



Gender-Based Economic Insights on IPD and OPD Utilization in Belgaum District: A Five-Year Review (2018-2022)

 **Hanamantgoud P Patil^{1*}**

¹Lecturer in Economics, G F G College, Harugeri, Raibag, Belgaum, Karnataka, India.

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*Corresponding Author: hppati1985eco@gmail.com

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Abstract

This study investigates gender disparities in healthcare utilisation within the rural Primary Health Centers (PHCs) of Belgaum District, Karnataka, India, over five years (2018-2022). By analysing In-Patient Department (IPD) and Out-Patient Department (OPD) data, the research aims to provide economic insights into the healthcare-seeking behaviours of men and women. The study highlights significant gender-based differences in healthcare access and utilisation, influenced by socio-economic factors and the availability of healthcare services. Key findings indicate that while both men and women utilise OPD services extensively, there are notable variations in IPD utilisation, particularly during the COVID-19 pandemic. The research underscores the importance of targeted interventions to address these disparities and improve health equity. The findings are intended to inform policymakers, healthcare providers, and researchers in their efforts to enhance healthcare access and reduce gender disparities in rural healthcare settings.

Keywords: *Gender Disparities, Healthcare Utilization, Economic Analysis, Healthcare Access, Health Equity, Gender-Based Differences, Health Policy.*



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1. INTRODUCTION

The word Accessing and utilising healthcare services are fundamental human rights, yet disparities persist across various demographic groups. Gender significantly influences healthcare-seeking behaviour and outcomes. Understanding these gender-based differences is crucial for developing equitable and effective healthcare policies and

interventions. This research explores gender-based economic insights into the utilisation of In-Patient Department (IPD) and Out-Patient Department (OPD) services in all Primary Health Centers (PHCs) of rural Belgaum District, Karnataka, India. With its diverse socio-economic landscape, Belgaum District is located in the north and is described as the second capital of Karnataka state: it has a total

population of 47,79,661 out of this rural population, which was 35,68,466, which represents a total of 74.66 percent of the total population of the district. the rural populations comprise 18,11,094 males and 17,57,372 women, representing 50.75 per cent and 49.25 per cent males and women, respectively, in the rural Belgaum district, estimated as per the census of 2011. The study presents a valuable context for investigating these disparities.

Karnataka has made strides in improving healthcare infrastructure and access, but regional variations in utilisation patterns remain. Analysing IPD and OPD utilisation provides a comprehensive picture of healthcare access, as IPD services reflect more complex healthcare needs requiring hospitalisation, while OPD services represent primary and preventive care. Examining these services through a gender lens allows for a deeper understanding of the barriers and facilitators influencing healthcare utilisation for both men and women. This study undertakes a five-year review (2018-2022) of healthcare utilisation data in Belgaum District. By focusing on the economic dimensions of gender-based healthcare utilisation, this research aims to contribute a more nuanced understanding of the factors influencing healthcare access and inform targeted interventions to improve health equity in the region. The findings will be relevant to policymakers, healthcare providers, and researchers working towards improving healthcare access and reducing gender disparities in healthcare utilisation. The findings of this study are expected to provide valuable insights for policymakers, healthcare providers, and researchers. By highlighting gender-based disparities in healthcare utilization, this research aims to contribute to developing targeted interventions that promote gender equity in healthcare access and utilisation.

2. OBJECTIVES OF THE STUDY

The current study was counted with the following objectives

- To understand major healthcare facilities available for rural in PHCs in the study area.
- To know rural men and women health care facilities available in PHCs of Karnataka.

- To evaluate rural men's OPD and IPD in all PHCs of Belgaum District.
- To examine rural women's OPD and IPD in all PHCs of Belgaum District.
- To Compare the rural men and women IPD and OPD in all PHCs of Belgaum District.

3. METHODOLOGY

The study uses secondary sources of data from the Communicable Diseases Reports of Belgaum District. The study period is five years from 2018.

4. STATISTICAL TOOLS USED

The current study uses statistical tools like tabulation, averages, percentages, and bar diagrams.

5. MAJOR HEALTHCARE FACILITIES ARE AVAILABLE FOR RURAL WOMEN

The following healthcare services are designed to address the unique health needs of rural women and ensure they have access to essential medical care.

