**An Economic Impact of Janaushadhi on the General Public: A Study in Belthangady Taluk**

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**Abstract:**

The Indian public health sector encompasses 18% of total outpatient care and 44% of total inpatient care.Middle and upper class individuals living in India tend to use public healthcare less than those with a lower standard of living. The public health care system was originally developed in order to provide a means to healthcare access regardless of socioeconomic status or caste.In this regard an attempt is made to study the economic impact of Jan Aushadhi Scheme launched by the central government in order to avail health care services to the needy population by offering medicines in a much subsidised rates. The current study is confined to Maladi village of Belthangady taluk of Dakshina Kannada District. The study is based on both primary and secondary data.

**Key words:** PMBJP (Pradhan Mantri Bhartiya Janaushadhi Pariyojana), CAGR (Compound Annual Growth Rate), Pharmaceutical, US Food and Drug Administration (USFDA).

**Introduction**

Increased health-care costs are still a serious worry around the world, particularly in emerging and poor nations where the bulk of the population cannot afford them, and India is no different. We are all aware that India is the developing country with the biggest percentage of young people. Due to the availability of high-priced branded medications on the market, individual medical expenses are discovered to be very high. People from the middle class and lower social classes are most impacted by the pricey branded drugs.

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Therefore, the Pradhan Mantri Bhartiya Janaushadhi Pariyojana (PMBJP) programme was developed to overthrow this administration. This programme strives to offer affordable, high-quality medications to the general populace. Numerous Jan Aushadhi medical outlets will be established across the nation to supply generic medications that are comparable to branded medications in terms of quality and chemical composition in order to make this programme successful. All types of medications will be cheaper at these Jan Aushadhi drug outlets.

The Janaushadhi scheme was introduced by the Indian government in November 2008 and is run by the Department of Pharmaceuticals, Ministry of Chemicals, and Ministry of Fertilisers. At the Amritsar Civil Hospital, the first Jan Aushadhi Shop debuted on November 25, 2008. In order to give the programme more momentum, it was once more renamed as the "Pradhan Mantri Bhartiya Janaushadhi Pariyojana" in November 2016. With the establishment of Janaushadhi medical outlets across the nation, this programme aims to offer high-quality generic medications at a lower cost, especially to the nation's impoverished and weaker citizens. The Janaushadhi Kendra is another name for these Janaushadhi pharmacies.

* 1. **Review of Literature:**

R.K. Srivastava and Sanjiwani J. K. (2014) in their article "Understanding of consumer's awareness about brands in the pharmaceutical industry: An empirical study," claimed that the results of the study will aid the industry in promoting the medication for the condition in which it must be taken. The outcomes also assist the pharmaceutical sector in strengthening its position and promoting better health.

Kanchan Mukherjee (2017), ‘A Cost Analysis of the Jan Aushadhi Scheme in India’ revealed that the janaushadhi price is among the lowest on the market for medications like atorvastatin and alprazolam. The study strongly advises the Indian government to review the pricing policy of the janaushadhi medicines.

Shamiya et al. (2017) research publication "Knowledge, Attitude, and Practises towards Jan Aushadhi Scheme," reveals that some physicians are still unconvinced of the effectiveness and promptness of the Jan Aushadhi medications. The majority of doctors rarely recommend generic medications. The majority of doctors rarely inform their patients about the Janaushadhi scheme.

Deshpande P.R. et al. (2018) in their research paper "Functioning and Productivity of Jan Aushadhi Stores in India: The Owners' Perspective" demonstrates that janaushadhi medications are the most affordable and high-quality medicines among all the brands that are currently accessible. The patients will greatly benefit from these two factors. It also discusses some of the negative aspects of Jan Aushadhi Medicals, such as the limited selection of pharmaceuticals offered, the lack of knowledge about the drugs, etc. These are the main problems with Jan Aushadhi Medicals.

Charan et al. (2019) In their study titled "Patients Opinion on the Use of Generics and Factors Associated with it: A Cross Sectional Study," discovered that patients' age and educational attainment were positively correlated with their degree of knowledge on Jan Aushadhi medications.

Nagarajappa and Srinivasan (2019) in their article "Modelling Customers' Buying Behaviour of Jan Aushadhi (Generic Medicines)" that when choosing a generic medication, consumers gave careful consideration to the following factors: product quality, price, doctor-provided education, and ease of use of the Jan Aushadhi medical stores.

