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A comparative analysis of Pharmaceuticals product utilizations by Rural and Urban peoples in Kamrup district, Assam, India

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ABSTRACT

Response to different drugs and its consumptions is an important issue now a days. There were varieties of drugs available in market with variable functions. Advance technology, consumer satisfactions, cost were some of the important factors which were directly correlated with selling of drugs. Effective treatment and its availability were some issue which compared its utilizations by rural and urban areas. Anti-diabetic drugs were mostly consumed whereas Neuropsychiatry drugs were least consumed in urban area. Rural areas shows more consumptions of anti-diabetic drugs but interestingly gastrointestinal and analgesics drugs were also reported same percentage of consumptions in rural areas. In individual cases, both vitamins and analgesics drugs were consumed by rural areas. 66% antibiotics drugs were consumed, out of which penicillin records itself as 67% consumptions in rural areas. 88% of penicillin among antibiotics was recorded in urban areas while vitamins contribute 86% to selling of drugs. There were different periodical demands in pharmaceutical drugs which also vary among areas. Anti-diabetics, vitamins, minerals and nutrients were most demands in rural areas. On the other hand pain, vitamins, minerals and drugs were recorded selling in urban areas. There were no significant differences ($p=0.084$) in availability and consumptions of different drugs in both rural and urban areas.

Key words: Technology, Consumer, Neuropsychiatry, penicillin, drugs.

INTRODUCTION

Advance technology leads to tremendous progress in Pharmaceutical industry in India. Infrastructure development, technology based creations and wide range of productions has helped to sustain in today competitive world. A different scenario is developed from earlier to

present pharmaceuticals products with lots of modifications. Products ranges from simple headache pills to various antibiotics have wide range of uses based on requirements. Some of the real added value of global pharmaceuticals company for business strategy was the ability to organize, coordinate and finance of various parts of drug development [1]. Discovery of drugs and its development is a process that can deliver a single drug for corporate success in a short to medium period of time. However, it was predicted that under this conditions normal principles of diversified portfolio produce predictable returns doesnot apply to this industry [2]. Top Indian pharmaceutical companies already taught of their presence like Ranbaxy. DRL, Cipla and Dabur. The main top blockbuster pharmaceutical companies by sales for 2001 together with total sales of drugs globally exceeds \$US 1 billion [3, 4]. It was also reported that success with small number of drugs directly or indirectly determines the fate of largest pharmaceutical companies [5, 6]. A new concept QSV i.e Quality, Speed and Value began in early 1990, with the main idea to improve speed to market, leveraging existing products, establishing a global presence. The first team to focus on sales, marketing and distributions of blockbuster in 1995 was one of the osteoporosis drugs Evista and other was Zyprexa, antipsychotic drugs [7]. Another advantage is in Sales and Marketing depends upon area. Scales per representatives typically increases with the company sizes [8]. In same report, it was discussed that most of the larger companies gains little from R&D expenditures economies of scale when R&D expenditure reaches \$1000m [8]. Interestingly, marketing absorbs more revenues than R&D sector and it has found that its efficiency has more impact on company value. The marketing and sales capability accounts for 42% of the variations in financial performances, a survey report suggests by US Pharmaceutical companies [9, 10].

MATERIALS AND METHODS

The main idea of this present research is to compare the different pharmaceutical drugs consumed by peoples in different localities of Kamrup district, Assam. The samples include randomly selected peoples and pharmacy situated in both urban and rural areas. The universe of study was to collect data randomly from 85 pharmacies which include 45 and 40 from rural and urban area respectively collected in between January 2011 to October 2011. On other hand we personally take data from 150 individuals which consist of 85 and 65 peoples from urban and rural areas. All the data was statically analyzed and stratified sampling random sample method was used to analyze.

RESULTS AND DISCUSSION

Indian pharmaceutical industry has improved much in recent years due to marketing, strategy management, communications etc. Many people were exposed to various kinds of diseases due to different factors. There were different demands of pharmaceutical products based on their necessity. It has been finding from our report that many of the pharmaceutical products were mostly used by urban peoples. 15.8% of Anti-infective drugs were mostly used in highest quantity by urban peoples comparatively 12.8% by rural ones. Gastrointestinal problems were found to be more in rural areas than urban. Different factors were involved in consumptions of drugs by individuals such as physical, social and environmental. Different signs and symptoms at various stages were also one major issue which differs in consumptions of costly

pharmaceuticals drugs. Largest selling of pharmaceutical drugs was Anti-diabetics, 29 % of drugs was sold in urban areas whereas 27% was reported in rural areas.