❖ Maternal and Child Health Services

In Karnataka, Rural Primary Health Centers (PHCs) provide several essential Maternal and Child Health (MCH) services to improve the health and well-being of rural women and children. Here are some key services:

- **Antenatal Care (ANC):** This care includes Regular check-ups, nutritional advice, and supplements like iron and folic acid to ensure the health of the mother and the developing fetus.
- **Postnatal Care (PNC):** Postnatal care consists of services like follow-up care for mothers and newborns to monitor their health and address any complications after delivery.
- **Immunization services:** Vaccination programs for children to protect against common diseases such as polio, measles, and tuberculosis.
- **Family Planning:** Family planning services include Counseling and contraceptives to help women plan their families and space pregnancies.

- **Nutritional Support:** PHCs offer nutritional services, such as supplement Distribution and advice on proper nutrition for pregnant and lactating women and young children.
- **Health Education:** PHCs conduct health education, including Awareness programs on hygiene, breastfeeding, and childcare practices, to promote healthy behaviors.
- **Health Camps and Workshops:** Regular health camps and educational workshops to raise awareness about women's health issues, hygiene, and preventive care.
- **community Outreach:** Programs to educate women about available health services and encourage utilization of PHC facilities.
- **Skilled Birth Attendance:** Trained healthcare professionals in PHCs assist in deliveries to ensure safe childbirth and manage any complications.

❖ **Family Planning Services**

Rural Primary Health Centers (PHCs) in Karnataka provide the following family planning services to improve families' health and well-being.

- **Contraceptive Methods**
 - ❖ Oral Contraceptive Pills, including Tablets taken daily to prevent pregnancy.
 - ❖ Primary Health Centers provide Condoms for Both males and females to prevent pregnancy and protect against sexually transmitted infections.
 - ❖ PHC offers Intrauterine Contraceptive Devices (IUCDs), which include small devices inserted into the uterus to prevent pregnancy.
 - ❖ PHC provides Injectable Contraceptives, which consist of Hormonal injections given every few months to prevent pregnancy.
- **Permanent Methods**
 - ❖ **Tubectomy:** It is A surgical procedure for female sterilization.
 - ❖ **Vasectomy:** It is A surgical procedure for male sterilisation.
- **Emergency Contraception:** Primary Health Centers provide these pills for taking after unprotected intercourse to prevent pregnancy.

- **Counseling and Education:** Primary Health Centers in Karnataka provide information and counseling on reproductive health, family planning options, and the benefits of spacing and limiting births.
- **Maternal and Child Health Services:** These services consist of Antenatal and postnatal care to ensure the health of mothers and children, and aim to promote reproductive health, reduce maternal and infant mortality, and empower families to make informed decisions about their reproductive health.

6. MAJOR HEALTHCARE FACILITIES ARE AVAILABLE FOR RURAL MEN

- ❖ **General Medicine:** In rural Primary Health Centers (PHCs) in Karnataka, General Medicine services are available for the treatment of various medical conditions requiring hospitalisation of male patients, including the following,
 - **Routine Check-ups:** Regular health assessments to monitor overall well-being and detect any early signs of illness.
 - **Treatment of Common Illnesses:** This includes managing conditions like fever, infections, respiratory issues, and gastrointestinal problems.
 - **Chronic Disease Management:** Ongoing care for chronic conditions such as diabetes, hypertension, and asthma.
 - **Minor Procedures:** Basic medical procedures like wound dressing, suturing, and abscess drainage.
 - **Health Education:** Guidance on maintaining a healthy lifestyle, including diet, exercise, and preventive measures.
- ❖ **Surgery services**

Following are the surgery services for male patients typically include

 - **Minor Surgical Procedures** include wound suturing, abscess drainage, and removal of small growths or foreign bodies.
 - **Emergency Care:** Initial management of trauma and injuries, including stabilisation and referral to higher-level facilities if needed.
 - **Post-Operative Care:** Follow-up care for patients undergoing surgery at higher-

level facilities, including wound care and complication monitoring.

- **Basic Urological Procedures:** Treatment for minor urological issues, such as catheterisation and management of urinary tract infections.

