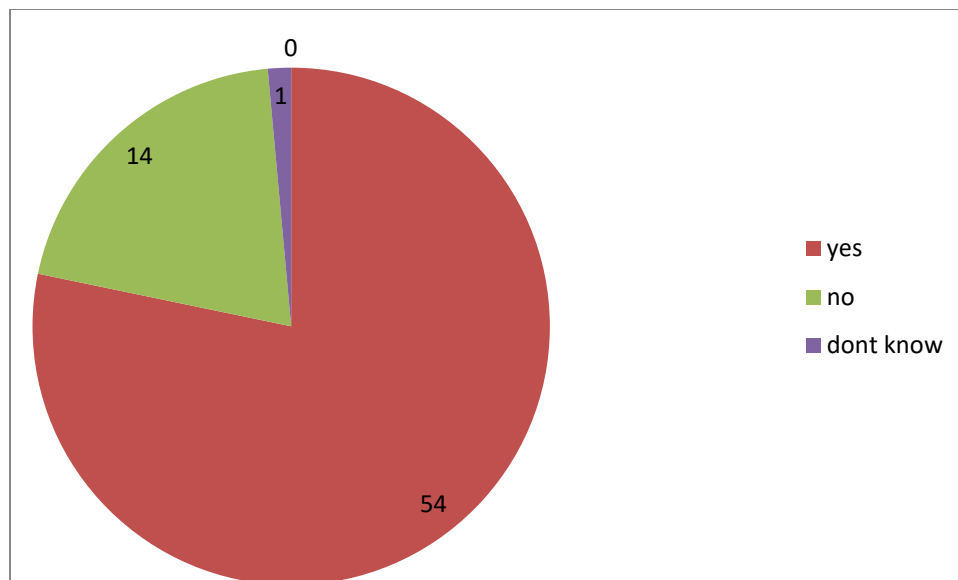


**Figure 2** Number of medical representatives visits for branded drugs per month

Fig 2 says that 45 people claimed the number of medical representatives to be less than 5, 12 claimed to be between 5 to 10 and other 12 claimed it to be more than 10. Number of branded medicine representatives are more as compare to the generic medicine are more .

From the fig 1 and 2 it can be interpreted that the number of medical representatives were more in case of branded as compared to the generic ones.

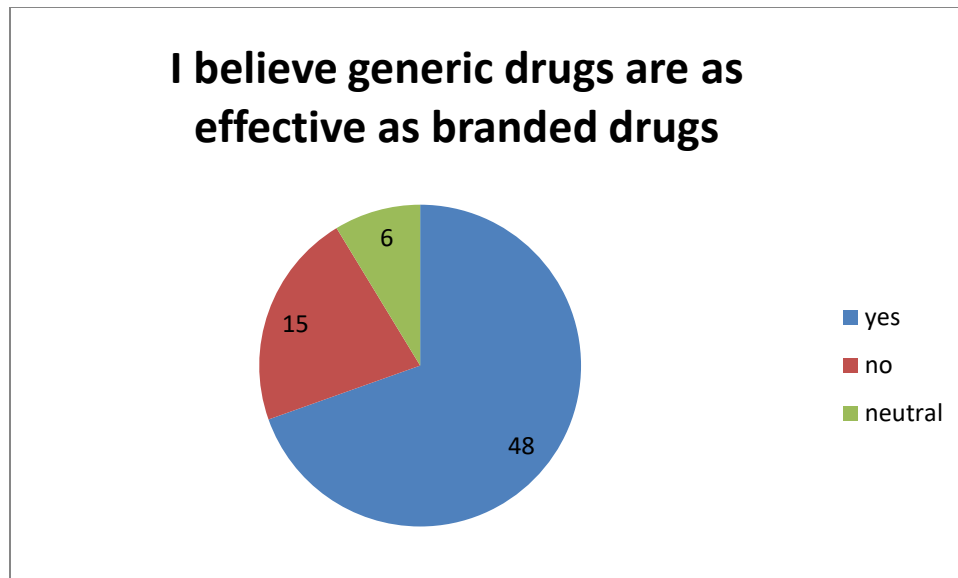
N=69



**Figure 3** Responses for the statement "The generic medicine are less expensive than the branded medicine."

Fig 3 states that 54 physicians out of total agreed that generic medicine is less costly than the branded one. This highlights that the physician have awareness about the pricing of generic medicine and branded medicine.