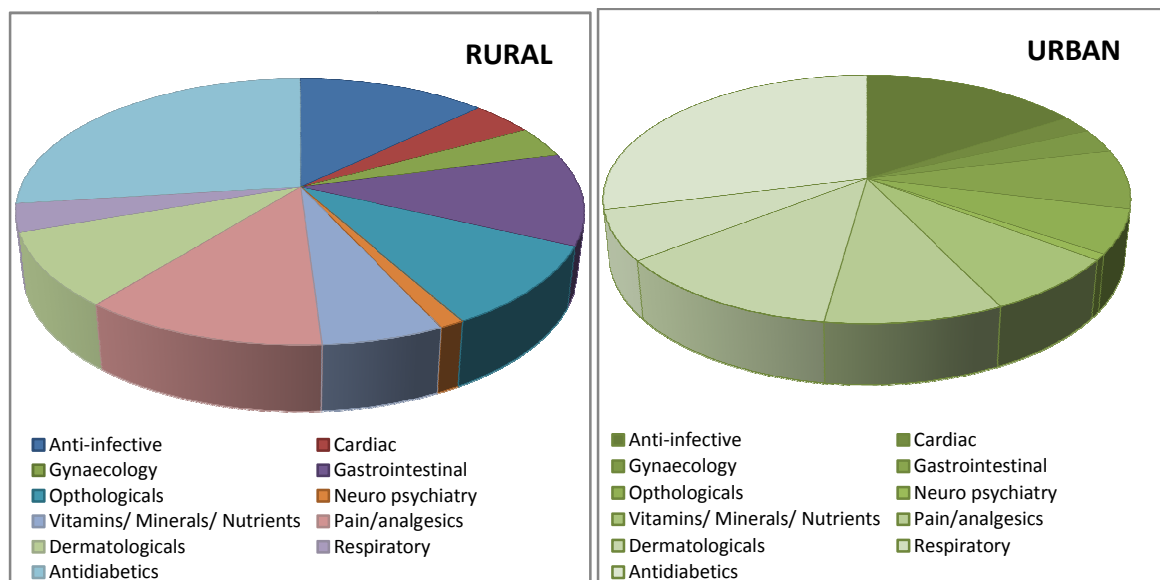


Fig 1: Comparative analysis of different pharmaceuticals products consumed by rural and urban peoples.