❖ Orthopaedics

The following are the orthopedic services available for male patients in PHCs,

- **Fracture Management:** Initial treatment and stabilisation of fractures, including casting and splinting.
- **Joint and Bone Care:** Treatment for joint pain, arthritis, and other musculoskeletal conditions.
- **Minor Surgical Procedures:** Procedures such as the removal of bone spurs or treatment of minor dislocations.
- **Rehabilitation Services:** Basic physiotherapy and exercises to aid recovery from injuries and surgeries.
- **Referrals:** Coordination with higher-level healthcare facilities for more complex orthopaedic surgeries and treatments.

❖ Urology services

Most of PHCs provide urology services for male patients, typically includes

- **Diagnosis and Treatment of Urinary Tract Infections (UTIs):** This involves managing infections affecting the urinary system.
- **Prostate Care:** Screening and treatment for prostate-related issues, including benign prostatic hyperplasia (BPH).
- **Kidney Stone Management:** Diagnosis and initial treatment for kidney stones, including pain management and referrals for further treatment if necessary.
- **Catheterization:** Insertion and management of urinary catheters for patients with urinary retention or other related issues.
- **Basic Urological Procedures:** Minor procedures such as circumcision and treating minor urological conditions.

❖ Mental Health

The following services aim to provide comprehensive mental health care to male

patients in rural areas, which are offered by rural Primary Health Centers (PHCs) in Karnataka,

- **Counseling Services:** Access to mental health professionals for individual counseling sessions to address issues such as stress, anxiety, anxiety, and depression.
- **Diagnosis and Treatment:** This includes identifying and managing common mental health disorders, including prescribing medications when necessary.
- **Community Outreach Programs:** These initiatives aim to raise awareness about mental health issues and reduce stigma within the community.
- **Referral Services:** Coordination with higher-level healthcare facilities for specialised psychiatric care and treatment.
- **Support Groups:** Facilitating group therapy sessions and support groups for individuals with similar mental health challenges.

❖ General Consultations

(PHCs) offer several general consultation services for rural men to address their health needs. The following services aim to improve rural men's overall health and well-being by providing accessible and comprehensive healthcare,

- **General Medical Consultations:** Diagnoses and treat common illnesses and health conditions, including infections, injuries, and chronic diseases.
- **Health Screenings:** Regular check-ups and screenings for hypertension, diabetes, and other non-communicable diseases.
- **Health Education:** Programs to raise awareness about healthy lifestyles, disease prevention, and hygiene practices.
- **Referral Services:** Referrals to higher-level healthcare facilities for specialized care when needed.
- **Telehealth Services:** Telehealth sessions allow rural men to access specialist consultations without traveling long distances.

❖ **Diagnostic services**

Rural Primary Health Centers (PHCs) provide several diagnostic services to help rural people identify and manage various health conditions.

- **Basic Laboratory Tests:** Blood, urine, and stool tests diagnosed infections, anemia, diabetes, and other common conditions.
- **Screening for Non-Communicable Diseases:** Regular screenings for hypertension, diabetes, and other chronic diseases.
- **Tuberculosis (TB) Testing:** Sputum tests and other diagnostic procedures to detect TB.
- **Malaria Testing:** Blood smears and rapid diagnostic tests to identify malaria infections.
- **HIV Testing:** Voluntary counseling and testing services for HIV.
- **Ultrasound and X-ray Services:** Available in some PHCs or through referral to higher-level facilities.

❖ **Preventive Care services**

PHCs offer several preventive care services. These services aim to promote overall health and prevent the onset of diseases, contributing to better health outcomes for rural

men and helping them maintain and improve their health.

- **Health Education:** Programs to raise awareness about healthy lifestyles, disease prevention, and hygiene practices.
- **Vaccination:** Immunization against common diseases such as tetanus and hepatitis.
- **Screening Programs:** Regular screenings for hypertension, diabetes, and other non-communicable diseases.
- **Nutritional Advice:** Guidance on balanced diets and nutritional supplements to prevent deficiencies.
- **Tobacco and Alcohol Cessation Programs:** Support and counseling to help men quit smoking and reduce alcohol consumption.
- **Infectious Disease Control:** Measures to prevent the spread of diseases like malaria, tuberculosis, and HIV.