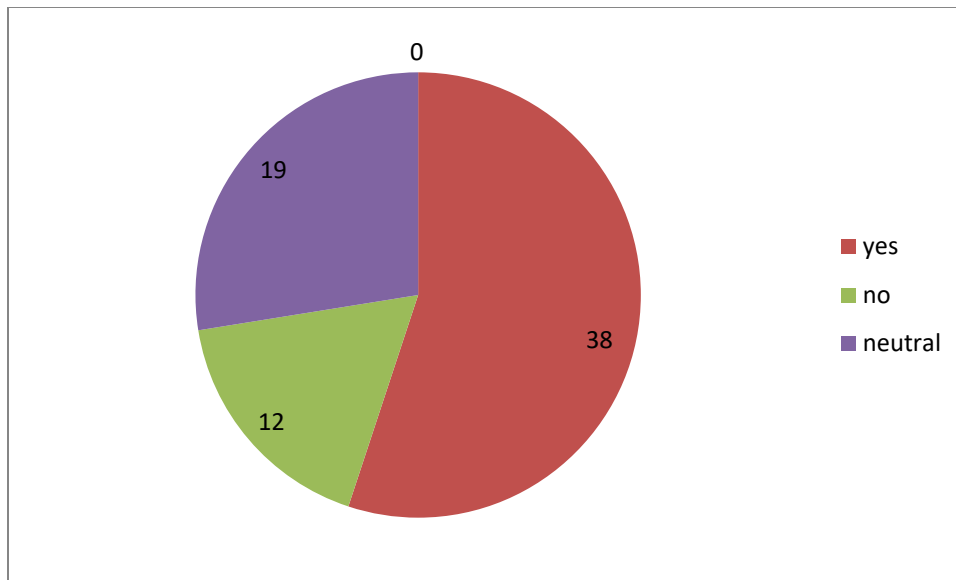
N=69



**Figure 4** Responses for the statement ‘I believe generic medicines are as effective as branded drugs’

Fig 4 states that people agreed that generic medicines are as effective as the branded one whereas 15 physicians disagreed with the statement. Most of the physician showed positive response towards the generic medicine.

N=69



**Figure 5** Responses for the Statement “there are only few ocal companies are as reputable generic drug companies”

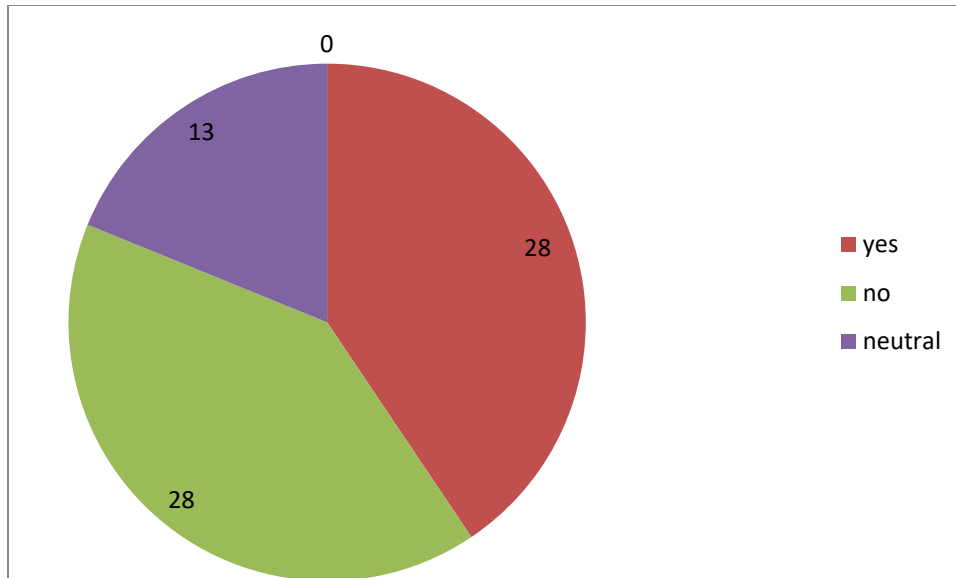
7

Fig 5 states that out of total number of respondents, 38 people agreed with the statement “there are only few reputable companies that manufacture generic drugs”. 19 physicians were neutral with the view and 12 people disagreed with the statement. This highlights that generic medicine companies needs to invest in the marketing so as to encourage physicians to prefer generic medicine.

