

## The Role of Primary Health Care in Reducing Health Inequities: A Case Study of Theni District in Tamil Nadu

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### ABSTRACT

Health is wealth for all living things in the world, we can't refuse this statement. In recent days the peoples are paid more amount to the hospitals for their health issues. But all are not able to get those medical services, in this place the Primary Health Centres are occupying the service gap in health care industry. The Primary Health Care centres providing services at the initial stages of health issues. Prevention is better than cure is only possible by the services of Primary Health Care centres. Tamilnadu is the primer state in the health care system and providing valuable services to the patients. The district has a diverse population, including a significant number of people living in hilly and tribal areas, particularly around the Western Ghats. Theni's hilly and remote areas present challenges in terms of accessibility and transportation, making it difficult in services. The present study covers the problems faced by patients of primary health care services of Theni district.

**Keywords:** Primary Health Care, Health Care Services, Health Care Supportive Workers, and State Government Contributions.

### 1. OBJECTIVES OF THE STUDY

1. To know the types of services provided by Primary Health Centres in Theni District
2. To explore the infrastructural facilities of Primary Health Centres (PHCs) in Theni District of Tamilnadu.
3. To Analyse the trend and progress of Primary Health Centres services in Theni District
4. To offer suitable suggestions based on findings of the study.

#### Scope of the Study:

This study aims to investigate the role of primary health care (PHC) services in mitigating health inequities within Theni District, Tamil Nadu. By evaluating the impact of PHC services on various socio-economic and demographic groups, the research will assess how effectively these services address disparities in health outcomes, access, and quality of care. The study will examine factors such as the availability, quality, and accessibility of PHC facilities. Utilizing both quantitative data from health records the research will identify key determinants influencing the effectiveness of PHC in reducing health inequities. The findings are expected to provide valuable recommendations for enhancing PHC services and inform policy interventions aimed at improving health equity in the district.

### 2. RESEARCH GAP OF THE STUDY

There are so many studies had been conducted about Primary Health Centres in India and Tamilnadu. But no study was conducted in Theni district and few studies have been conducted on patients' perception about Government but this study entirely focused on patients' perception point of view

### 3. IN-PATIENT SERVICES PROVIDED BY PRIMARY HEALTH CENTRES

One of the important services provided by Primary Health Centres is In-patients services. In-patient services are needed for those who need close contact and monitoring during the treatment period. In-patients' services mostly give to those who are affected and needed services like child birth, surgeries, spinal cord issues and regional block anesthesia. Recently the government of Tamilnadu offered a greater number of in-patients services to peoples those who are affected by Covid-19. Some of the patients need overnight observations that kind of patients mostly got inpatients services. This is necessary for patients who need to be monitored closely during the procedure and while they are recovering. The following table shows the inpatients services provided by Theni District primary health care centres.

**Table No.1 In-Patients Services Provided by Primary Health Centres (PHCs)**

S. No	Year	No. of In-Patients	Growth Rate (%)
1	2013-2014	19,663	-
2	2014-2015	19,897	01.19
3	2015-2016	20,296	02.00
4	2016-2017	21,954	08.17
5	2017-2018	30,859	40.56
6	2018-2019	31,819	03.11
7	2019-2020	31,421	-01.25
8	2020-2021	22,719	-27.69
9	2021-2022	25,774	13.45
10	2022-2023	33,947	31.71
Mean		25,835	
S. D		5645.7069	
CAGR (%)		5.61	

The above table 1.1 shows the inpatients services provided by the Primary Health Centres in Theni district. The number of in-patient services provided by primary health centres was increased from 19,897 patients to 30,859 patients in the year 2013-2014 to 2017-2018. After that it was suddenly decreased to 22,719 in the year 2020-2021 due to the impact of covid - 19. That time covid-19 virus impacted patients are only allowed to take treatment within the hospitals. The highest growth rate 40.56 per cent in the year 2017-2018.