Solomon and Sundar (2019), In their study "Impact of Brand Awareness and Customer Satisfaction towards Services of Jan Aushadhi Medical Stores" discovered that the authors discovered that accessibility, tangibility, reliability, and responsiveness are the four key elements that have the greatest impact on customers' satisfaction with the services rendered by Jan Aushadhi medical store employees. Additionally, they claimed that the consumers are being badly impacted by the staff's actions.

Ashwini and Nivedita Sanil (2020) in their research article "A Study on Jan Aushadhi Shops of Udupi District," the majority of people are aware of janaushadhi stores, and people of all income levels favour them.

Koshi and Panicker (2020) in their research article “A study on satisfaction level of Jan Aushadhi stores” reveals that, most of 40 to 50 age group people benefitted from the janaushadhi. Middle class families dominate the purchasing of Janaushadhi products comparatively others. Friends and relatives are sources for the gets information regarding Janaushadhi stores.

Pawar et al. (2021) In their article "Paralleling the quality and economy of levofloxacin hemihydrate and cefuroxime axetil tablets," found no discernible difference between the efficacy and quality of generic medications sold in Jan Aushadhi medical stores and those sold under other brand names.

Manjula Bai H (2021) in her research study titled "A Study on Customer Awareness towards Pradhan Mantri Bharatiya Jnanaushadi Kendra's with Reference to Shimoga" showed that more individuals are becoming aware of Jan Aushadhi schemes and visiting these stores to purchase medications. The percentage is moving more and more in favour of PMBJP.

R. Rajasekaran et al. (2021) in their study, 'A study on customer awareness towards Pradhan Mantri Bharatiya Janaushadhi Kendra's with reference to Tirupur district' discovered that the majority of customers were satisfied with the Jan Aushadhi store and demographic variables such as age group, gender, and occupation had less of an impact on customer satisfaction.

Gauthaman J (2022) in his research article "A cost analysis and availability scenario of drugs and oral care products prescribed for common oral conditions with reference to the current Indian market prices, Jan Aushadhi, and the state medical commissions" revealed that oral care is a crucial component of the healthcare system. Only six medications and one oral care item were offered in Jan Aushadhi medical outlets in this regard. People are forced to purchase them at retail pricing from private sectors due to a lack of availability.

* 1. **Objectives**

1. To study the general knowledge of people about Jan Aushadhi Medical Outlets.
2. To study the people’s awareness on Jan Aushadhi medical scheme.
3. To study the satisfaction level of customers towards quality, price, availability, accessibility, acceptability, affordability of medicines supplied through Jan Aushadhi medical scheme.
4. To offer policy suggestions to strengthen Jan Aushadhi medical scheme.
   1. **Methodology**

The present study is conducted in Belthangady taluk of Dakshina Kannada district. This study has relied on both the primary and secondary data for its analysis. Secondary data’s were collected through published and unpublished sources such as books, journals, newspaper, periodicals, government report, and articles in reputed journal and so on. Primary data’s were collected from the field investigation with employing structured and pre-tested interview schedules to the public. Keeping the scope, objective, time and financial burden in mind, about 50 respondents have been selected and collected the information. The data’s have been analysed with the help of using simple statistical tools like, average, percentage and so forth.

**1.5. Pharmaceutical Industry**

The generic drugs and inexpensive vaccinations produced by the Indian pharmaceutical industry are well-known internationally. Indian Pharma has evolved over the years into a thriving industry and currently ranks third in pharmaceutical manufacturing by volume. The Indian pharmaceutical industry has expanded steadily during the past nine years at a CAGR of 9.43%. The pharmaceutical industry has continuously generated trade surpluses. Pharmaceutical exports totalled 180555 crore (USD 24.35 Bn) during 2020–21, while pharmaceutical imports totalled 49436 crore (USD 6.66 Bn), resulting in a trade surplus of USD 17.68 Bn. The total amount of pharmaceutical exports up to the end of September 2021 was 87864 crore (USD 11.88 Bn), compared to total imports of 33636 crore (USD 4.66 Bn), creating a trade surplus of 54228 crore (USD 7.22 Bn).

