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Access to the Chief Minister's Comprehensive Health Insurance Scheme - Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (CMCHIS–PMJAY): Evidence on Awareness, Enrollment, and Healthcare Utilization in Tamil Nadu

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ABSTRACT

Access to affordable healthcare remains an important public health priority, and publicly funded health insurance programmes play a vital role in improving healthcare access among vulnerable populations. This study examined access to the Chief Minister's Comprehensive Health Insurance Scheme–Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (CMCHIS–PMJAY) by assessing awareness, enrollment, and healthcare utilization among households in Kanyakumari District, Tamil Nadu. A community-based cross-sectional study was conducted among 386 households selected through proportionate random sampling, and primary data were collected using a structured interview schedule. Descriptive statistics and the Chi-square test were used for data analysis. The findings revealed that awareness of CMCHIS–PMJAY was relatively high; however, enrollment under the scheme remained comparatively low. More than half of the respondents had utilized hospital services during the previous 12 months, with private hospitals being the preferred source of treatment. A significant association was observed between awareness and enrollment, indicating that awareness plays an important role in encouraging participation in the scheme. Among enrolled households, utilization of CMCHIS–PMJAY was significantly associated with hospitalization, suggesting that the scheme is mainly used when hospital care is required. The study concludes that improving access to CMCHIS–PMJAY requires continued efforts to strengthen enrollment, simplify access to scheme benefits, and enhance beneficiary support. These measures can improve the effectiveness of the programme and contribute to equitable access to healthcare services in Tamil Nadu.....

Keywords: CMCHIS–PMJAY; Health insurance; Healthcare access; Awareness; Enrollment; Healthcare utilization; Tamil Nadu...

INTRODUCTION

Access to affordable and timely healthcare remains an important public health challenge, particularly for low- and middle-income households. Although healthcare facilities have expanded in recent years, many people still experience difficulties in obtaining appropriate medical treatment because of financial constraints, limited awareness of available services, and unequal access to healthcare facilities. Publicly funded health insurance programmes have become an important policy measure to improve healthcare access by reducing financial barriers and encouraging the use of essential health services. Achieving these objectives depends not only on the availability of health insurance but also on the extent to which eligible households are aware of and enrolled in the programme.

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In India, Ayushman Bharat–Pradhan Mantri Jan Arogya Yojana (AB PM-JAY) was introduced to provide financial protection and improve access to secondary and tertiary healthcare services for economically vulnerable families. In Tamil Nadu, the Chief Minister's Comprehensive Health Insurance Scheme (CMCHIS) has been integrated with AB PM-JAY to strengthen health insurance coverage and expand access to quality healthcare. The scheme offers cashless treatment through empanelled public and private hospitals for a wide range of medical procedures. The effectiveness of the programme depends on beneficiary awareness, successful enrolment, and the actual use of healthcare services. Limited awareness, difficulties in enrolment, and inadequate knowledge of scheme benefits may reduce its overall impact, even among eligible households

Despite the wide implementation of CMCHIS–PMJAY, evidence on awareness, enrolment, and healthcare utilization remains limited at the district level in Tamil Nadu. Understanding these aspects is essential for identifying barriers that affect access to healthcare and for improving the implementation of the scheme. Therefore, the present study examines the level of awareness, enrolment, and healthcare utilization under CMCHIS–PMJAY among households in Tamil Nadu. The findings are expected to provide useful evidence for strengthening programme implementation and improving equitable access to healthcare services.

2. Literature Review

Awareness is an important factor influencing participation in public health insurance programmes. Studies have shown that people who are familiar with the eligibility criteria, benefits, and enrolment procedures are more likely to participate in government-sponsored health insurance schemes. In contrast, inadequate information and poor communication often limit participation, particularly among socially and economically disadvantaged households. Research also suggests that awareness differs across population groups because of variations in education, income, occupation, and access to information.