Responses for the Statement “ I believe generic drugs are of lower quality when compared to the original drugs”.

Fig 1.7

N= 69

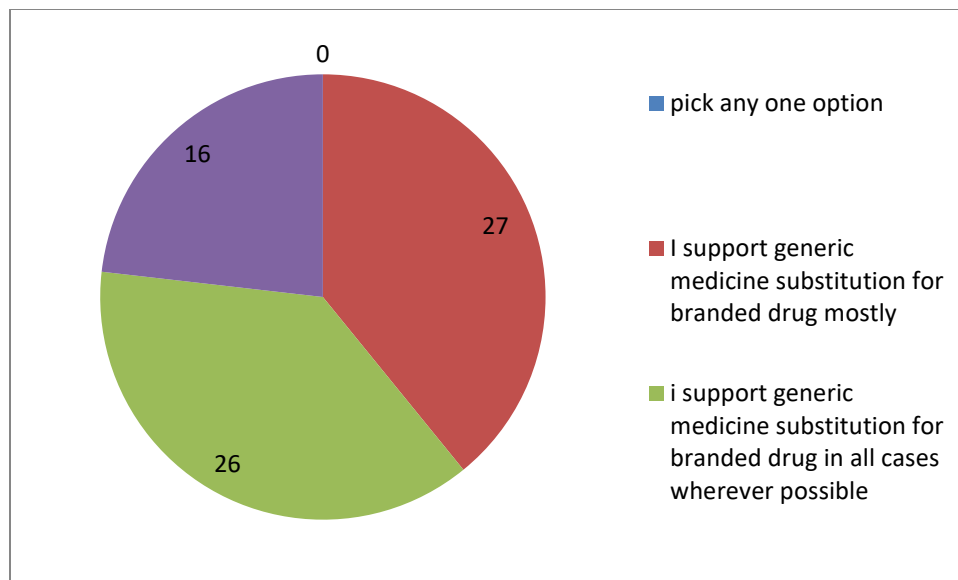


**Figure 6** Responses for the Statement “ I believe generic drugs are of lower quality when compared with the original drugs”.

Fig 6 states that 28 physicians believed that generic drugs were of low quality when compare with the branded counterparts, 13 people were neutral to the view point and 28 people disagreed with the idea.