### 4. UT-PATIENTS SERVICES PROVIDED BY PRIMARY HEALTH CENTRES (PHCS)

Those patients got treatment within a day and they are not allowed to stay in the health centres in not exceeding 24 hours. After got treatment they take home and they are following the doctor advise from their home. The PHCs give treatment for communicable diseases like vector born disease and tuberculosis disease. The PHCs doctors also giving treatment for noncommunicable diseases like cancer, diabetes, Fluorosis and etc., The following table shows the number patients got treatment from PHCs of Theni District.

**Table No. 2 Out-Patients Services Provided by Primary Health Centres (PHCs)**

S. No	Year	No. of Out-Patients	Growth Rate (%)
1	2013-2014	17,09,311	-
2	2014-2015	18,19,027	06.42
3	2015-2016	17,39,828	-04.35
4	2016-2017	17,28,757	-00.64
5	2017-2018	18,98,483	09.82

6	2018-2019	19,97,703	05.23
7	2019-2020	19,09,854	-04.40
8	2020-2021	13,33,823	-30.16
9	2021-2022	15,42,617	15.65
10	2022-2023	16,85,935	09.29
<b>Mean</b>		17,36,534	
<b>SD</b>		192767.643	
<b>CAGR</b>		-0.14	

The above table 2 shows the in-patients services provided by PHCs (Primary Health Centres of Theni District for the last ten years. The averagely 17,36,534 patients are got treatment from the health centres. In the begging of the study period the growth rate shows 06.42 per cent after that it was highly decreased to -30.16 per cent in the year 2020-2021 because in that period only covid -19 impacted patients are came to health centres and other diseases affected patients are taking treatment from home only so, that the per cent was suddenly decreased after that it was goes to 15.65 per cent in the year 2021-2022.

## 5. DOCTORS' SERVICES IN PRIMARY HEALTH CENTRES

Doctors are real god for the patients that why the patients believe the doctors in full. Now a days some of the crimes are happened against the doctors like Kolkata cases. This kind of activities are completely avoidable one so, that central and state government want to take more strong actions against that. The government appointed minimum two doctors in Primary Health Centres. The following table shows the number doctors working in PHCs in the past ten years.

**Table No. 3 Total number of doctors providing their services in Primary Health Centres**

S. No	Year	No. of Doctors	Growth Rate (%)
1	2013-2014	110	-
2	2014-2015	126	14.55
3	2015-2016	126	00.00
4	2016-2017	128	01.59
5	2017-2018	129	00.78
6	2018-2019	129	00.00
7	2019-2020	129	00.00
8	2020-2021	129	00.00
9	2021-2022	129	00.00
10	2022-2023	129	00.00
<b>Mean</b>		126.4	
<b>S.D</b>		5.89161363	
<b>CAGR (%)</b>		1.61	

The above table no. 3 presents the doctors working in the Primary Health Centres of Theni district. In the beginning of the study period 110 doctors are worked in health centres after that it was increased to 126 in the year 2015-2016. The highest growth rate was shows 14.55 per cent in the year 2014-2015. At the end of the study period 129 doctors working in health centres of Theni district.

## 6. NURSES WORKING IN PRIMARY HEALTH CENTRES OF THENI DISTRICT

Nurses are backbone to the doctors and they only close watching the in-patients and outpatients. And they very well know about the patient's illness and their medical records. The government of Tamilnadu appointed adequate number nurses in the PHCs of Theni District. They are providing first aid treatment for minor injuries patients and illness affected patients. In PHCs they maintaining medical records of the patients in proper manner, and they make a documentation. Nurses are

involving in health camps and awareness programs with the aim of early identification and preventions of diseases.

**Table No. 4 Total number of nurses providing their services in Primary Health Centres**

S. No	Year	No. of Nurses	Growth Rate (%)
1	2013-2014	183	-
2	2014-2015	183	00.00
3	2015-2016	183	00.00
4	2016-2017	183	00.00
5	2017-2018	190	03.83
6	2018-2019	196	03.16
7	2019-2020	196	00.00
8	2020-2021	196	00.00
9	2021-2022	196	00.00
10	2022-2023	196	00.00
Mean		<b>190.2</b>	
SD		6.46013416	
CAGR (%)		0.69	

The above table no.4 exhibits the number of nurses contributing their services to patients' primary health centres in Theni district. In the year 2013-2014 183 nurses are working in the Primary Health Centres after that it goes to 190 in the year 2017-2018 due to the impact of new appointment. At the end of the study period 196 nurses are working it enough as per the government norms. The mean value of 190 nurses working in the primary health centres.