The pharmaceutical sector in India is also quite important internationally. Outside of the USA, India has the most pharmaceutical manufacturing facilities that are in compliance with the US Food and Drug Administration (USFDA). 500 manufacturers of active pharmaceutical ingredients (API) make up around 8% of the worldwide API market. India manufactures 60000 different generic brands over 60 therapeutic categories, making approximately 20% of the world's supply of generic medications. One of medicine's biggest success stories is India's ability to provide accessible, cheap HIV treatment. One of the world's largest suppliers of inexpensive vaccines is India. Indian pharmaceuticals are widely favoured due to their low cost and great quality, earning the nation the title of "pharmacy of the world" with justification. In the fiscal year 2015–16, pharmaceutical companies produced pharmaceuticals worth 3.03 lakh crore, which rose to 3.98 lakh crore in 2018–19 and 4.27 lakh crore in 2020–21. Based on an estimate of the output's trend growth rate (CAGR), which was 9.77% from 2013–14 to 2019–20.

**1.6. Pradhan Mantri Bhartiya Janaushadhi Pariyojana (PMBJP)** Despite being one of the top suppliers of generic drugs globally, the majority of Indians do not have adequate access to inexpensive medications. Despite having comparable therapeutic benefits, branded generic medications are much more expensive than their unbranded generic counterparts. The Department of Health and Human Services (Department) introduced the Pradhan Mantri Bhartiya Janaushadhi Pariyojana (PMBJP) in 2008 with the goal of making high-quality generic medications accessible to everyone at reasonable prices, particularly for the underprivileged and impoverished.

PMBJP's implementing body is the Pharmaceuticals & Medical Devices Bureau of India (PMBI). As part of this programme, special pharmacies known as Pradhan Mantri Bhartiya Janaushadhi Kendras (PMBJK) are set up across the nation to offer generic medications to the general public. On November 25, 2008, the first Jan Aushadhi Kendra in Amritsar, Punjab, was inaugurated. As a distinct independent legal entity, the bureau was registered as a society independent under the Societies Registration Act of 1860 in April 2010. Only 80 outlets were open as of March 31, 2014, since the plan failed to gain traction.

The expansion of "Jan Aushadhi Kendras" was suggested in 2015 by the Committee of Secretaries, which the Hon'ble Prime Minister had appointed to discuss health-related concerns. As a result, a franchisee-like business model was devised, and a comprehensive media campaign was launched in national and local publications encouraging individual business owners to apply for setting up and managing PMBJP Kendra. In response, all applications were carefully examined, and those who qualified received help opening Kendras by receiving a drug licence and other necessary infrastructure. The door was opened for private involvement in both the purchase and sale of medications.

The target of opening 3000 Kendras was reached in December 2017. Additionally, in March 2020, the new target of 6,000 outlets total was reached. As of December 31, 2021, 8640 JanaushadhiKendras were open for business. 240 pieces of surgical equipment and 1451 medications are offered by the PMBJP. The Pariyojana's product basket will contain 75 Ayurvedic medications, which are AYUSH goods that the PMBJP has selected to include. The PMBI has developed an electronic tender for the acquisition of the same. With the primary objective of establishing a focused and empowered framework to carry out the Jan Aushadhi Campaign, the Department formed the Pharmaceuticals & Medical Devices Bureau of India (PMBI), formerly known as the Bureau of Pharma Public Sector Undertakings of India (BPPI), on December 1st, 2008. PMBJP reported sales of 433.61 crore (at MRP) for the fiscal year 2019–20. As a result, the country's common citizens have saved about 2500 crore because these medications are 50% to 90% less expensive than the going market rate. Sales of 665.83 crore were made in the financial year 2020–21, which allowed people to save around 4000 crore compared to purchasing branded medications. From January 1, 2021, through December 31, 2021, PMBI generated sales of 652.67 crore rupees, resulting in savings for the public of over 3,800 crore rupees[[1]](#footnote-1). As on 31.12.2021, 8640 PMBJP Kendras are functional across the country.

**1.7. Research Results, Discussion & Interpretation**

The goal of the current study is to assess research findings and analyse and interpret field survey data that was collected through scheduled, organised interviews in the study area. For the primary level survey, 50 sample respondents were randomly selected from Maladi village in Belthangady taluk of Dakshina Kannada district.