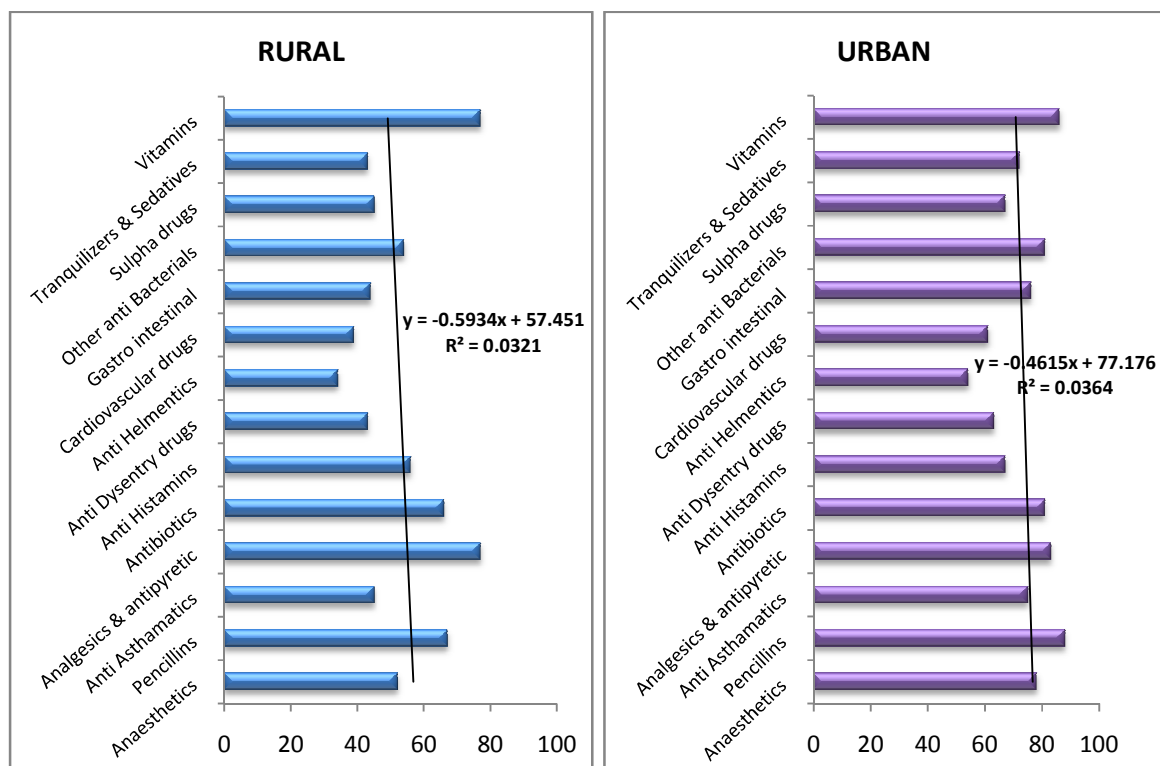


Fig 2: Percentage of different pharmaceuticals drugs sells on rural and urban areas.

However the least consumed drugs were Neuropsychiatry drugs both rural and urban peoples consumed about 1.2% and 0.8% respectively. Regarding pain or analgesic drugs urban areas records 9.4% whereas interestingly rural areas shows more selling of same drugs. Vitamins and minerals were also observed to consume as supplementary diets by peoples suffering from illness. Price of drugs is another factor which cannot be over viewed as many rural areas were below poverty line. Its consumptions and availability were other factors which were considered during our study.

Different drugs show variable in actions and consumptions by the peoples. The most consumed drugs by the urban peoples were penicillin about 88 % than next was vitamins. Interestingly, in case of rural peoples it was vitamins, analgesics and antipyretics drugs consumed at highest percentages (77%). However lower consumptions was recorded by anti-helmentics drugs (34%) in rural areas whereas in urban areas the lowest positions was recorded by cardiovascular drugs (61%) in urban areas. Interestingly, if we carefully observed than we found that all the pharmaceuticals drugs were shows more than 50% consumptions in urban areas. However, below 50% was recorded by anti asthmatics, anti helminthes, anti dysentery, cardiovascular, gastrointestinal, sulpha, Tranquilizers and Sedatives drugs in rural areas. There is difference in consumptions which may be due to more populations, pollutions, stress etc. in urban areas.