## 7. SANITARY WORKERS SERVICES TO PRIMARY HEALTH CENTRES

The sanitary workers are maintaining clean and safe situation for the human being in the health centres like patients, and visitors. The sanitary workers daily cleaning the wards, consultation rooms. To prevent the spread of infections and diseases, they regularly disinfect floors, walls, and surfaces. They manage the collection and disposal of general waste from the PHC premises, contributing to overall environmental cleanliness. In some PHCs, sanitary workers may handle the washing, drying, and folding of linens used in the facility, ensuring that clean bedding and garments are always available.

**Table No. 5 Sanitary workers services to Primary Health Centres**

S.No	Year	No. of Nurses	Growth Rate (%)
1	2013-2014	96	-
2	2014-2015	96	00.00
3	2015-2016	96	00.00
4	2016-2017	121	<b>26.04</b>
5	2017-2018	121	00.00
6	2018-2019	121	00.00
7	2019-2020	121	00.00
8	2020-2021	121	00.00
9	2021-2022	121	00.00

10	2022-2023	121	00.00
<b>Mean</b>		<b>113.5</b>	
<b>SD</b>		12.0761473	
<b>CAGR (%)</b>		2.34	

The above table 5 shows clearly about sanitary workers numbers in PHCs of Theni District. In the beginning of the study period 96 sanitary workers are worked in Primary Health Centres after that it was increased to 121 sanitary workers in the year 2016-2017. In the year 2016-2017 major new appointments are done by the Tamilnadu government in PHCs of Theni district it is appreciable one. But after 2016-2017 up to 2022-2023 no new appointments were done by governments.

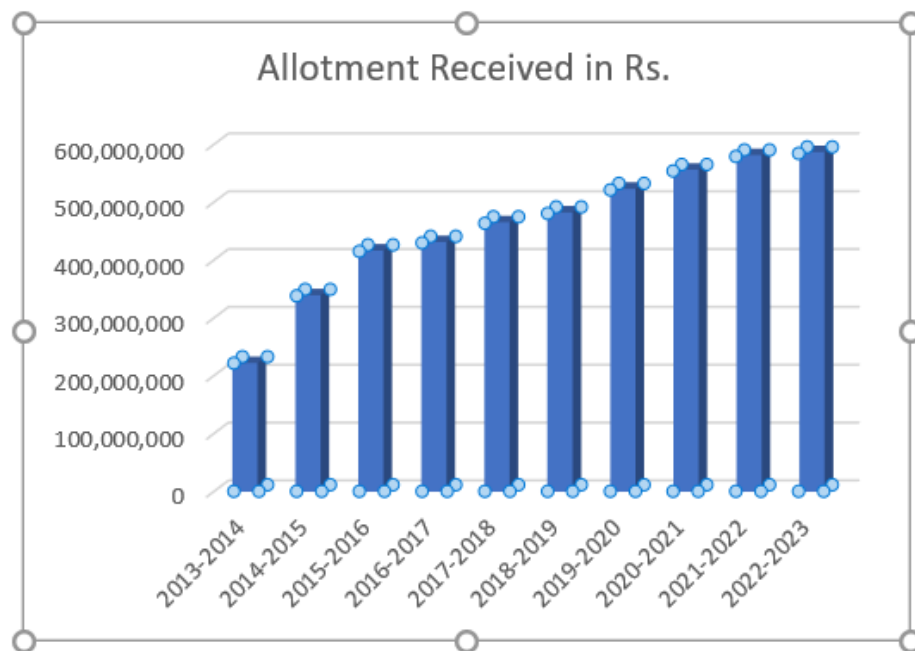
#### AMOUNT RECEIVED FROM TAMILNADU STATE GOVERNMENT

The Primary Health Centres (PHCs) got funds from both state and central government, and also receiving fund from other NGO and other agencies. The receiving amount varied according to the size, place and implemented programs of PHCs. The PHCs using funds for infrastructure development, manpower, equipment's for medical and management expenses. The Central and state government offering funds on National Health Mission and Ayusman Bharat schemes of the government. The following table clearly shows the amount received by Primary Health Centres of Theni District.