**1.7.1. General Information of Respondents**

A field study was conducted in the month of June 2023, with a total of 50 respondents chosen at random. About 88% of the respondents were married, while the remaining 12% were unmarried, indicating that a large number of married people use Jan Aushadhi medicines. Age-wise dividing is useful in the study, as it shows which age group people are the most beneficiaries of the scheme. It demonstrates that the working population of the study area is the study's primary focus. Without a question, education is important in everyone's life and aids in overall development. One of the most effective instruments for development is education. The majority of respondents, according to the field inquiry, had at least a primary and secondary education, and the percentage of respondents with a university or undergraduate degree was, respectively, roughly 14% and 8%. A person's occupation can even be considered a vital component of their existence. About 34% of the total respondents who were interviewed relied on self-employment, with another 26% and 12% working as labourers in various sectors and cultivators in their own fields, respectively. A family's annual income demonstrates how much they spend on daily expenses. People in rural areas make very little money each year. They do both to survive and spend money very deliberately. About 86% of the total respondents who were questioned had annual earnings of less than $1,000,000; the remaining 14% was dispersed between $1 lakh and $5 lakh throughout the research region. It demonstrates that middle class individuals today generally favour Jan Aushadhi medications.

**1.7.2 Awareness of the Scheme and sources of information**

Jan Aushadhi left in 2008, but after 2015, it became popular. People today must and should take Jan Aushadhi medications and be aware of this scheme. The field study provides proof that every respondent was aware of the Jan Aushadhi Scheme, which is now operating in their area. In India, the PMBJP has more than 8,500 medical outlets. A minimum of one in every taluk. People learned about the Janaushadhi plan from a variety of sources. Table-01 contains information on the PMBJP awareness raising methods.

**Table-01: the way of knowing about PMBJP**

|  |  |  |
| --- | --- | --- |
| Source of Awareness | Frequency | Percentage |
| Hoardings and Poster | 3 | 6.0 |
| Word of Mouth | 6 | 12.0 |
| Observation | 21 | 42.0 |
| News and Media | 2 | 4.0 |
| Doctors’ advice | 5 | 10.0 |
| Hoardings and Poster & Observation | 2 | 4.0 |
| Word of mouth & Observation | 6 | 12.0 |
| Word of mouth & Observation & News and Media | 1 | 2.0 |
| Observation and News and Media | 3 | 6.0 |
| Hoardings, Word of mouth, Observation & Doctors Advice | 1 | 2.0 |
| **Total** | **50** | **100.0** |
| Source: Primary Data collected in the month of July 2023 | | |

According to data in table 01, 42 percent of those surveyed learned about the programme through observation, and word-of-mouth advertising was another effective method. In the research region, other sources like billboards, posters, news, and media have also played a significant role in raising awareness of the PMBJP.

**1.7.3 Usage status Jan Aushadhi medicines**

These days, India has a rather substantial usage of Jan Aushadhi medications. It is due to the affordable availability of medications. A preliminary investigation suggests that 39 out of 50 responders utilise Jan Aushadhi medications in some capacity. The remaining 11 responders in the research area did not use any Jan Aushadhi medications. In daily living, people experience a variety of health-related issues and must visit the doctor frequently. In this regard, Table-02 provides data gathered regarding the number of visits to the Jan Aushadhi medicines in a daily life.

**Table-02: - Frequency of using Jan Aushadhi Medicines**

|  |  |  |  |
| --- | --- | --- | --- |
| Frequency of Using | Frequency | Percentage | Cumulative Percent |
| Never | 11 | 22.0 | 22.0 |
| Daily | 6 | 12.0 | 34.0 |
| Monthly | 5 | 10.0 | 44.0 |
| Occasionally | 28 | 56.0 | 100.0 |
| **Total** | **50** | **100.0** |  |
| Source: Primary Data collected in the month of July 2023 | | | |

The field study demonstrates that more than half of the respondents (56%) had sporadically visited to purchase necessary medications in Jan Aushadhi pharmacies in their region. Additionally, around 22% of them had never utilised Jan Aushadhi medicines, and about 13% went every day to the study location to receive the medications they needed for one reason or another.

**1.7.4 Money spent on Jan Aushadhi medicines**

People used to spend a lot of money on medications before to Jan Aushadhi, especially diabetes and sugar sufferers. However, it rapidly diminished after the Jan Aushadhi scheme was implemented. Table-03 details the monthly spending on Jan Aushadhi medications in the stud area.