Fig 1.8

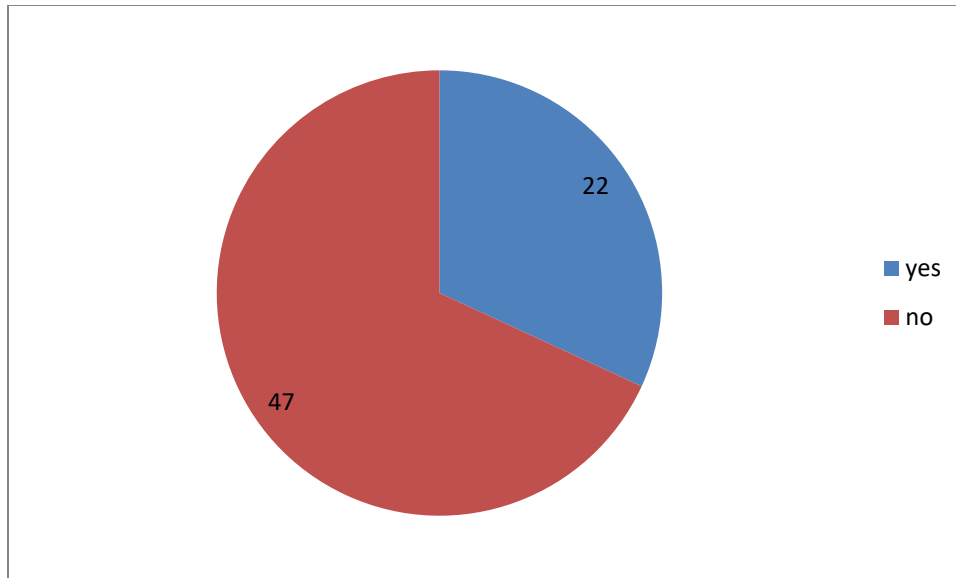
N=69



**Figure 7**

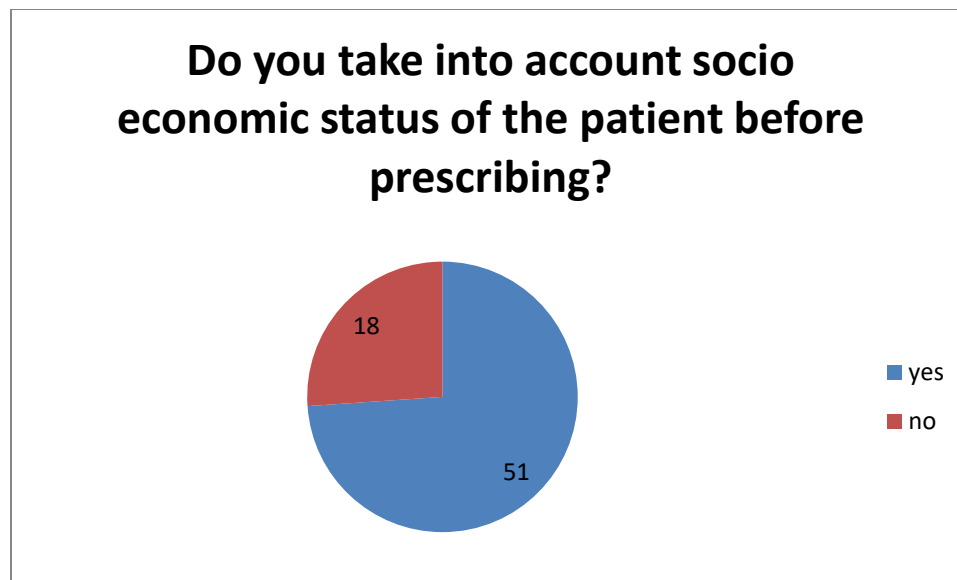
Fig 7 states that 27 agreed that they support generic medicine substitution in the most of the cases and 26 people support the generic medicine substitution in all the cases whereas 16 people do not support generic medicine substitution.

N=69



**Figure 8** Responses for the Statement “Are you aware of any literature where original and generic drugs showed efficacy”?

Fig 8 states that 22 people agreed to the statement “ Are you aware of any literature where original and generic drugs showed efficacy” Whereas 47 people do not have any exposure to the literature research proving about the efficacy of generic drugs. This shows the need of taking research studies which could provide the evidence of efficacy of generic drugs . generic medicine companies should invest in undertaking research studies to eliminate the negative beliefs of generic drugs among physicians.



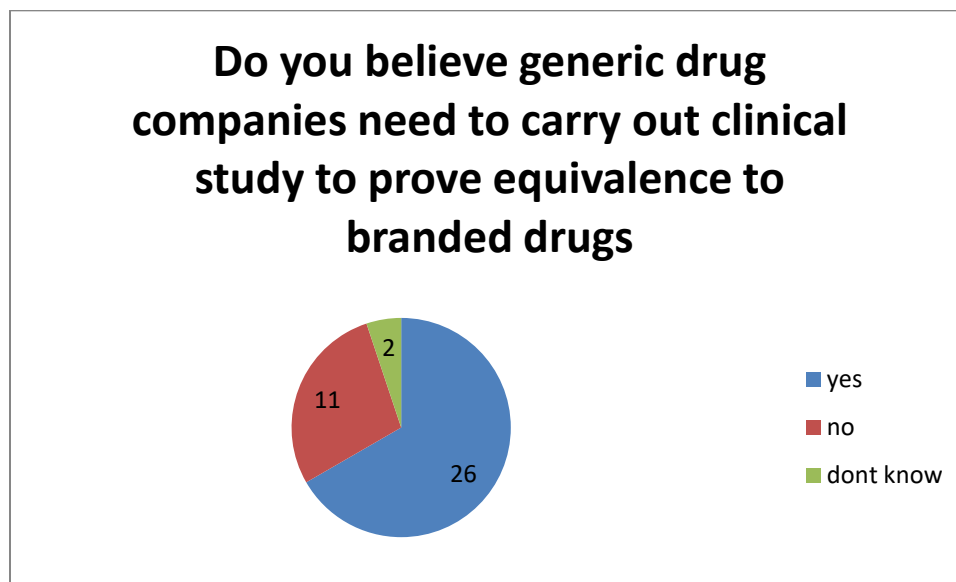
**Figure 9** Responses for the Statement “ Do you take into account socio-economic status of the patient before prescribing”?