**Table No. 6 Amount received from Tamilnadu State Government**

S.No	Year	Allotment Received	Growth Rate (%)
1	2013-2014	22,26,38,095	-
2	2014-2015	33,97,30,850	52.59
3	2015-2016	41,70,96,520	22.77
4	2016-2017	43,18,74,380	03.54
5	2017-2018	46,59,24,172	07.88
6	2018-2019	48,29,74,016	03.66
7	2019-2020	52,39,09,187	08.48
8	2020-2021	55,68,23,314	06.28
9	2021-2022	58,20,53,008	04.53
10	2022-2023	58,73,54,855	00.91
<b>Mean</b>		<b>46,10,37,840</b>	
<b>SD</b>		114777352.50	
<b>CAGR (%)</b>		10.19	

The above table 6 shows the fund received by PHCs for ten years, In the beginning of the study period the PHCs received Rs.22,26,38,095 in the year 2013-2014 after that the amount suddenly increased to Rs. 33,97,30850 in the year 2014-2015. It shows the government focus on health care sectors. The lowest growth rate 00.91 per cent in the year 2022-2023.



### 8. NUMBER OF PHARMACIST PROVIDED THEIR SERVICES IN PHCS

In Tamilnadu Pharmacists services are more important in the healthcare system. They are doing dispensing the medication, patient counseling, inventory management, support in public health programs. Normally they are receiving Rs. 25,000 to Rs. 35,000 as monthly salary. In some rural PHCs only limited number pharmacist working means the remaining persons facing more work load. The following Table clearly exists the Pharmacist working in PHCs of Theni District.

**Table No. 7 Number of Pharmacist working in PHCs of Theni Distric**

S.No	Year	No. of Pharmacist	Growth Rate (%)
1	2013-2014	35	-
2	2014-2015	35	0
3	2015-2016	35	0
4	2016-2017	35	0
5	2017-2018	36	2.86
6	2018-2019	36	0
7	2019-2020	36	0
8	2020-2021	36	0
9	2021-2022	36	0
10	2022-2023	36	0
Mean		<b>35.6</b>	
S.D		0.49	
CAGR (%)		0.28	

The above table no.7 shows the number of pharmacists working in PHCs of Theni district. In the starting period of the study

shows the 35 pharmacists are working in the year 2013-2014 after that it was increased to 36 but this not enough appointment. Today the population too high so, the government want to appoint a greater number of posting in the pharmacy field.

## 9. CORRELATION ANALYSIS OF PHCS SERVICES

Correlation Variables	r value
Correlation between Amount Received and No. Patients treated	- 0.25
	-
Correlation between No. of Staffs worked and No. of Patients treated	0

As per above the study result, we clearly know that there is a negative relationship between amount received by PHCs and number of patients treated. This is not an appreciable one so, the administrator of the Theni district can take more steps to use the fund effectively. And there no correlation lies between No. of staffs worked and number of patients treated.

## 10. RECOMMENDATIONS OF THE STUDY

1. In the year 2019-2020 and 2020-2021 in-patients' services provided by the Primary Health Centres shows negative growth rate it clearly indicates the failure of PHCs services in the Covid-19 impacted time. So, that the government of Tamilnadu may take steps to increase and provide the services at the time of emergency.
2. Amount received by Primary Health Centres increases year by year but the number of patients treated not increased that much it may the reason of there is no huge appointment is established. So, that the government of Tamilnadu may take necessary staffs to appoint the health care industries.
3. Pharmacist are doing dispensing the medication, patient counseling, inventory management, support in public health programs but in Theni district the appointment increment does increase as much needed so, the Tamilnadu government may appoint a greater number of pharmacists on permanent basis.

## 11. CONCLUSION

Theni district primary health care system is a robust and well-organized network that plays a crucial role in the state's overall healthcare delivery. With continued focus on improving infrastructure, workforce availability, and the integration of technology, Tamil Nadu can further enhance the quality and reach of its primary health care services.

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