**Table-03: - Money spent on Jan Aushadhi medicines (monthly)**

|  |  |  |
| --- | --- | --- |
| Monthly Spending | Frequency | Percentage |
| Not Spend on Jan Aushadhi medicines | 11 | 22.0 |
| Up to 500 | 35 | 70.0 |
| 501 to 1000 | 1 | 2.0 |
| 1001 to 1500 | 1 | 2.0 |
| More than 1501 | 2 | 4.0 |
| **Total** | 50 | 100.0 |
| Source: Primary Data collected in the month of July 2023 | | |

The table-03 shows that the majority of respondents, or 70%, spent up to Rs. 500 per month on Jan Aushadhi medications, and that 8% of them collectively paid between Rs. 501 and more than Rs. 1501 on this purpose in the study region. Additionally, 22% of respondents said they bought their medications from other general medical stores rather than Jan Aushadhi.

**1.7.5. Preference of Jan Aushadhi medicines**

Jan Aushadhi remedies are currently gaining popularity on the market. People favour using Jan Aushadhi over branded pharmaceuticals. Table-04 lists the benefits of using Jan Aushadhi medications versus branded ones.

**Table-04: -Preference of Jan Aushadhi over the branded medicines**

|  |  |  |  |
| --- | --- | --- | --- |
| Preference over the Branded Medicines | **Frequency** | **Percentage** | **Valid Percent** |
| Affordability | 2 | 4.0 | 5.1 |
| Availability | 9 | 18.0 | 23.1 |
| Advice of the expert | 1 | 2.0 | 2.6 |
| Financial Compulsion | 12 | 24.0 | 30.8 |
| Affordability and Availability | 3 | 6.0 | 7.7 |
| Availability and Financial Compulsion | 11 | 22.0 | 28.2 |
| Affordability, Availability & Financial compulsion | 1 | 2 | 2.6 |
| Total | 39 | 78.0 | 100 |
| Not Applicable | 11 | 22.0 |  |
| **Total** | 50 | 100.0 |  |
| Source: Primary Data collected in the month of July 2023 | | | |

Data in table 04 showed that due to budgetary constraints and the easy access to such medications there, about 30.8 and 23.1% of respondents preferred to purchase their medications at the adjacent Jan Aushadhi Kendra. Additionally, due to the affordability and financial necessity of these medications at local Jan Aushadhi stores in the research region, roughly 28.2% of them used to purchase them.

**1.7.6. Continuation of the Jan Aushadhi medicines in future**

Once someone becomes dependent on a certain thing, they only want that product. It also holds true in the case of prescription drugs. Table-05 depicts the continued use of Jan Aushadhi medications in the study region in the years to come.

**Table-05: - Continue of Jan Aushadhi medicines in future also**

|  |  |  |
| --- | --- | --- |
| Continuation of Jan Aushadhi Medicines | Frequency | Percentage |
| Yes | 39 | 78.0 |
| Not Applicable | 11 | 22.0 |
| Total | 50 | 100.0 |
| Source: Primary Data collected in the month of July 2023 | | |

The information in table-05 showed that the respondents who had already bought Jan Aushadhi medications are willing to do so in the future as well. They claimed that the primary driver for the ongoing purchase of Jan Aushadhi medications is financial need.

**1.8. Findings of the study**

Based on the discussion of primary data in the previous chapter, the researcher discovered some noteworthy conclusions of the study, which are given below.

* More than 90% of the people who use to have Jan Aushadi Medicines are from below middle income category people due to their financial compulsion.
* The people of the study area largely depend on the labour work and self-employment are highly dependent on Jan Aushadi Medicines.
* Based on primary datanearly 80% of the people using Jan Aushadhi medicines.
* The spending amount largely decreased, 90% of population spends less than 200Rs. for their medicines monthly. It has significantly reduced the burden on the common people.
* More than 50% respondents in the study region are availing all prescribed medicines at Jan Aushadhi outlets and some peoples are not due to non-availability.
* The current beneficiaries of the Jan Aushadhi medicines are willing to continue the Jan Aushadhi medicines in future also.
* Large number of respondents said that, government should increase the product range, so that more people are getting the benefit.

**1.9. Suggestions of the study**

Based on the above findings, researcher offered some suggestions which are helpful for the effective implementation of PMBJP in the study region in particular and country as a whole in general.