7. NUMBER OF WOMEN TREATED AT IPD AND OPD IN ALL PHCS OF BELGAUM DISTRICT

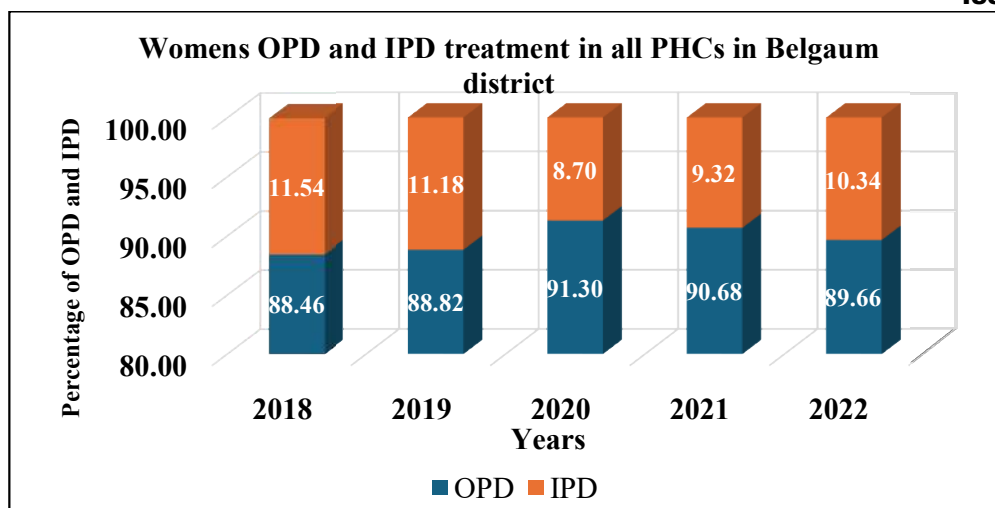
The following data are clear: the women's Outpatient Department (OPD) and Inpatient Department (IPD) healthcare treatments in PHCs and CHCs of Belgaum District from 2018 to 2022. i.e. 5years.

Table-1

Years	OPD	IPD	Total
2018	1229518 (88.46)	160391 (11.54)	1389909 (100)
2019	1332423 (88.82)	167659 (11.18)	1500082 (100)
2020	880700 (91.30)	83947 (8.70)	964647 (100)
2021	1122881 (90.68)	115459 (9.32)	1238340 (100)
2022	1124934 (89.66)	129781 (10.34)	1254715 (100)

Source: (Communicable Diseases Reports 2018, 2019, 2020, 2021, and 2022 from District Health Office (DHO) Belgaum.)

Note: Data in the bracket shows percentage. OPD consists of new and old cases.

**Fig-1**

Source: (Table No-01.)

As per Table no 01, total OPD trends in women increased from 88.46 percent to 88.82 percent and 91.30 percent in 2018, 2019, and 2020, respectively, in rural Primary Health Centers in Belgaum district, and further decreased from 90.68 to 89.66 percent in 2021 and 2022, respectively. Meanwhile, IPD trends of women recorded 11.54 and 11.18 percent in 2018 and 2019, respectively.

IPD decreased to 8.70 percent in 2020 and increased to 9.32 and 10.34 percent in 2021 and 2022, respectively. Considering the total treatment trends in women, treatment increased from 2018 to 2019, decreased in 2020 due to COVID-19, and further increased in 2021 and 2022, respectively.

8. NUMBER OF MEN TREATED AT IPD AND OPD IN ALL PHCS OF BELGAUM DISTRICT

Table-2

Years	OPD	IPD	Total
2018	983035 (92.18)	83424 (7.82)	1066459 (100)
2019	1088755 (92.33)	90417 (7.67)	1179172 (100)
2020	737324 (94.81)	40373 (5.19)	777697 (100)
2021	957205 (93.83)	62941 (6.17)	1020146 (100)
2022	884217 (92.68)	69809 (7.32)	954026 (100)

Source: (Communicable Diseases Reports 2018, 2019, 2020, 2021, and 2022 from District Health Office (DHO) Belgaum.)

Note: Data in the bracket shows percentage. OPD consists of new and old cases.