Enrolment is the first step towards accessing health insurance benefits. Earlier studies have reported that enrolment levels are influenced by socio-economic characteristics, administrative procedures, document availability, and support received from local institutions and healthcare providers. While government initiatives have improved insurance coverage in many areas, a considerable number of eligible households remain outside the scheme. This indicates that improving enrolment requires not only wider programme coverage but also better awareness, simplified procedures, and effective community outreach.

Healthcare utilization is commonly used to assess whether insured households are able to benefit from available health services. Existing studies indicate that health insurance encourages the use of hospital services by reducing financial barriers to treatment. However, utilization is also influenced by factors such as accessibility of healthcare facilities, availability of empanelled hospitals and quality of care, waiting time, and beneficiary experience. Differences in these factors may lead to variations in healthcare utilization even among insured households.

Previous studies have examined different aspects of public health insurance in India, limited evidence is available on the combined assessment of awareness, enrolment, and healthcare utilization under CMCHIS–PMJAY using household-level primary data. District-level studies from Tamil Nadu are also limited, making it difficult to understand local variations in programme access and utilisation. The present study examines these three dimensions together to provide a comprehensive understanding of access to CMCHIS–PMJAY and to generate evidence that can support improvements in programme implementation.

3. Methodology

3.1 Study Design

The present study adopted a community-based cross-sectional research design to assess awareness, enrollment, and healthcare utilization under the Chief Minister's Comprehensive Health Insurance Scheme–Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (CMCHIS–PMJAY) among households in Kanyakumari District, Tamil Nadu. A quantitative approach was employed to collect primary data from the selected households.

3.2 Study Area

The study was carried out in Kanyakumari District, located at the southern tip of Tamil Nadu. The district comprises both rural and urban areas with access to public and private healthcare facilities. As CMCHIS–PMJAY is implemented throughout the district, it provides an appropriate setting to examine household awareness, enrollment, and healthcare utilization under the scheme.

3.3 Sampling and Sample Size

The study included 386 households selected through a proportionate random sampling technique. The sample was proportionately distributed across the selected development blocks, Municipal Corporation, and municipalities based on the number of households in each area. This approach ensured adequate representation of households from different geographical locations within the district.

3.4 Data Collection

Primary data were collected using a structured interview schedule. The questionnaire covered socio-demographic characteristics, awareness of CMCHIS–PMJAY, enrollment status, and healthcare utilization.

3.5 Statistical Analysis

The collected data were coded, verified, and analysed using the Statistical Package for the Social Sciences (SPSS). Descriptive statistics, including frequency and percentage, were used to summarise the characteristics of the respondents. The Chi-square test was applied to examine the association between selected variables related to awareness, enrollment, and healthcare utilization. Statistical significance was assessed at the 5 Per cent level ($p < 0.05$).

3.6 Ethical Considerations

Participation in the study was voluntary, and informed consent was obtained from all respondents before the interview. The purpose of the study was explained to each participant, and the confidentiality of the information provided was maintained throughout the research. The data collected were used exclusively for academic purposes.

4. Results

4.1 Socio-demographic Characteristics of the Respondents

Understanding the socio-demographic profile of the study population is important for interpreting healthcare utilization and financial risk protection outcomes. Table 1 presents the demographic and socio-economic characteristics of the respondents, including their place of residence, age, gender, religion, social group, educational qualification, housing conditions, ration card category, and monthly household income.

Table 1

Socio-demographic characteristics of the respondents (N = 386)

Variable	Category	Frequency (n)	Percentage (Per cent)
Category of Living	Urban	194	50.3
	Rural	192	49.7
Age (years)	30–40	42	10.9
	41–50	127	32.9
	51–60	129	33.4
	Above 60	88	22.8
Gender	Male	332	86.0
	Female	54	14.0
Religion	Hindu	162	42.0
	Muslim	27	7.0
	Christian	197	51.0
Social Group	Scheduled Caste (SC)	50	13.0
	Scheduled Tribe (ST)	15	3.9
	Backward Class (BC)	236	61.1
	Most Backward Class (MBC)	29	7.5
	General / Forward Caste	56	14.5
Educational Qualification	No Formal Education	9	2.3
	Primary	36	9.3
	Middle	39	10.1