Fig 9 says that 51 Physicians ask for socio economic status of the physician before prescribing the medicine most of the physicians take into account the socio-economic status which highlights that physicians are aware of the importance of affordable medicine in healthcare.

.

**Responses for the people who disagreed with the statement “ Are you aware about the literature that talks about difference of efficacy of generic and branded drugs”**

N= 39



**Figure 10 Responses for the Statement “ do you believe generic drug companies need to carry out clinical study to prove equivalence to branded drugs**

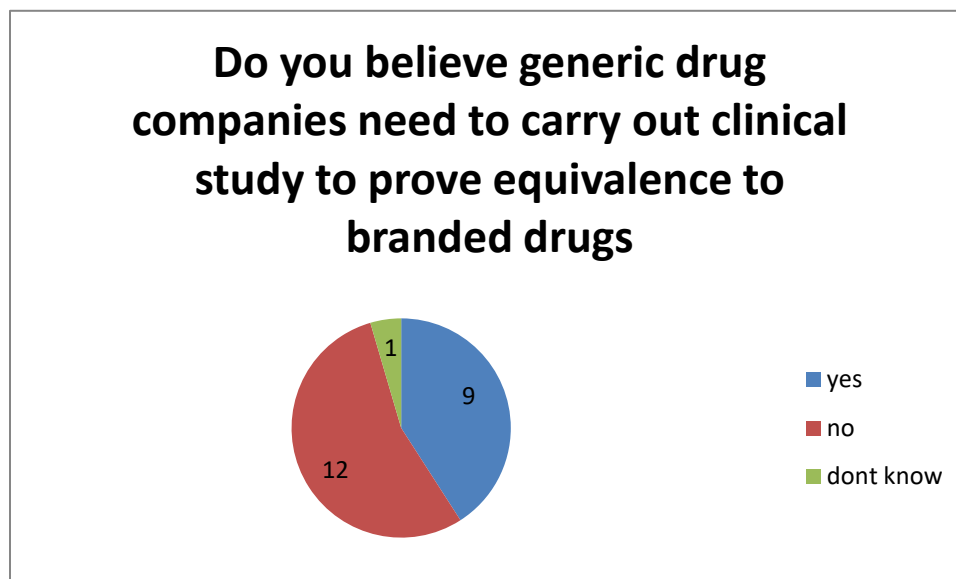
Fig 10 states that out of total physicians who disagreed with the statement“ Are you aware about the literature that talks about difference of efficacy of generic and branded drugs” , 26 believed that generic medicine companies needs to carry out clinical study to prove equivalence to branded drugs. This clearly states the need of undertaking research by the generic medicine

companies which could prove the efficacy of the generic medicine as majority of the respondents who were not aware of the literature stressed upon the this need.

**Responses for the people who agreed with the statement “ Are you aware about the literature that talks about difference of efficacy of generic and branded drugs”**