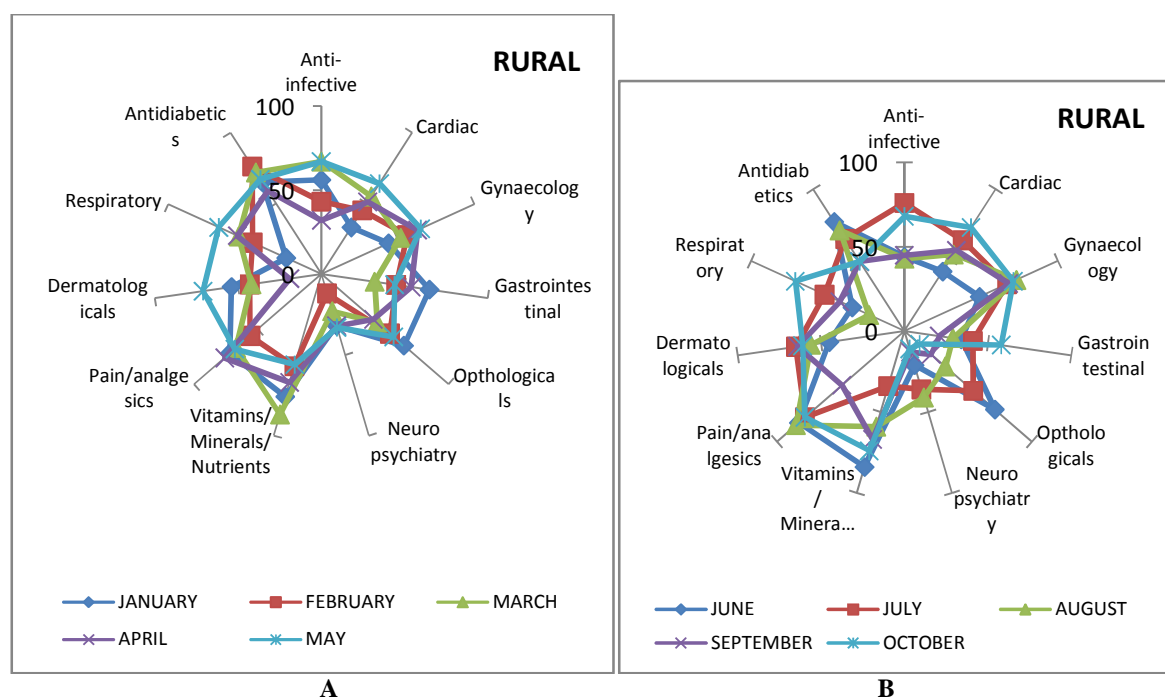


Fig 3: Percentage of selling of different pharmaceutical drugs in rural area. A- Selling from Jan'11-May'11. B- Selling from June'11-Oct'11.

Another fact is the selling and consumptions of different drugs in different periods. In rural areas the highest sells of pharmaceutical products were vitamins, minerals and nutrients in the month of January and September. The same drugs again show highest percentages of selling in rural areas on the month of March. However, on the month of February and April another drugs i.e antidiabetics drugs shows more selling in rural areas. Pain and analgesic drugs were mostly consumed on the month of June, July, August and October. Comparatively, urban areas also

show variable results regarding pharmaceuticals drugs in different periods. January and September recorded largest sells on antidiabetic drugs in urban areas. Vitamins, minerals and nutrients were mostly consumed in the month of March, April and May. Pain analgesics and dermatologists drugs were more consumed by urban peoples on the month of June. The main reason for consumptions of variety drugs depends upon its demand. There were lots of factors involved in it like consumer satisfactions, supply of particular drugs, level of diseases, cost effectiveness etc.