* The shops should require greater marketing initiatives.
* The makers should perform a survey to improve their product promotion.
* Medicines should be accessible through nearby retailers and online.
* Government should host the awareness campaigns rural communities so as to access the medicines at reasonable price.
* Government must take an initiative to promote Jan Aushadhi Medicines at all private as well government OPDs/Clinics.

**1.10. Conclusion**

Jan Aushadhi outlets have been developed to provide customers with cost-effective, high-quality generic drugs that are comparable to expensive branded drugs in terms of quality and effectiveness. The Jan Aushadhi Medicine Scheme has been quite successful in reaching the population in need, according to the report, but public authorities must still host activities to provide services to the greatest possible number of individuals.

**References**

1. Ashwini & NivedithaSanil “A study on Jan Aushadhi shops of Udupi district” Asia Pacific of Research, Vol: I. Issue CVIII, March 2020, pp. 87-92
2. CharanJaykaran, ChaudhariMayur, Saxena, Deepak, Bhardwaj, Pankaj, Dwivedi et al. Patients Opinion on the use of Generics and Factors Associated with it: A CrossSectional Study. Journal of Young Pharmacists 2019;11:172-176. 10.5530/jyp.2019.11.36.
3. Deshpande PR, Sheriff MK, Pawar AP. Functioning and productivity of Jan Aushadhi stores in India: The owners' perspective. CHRISMED J Health Res 2018;5:28-37.
4. Gauthaman J. A cost analysis and availability scenario of drugs and oral care products prescribed for common oral conditions with reference to the current Indian market prices, Jan aushadhi, and the state medical commissions. J Family Med Prim Care 2022;11:2134-8
5. Manjula Bai, H. “A Study on Customer Awareness towards Pradhan MantriBharatiyaJnanaushadi Kendra’s with Reference to Shimoga.” ComFin Research, vol. 9, no. 1, 2021, pp. 1-10.
6. Milton Solomon C, Sundar C. Impact of Brand Awareness and Customer Satisfaction towards Services of Jan Aushadhi Medical stores. International Journal of Recent Technology and Engineering (IJRTE) 2019;8(2S4):546–551. https://doi.org/10.35940/ijrte.B1107.0782S419
7. Mukherjee K. A cost analysis of the Jan Aushadhi scheme in India. Int J Health Policy Manag. 2017;6(5):253– 256. doi:10.15171/ijhpm.2017.02
8. Nagarajappa, Maruthi, Srivatsa, Hosur. Modelling Customers’ Buying Behaviour of Jan Aushadhi (Generic Medicines). Indian Journal of Pharmaceutical Education and Research 2019;54:175-186. 10.5530/ijper.54.1.21
9. Pawar A, Chainpure M, Dhapte-Pawar V. Paralleling the quality and economy of levofloxacin hemihydrate and cefuroxime axetil tablets. Indian Journal of Pharmaceutical Education and Research 2021;55(1):136- 145
10. RoshnaKoshi and Akhila M Panicker “A study on satisfaction level of Jan Aushadhi stores”. JETIR May 2020, Vol: 7, Issue 5, pp 776-787
11. ShamiyaSadiq, Vijay Khajuria,KanikaKhajuria. Knowledge, attitude, and practices towards Jan Aushadhi scheme. Natl J Physiol Pharm Pharmacol 2017;7(9):977-982.
12. Srivastava, R.K., and Sanjiwani Jayant Kumar. “Understanding of Consumer’s Awareness about Brands in Pharmaceutical Industry: An Empirical Study.” Journal of Medical Marketing, vol. 14, no. 2-3, 2014, pp. 99-107.
13. Annual report 2021-22\_04052022.pdf
14. http://janaushadhi.gov.in/
15. https://en.m.wikipedia.org/wiki/Pharmaceutical\_industry
16. https://en.m.wikipedia.org/wiki/Pradhan\_Mantri\_Bharatiya\_Janaushadhi\_Pariyojana
17. https://janaushadhi.gov.in/pmjy.aspx#:~:text=With%20oblective%20of%20making,of%20India%20in%20November%2C%202008
18. https://pharmaceuticals.gov.in/
19. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5417146/

1. PMBJP -Annual report - 2021-22 [↑](#footnote-ref-1)