Fig 1.13

N=22

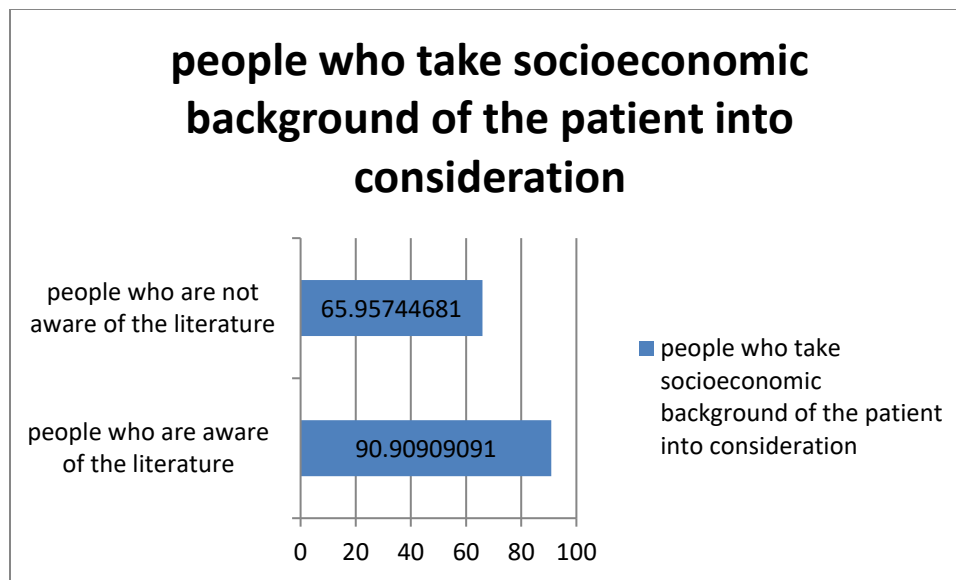


**Figure 11 Responses for the people who agreed with the statement “ Are you aware about the literature that talks about difference of efficacy of generic and branded drugs”**

Fig 11 states that out people who have the previous exposure to literature, 9 believed that the generic companies need to carry out clinical study to prove equivalence to branded counterparts .from from the above two figures it can be interpreted the need of undertaking literature as the mistrust for the generic medicine in case of physicians who are nit aware of the generic medicine is more as compare to physicians who are aware of the literature research that talks about efficacy.

Fig 1.16

N=51



**Figure 12** Responses of the physicians who take socio-economic background of the patient into consideration

Fig 12 : from this chart it can be drawn that out of physicians who have knowledge about the literature which talks about the efficacy of generic drugs , 90 percent physicians take into account the socio-economic background of the patient prior to prescribing whereas for the physicians who are not aware of any literature that talks about the efficacy of the generic drug only 65 percent takes in account the consideration the socio-economic background of the patient. This clearly states how important factor is the efficacy factor for physician when it comes to prescribing the drug for the patient, in the previous graph we have seen that the physicians point of view for efficacy of generic drugs improves as the number of medical representatives visited increased and how this efficacy factor effects the physicians action to take into account the patients socio-economic condition.

## 7. Discussion

The questionnaire was filled by 69 physicians out of 100 . Majority of these questionnaire is filled by physicians having 1 to 5 years of experience. Over 48 physicians agreed that yes generic drugs are as effective as branded drugs while 28 physicians doubted the quality of generic medicines as compare to the branded ones, from the data we can see that the number of medical representatives visited ( more then 10) are fewer in number for generic drugs as compare to the branded one. with the increase in the knowledge of literature that speaks about generic drug efficacy physicians seems to show positive attitudes towards the generic drug efficacy and tend to consider the patients' socio economic condition of the patient before prescribing the medicine, thus literature plays an important part in making physician aware about the generic medicine use and combating the negative belief system against the generic drug use. Physician tends to show a little trust on the generic medicine efficacy as only 27 physicians out of 69 physicians supported generic medicine use over branded medicine which clearly states the need for generating awareness regarding the efficacy of the generic drug. Also, a majority of the physicians believed that the the generic medicines manufacturing companies need to prove its clinical significance yet. There are less number of physicians who are aware about the literature , which states the gap that exists between the knowledge and believe system. Therefore, it is very important that physicians are introduced to the material that could provide the evidence for generic drugs to be as much as safe as branded drugs either through the number of medical representatives or any other means. As the number of medical representatives rose, physicians belief system tends to change with respect to the generic drugs.

## 8. Conclusion

The study aims to highlight the importance of medical representatives that are means of making physicians aware about the generic medicine use. Study also stresses the need to conduct more clinical research which could prove the effectiveness of the generic drugs against branded ones. From the data we can see that acceptance towards the generic drugs was more for the physicians who have the awareness related to literature that speaks about the effectiveness of the generic drugs which states the importance of literature as a scientific evidence in changing the belief system of the generic drugs.

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