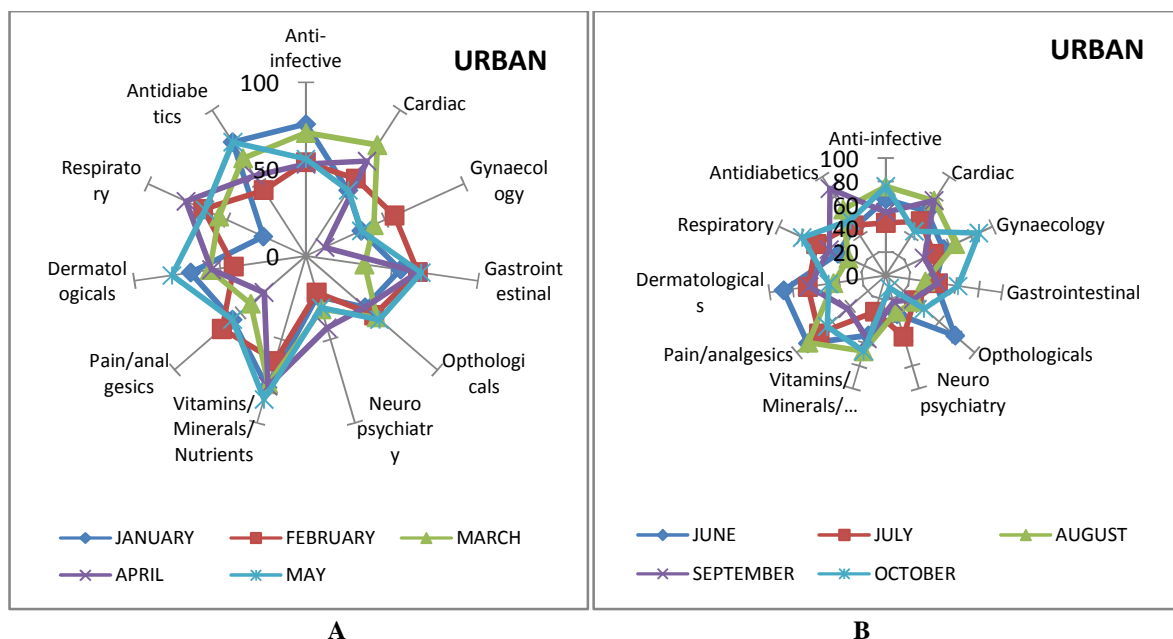


Fig 4: Percentage of selling of different pharmaceutical drugs in urban area. A- Selling from Jan'11-May'11. B- Selling from June'11-Oct'11.

Different Pharmaceuticals Company shows different selling of pharmaceuticals drugs. Company likes Zydus cadila, Lupin, Sun, and Novartis shows good selling in rural and urban areas. However others companies have also shows much productions in different drugs in these areas. Interestingly, when we compare rural with urban areas we found that there were little differences in consumption of drugs. There were no significant differences ($p=0.084$) was found on selling of pharmaceuticals drugs on both urban and rural areas. So, we more or less can consider that both urban and rural areas have sufficient drug supplier distributors. Selling and consumptions of pharmaceuticals drugs mainly depends on its availability, patient satisfactions, its costs etc.

Thus this report confirms that there were different in selling and consumptions of pharmaceuticals drugs on rural and urban areas. The demand and supply of drugs in different regions is also a crucial issue. Price of the drugs is another factor for rural areas which must be considered. Rural peoples have lots of demands in variety of drugs depends upon social, economical and environmental factors.

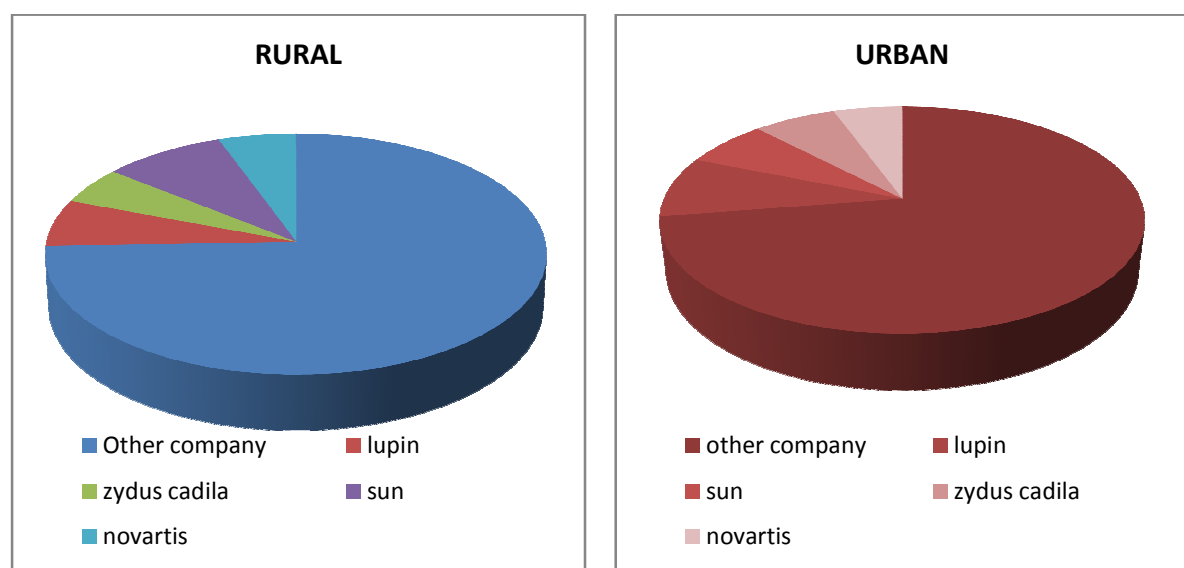


Fig 5: Selling of different Pharmaceutical products in both rural and urban areas.

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