	High School	94	24.4
	Higher Secondary	80	20.7
	Diploma / ITI	21	5.4
	Graduate	42	10.9
	Postgraduate	9	2.3
	Professional	52	13.5
	MPhil / PhD	4	1.0
Type of House	Kutcha House	41	10.6
	Semi-pucca House	79	20.5
	Pucca House	255	66.1
	Hut / Temporary Shelter	11	2.8
Type of Ration Card	PHH	152	39.4
	AAY	62	16.1
	NPHH	168	43.5
	No Ration Card	4	1.0
Monthly Household Income (Rupees)	Up to 10,000	26	6.7
	10,001–20,000	155	40.2
	20,001–30,000	127	32.9
	30,001–40,000	44	11.4
	40,001–50,000	14	3.6
	Above 50,000	20	5.2
	Total	386	100

Source: Primary Data

Table 1 presents the socio-demographic characteristics of the respondents included in the study. The respondents were almost equally distributed between urban (50.3Per cent) and rural (49.7Per cent) areas, providing balanced representation from both settings. Most respondents belonged to the 41–60 years age group (66.3Per cent), and males constituted the majority of the sample (86.0Per cent). Christians represented the largest religious group (51.0Per cent), while the Backward Class (61.1Per cent) accounted for the highest proportion among the social groups. Regarding educational attainment, nearly half of the respondents had completed High School (24.4Per cent) or Higher Secondary education (20.7Per cent), whereas only a small proportion had no formal education (2.3Per cent). Most of the households lived in pucca houses (66.1Per cent) indicating relatively better housing conditions. In terms of food security status, Non-Priority Household (NPHH) ration card holders (43.5Per cent) and Priority Household (PHH) card holders (39.4Per cent) formed the largest groups. Monthly household income was concentrated between Rupees 10,001 and Rupees 30,000, accounting for more than two-thirds of the respondents.

4.2 Hospital Service Utilization

Hospital service utilization is an important indicator for assessing access to healthcare under CMCHIS–PMJAY. It reflects the extent to which households seek hospital care and the type of healthcare facility they prefer. Table 2 presents the utilization of hospital services during the previous 12 months and the place where respondents received treatment.

Table 2

Hospital Service Utilization among the Respondents (N = 386)

Variable	Category	Frequency (n)	Percentage (Per cent)
Availed hospital services during the past 12 months	Yes	213	55.2
	No	173	44.8
Place of treatment	Public hospital	144	37.3
	Private hospital	236	61.1
	Self-treatment	6	1.6
	Total	386	100.0

Source: Primary Data

The Table 2 shows the hospital service utilization of the respondents during the past 12 months. More than half of the respondents (55.2 Per cent) reported that they had received hospital services during the reference period, while 44.8 Per cent had not used hospital services. With regard to the place of treatment, private hospitals were preferred by the majority of the respondents (61.1 Per cent), followed by public hospitals (37.3 Per cent). Only a small proportion (1.6 Per cent) reported self-treatment. These findings indicate that hospital services were widely utilized among the respondents, with private hospitals being the most commonly used healthcare providers.

4.3 Awareness of CMCHIS–PMJAY among Households

Awareness of a health insurance scheme is an important factor influencing enrolment and utilization of healthcare services. Table 4.3 presents the level of awareness of the CMCHIS–PMJAY scheme among the surveyed households and identifies the major sources through which respondents obtained information about the scheme.