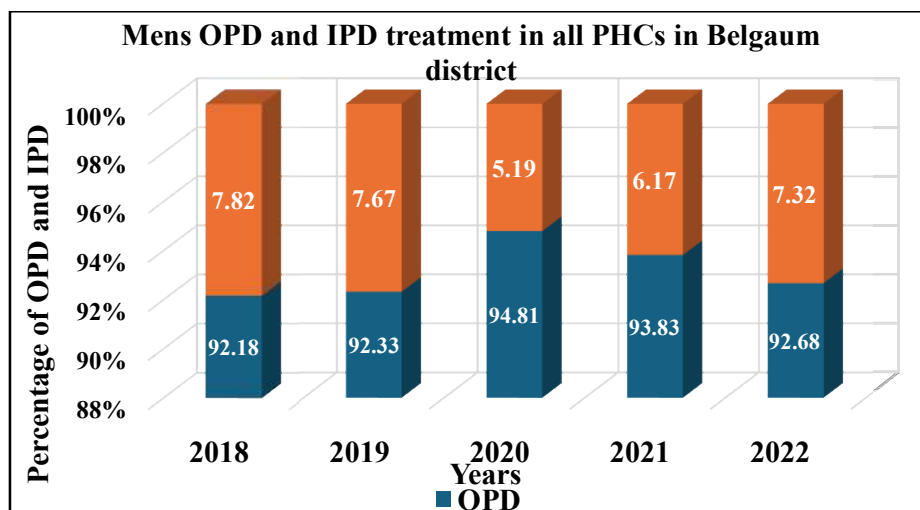


Fig-2

Source: (Table No 02.)

Table No. 02 shows that 92 percent of total men treated with OPD during 2018 and 2019, and it was increased to 94.81 percent in 2020; further, it was decreased to 93.83 and 92.68 percent in 2021 and 2022, respectively. Thus, the treatment of men's IPD in PHCs was 7.82 and 7.67 percent in 2018 and 2019, respectively. Further, it decreased to 5.19 in 2020 and gradually increased to 6.17 and 7.32 percent in 2021 and 2020, respectively. Comparing the total treatment of men in PHCs increased in 2019, which remained the same in 2018 and 2020. Clearly, during COVID-19, the number of men's treatments was reached.

9. FINDINGS

The current article clears up the following findings.

- The number of men and women OPD treatments in PHC remained constant between 2018 and 2019.
- In 2020, women's OPD treatment reached 91.30 percent, the highest in the study period. In the COVID-19 period, a major part of women was treated with OPD compared to IPD.
- During the year 2020, women's IPD was recorded as low as 8.70 percent during the study period.
- During the COVID-19 pandemic in 2020, there was a significant increase in OPD utilization by women, reaching 91.30%
- In 2020, the total number of women's patients was recorded as the highest in

Primary Health Centers (PHCs) because of disturbances in the availability of healthcare facilities in the private sector.

- The OPD rate for men reached 94.81 percent, the highest in 2020, compared to the remaining years of the study period.
- Only 5.19 percent of men are treated for IPD during the year 2020 due to the COVID-19 pandemic's effect on healthcare services.
- Men's IPD utilization was lowest in 2020 and gradually increased in the following years.
- The highest number of men and women patients were recorded for PHC in 2019 because of disturbances in healthcare facilities.
- Comparing the total number of men and women patients is constant during the period of 2018 to 2019 and 2021 to 2022.
- During the study period, the total number of men and women patients treated was recorded as the highest in 2020.
- The present study clearly shows that in 2020, when the COVID-19 pandemic played a main role in the healthcare sector all over India, lockdowns, shutdowns of most economic activities, and disturbances in the healthcare delivery system resulted in patients being shifted from private to public healthcare facilities.

- The availability of healthcare services and regional variations significantly affected utilization patterns.
- The findings underscore the need for targeted interventions to address gender disparities in healthcare access and utilization.
- The findings underscore the need for targeted interventions to address gender disparities in healthcare access and utilization.

10. CONCLUSION

This study reveals significant gender disparities in healthcare utilization in Belgaum District's rural PHCs from 2018 to 2022. Women showed higher OPD utilization during the COVID-19 pandemic, likely due to disruptions in private healthcare services, while men's IPD utilization was lowest during 2020. These findings highlight the impact of socio-economic factors and healthcare availability on healthcare-seeking behaviors. Addressing these disparities requires targeted interventions to improve health equity. Policymakers, healthcare providers, and researchers must work together to ensure equitable healthcare access for all individuals in rural areas.

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