Table 4.3

Awareness of CMCHIS–PMJAY among Households

Awareness of CMCHIS–PMJAY and Sources of Information		Frequency	Percent
Awareness about CMCHIS–PMJAY	Yes	327	84.7
	No	59	15.3
Source of Awareness about CMCHIS–PMJAY	Television / News Channels	51	13.2
	Newspapers, Print Media or Advertisements	73	19.2
	Friends or Neighbors	144	37.3
	Other Beneficiaries	59	15.3
	Total	386	100.0

Source: Primary Data

The Table 3 presents the respondents' awareness of CMCHIS–PMJAY and their sources of information about the scheme. The findings show that a large majority of the respondents (84.7 Per cent) were aware of CMCHIS–PMJAY, while 15.3 Per cent reported that they were not aware of the scheme. Among those who were aware, friends or neighbours were the most common source of information (37.3 Per cent), followed by newspapers, print media, or advertisements (19.2 Per cent). Other beneficiaries (15.3 Per cent) and television or news channels (13.2 Per cent) also contributed to spreading awareness. These findings indicate that personal networks played a greater role than mass media in creating awareness about CMCHIS–

PMJAY among the study households.

4.4 Enrollment Status and Household Coverage under CMCHIS–PMJAY

While awareness is essential, it does not always lead to enrollment. The table 4.4 presents the enrollment status of households and the enrollment attempts made by households that are not yet enrolled in the scheme.

Table: 4. 4

Enrollment Status Household Coverage under CMCHIS–PMJAY

CMCHIS–PMJAY Enrollment Profile		Frequency	Percent
Household Member Enrolled under CMCHIS–PMJAY	Yes	127	32.9
	No	259	67.1
Attempted to Enroll under CMCHIS–PMJAY (Among Non-Enrolled Households)	Yes	75	19.4
	No	125	32.4
Total		386	100.0

Source: Primary Data

The Table 4.4 presents the enrollment status of households under CMCHIS–PMJAY. The results show that 32.9 Per cent of the respondents had enrolled in the scheme, whereas 67.1 Per cent had not enrolled. Among the households that were not enrolled, only 19.4 Per cent had attempted to enroll, while 32.4 Per cent had never attempted the enrollment process. These findings indicate that although the scheme has reached a section of the population, a large proportion of households remain outside the programme. The low level of enrollment and the limited number of enrollment attempts among non-enrolled households suggest the need for greater awareness and improved access to the enrollment process.

4.5 Association between Awareness about CMCHIS–PMJAY and Household Enrollment under the Scheme

Awareness about the CMCHIS–PMJAY scheme is considered an important factor influencing household enrollment. To examine this relationship, a Chi-square test was performed at the 5 percent level of significance ($p < 0.05$). Table 4.5 presents the results of the analysis by showing the distribution of enrolled and non-enrolled households according to their level of awareness about the scheme.

Table 4.5

Chi-square Analysis of Awareness about CMCHIS–PMJAY and Household Enrollment

Variable	Category	Not Enrolled n (Per cent)	Enrolled n (Per cent)	Total (N)	Chi-square Value	p-value	Significance
Awareness about CMCHIS–PMJAY	No	59 (100.0)	0 (0.0)	59	34.150	<0.001	Significant
	Yes	200 (61.2)	127 (38.8)	327			
	Total	259 (67.1)	127 (32.9)	386			

Significant at the 5 per cent level ($p < 0.05$)

Source: Computed from Primary Data.

The Table 4.5 presents the association between awareness of CMCHIS–PMJAY and enrollment under the scheme. All respondents who were not aware of CMCHIS–PMJAY (100.0 Per cent) were not enrolled in the programme. In contrast, among those who were aware of the scheme, 38.8 Per cent had enrolled, while 61.2 Per cent had not enrolled. The Chi-square test showed a statistically significant association between awareness and enrollment (Chi- square = 34.150, $p < 0.001$). These findings indicate that awareness plays an important role in influencing enrollment under CMCHIS–PMJAY, and households with greater awareness are more likely to enroll in the scheme.

4.6 Utilization of CMCHIS–PMJAY Services

Figure 1 shows the respondents who used CMCHIS–PMJAY services during the last 12 months among the households enrolled in the scheme.

Source: Primary Data.

Figure 1

Utilization of CMCHIS–PMJAY Services (N=127)

Figure 1 shows that 74 respondents (58.3 Per cent) had used CMCHIS–PMJAY services during the last 12 months, while 53 respondents (41.7 Per cent) had not used the scheme. This indicates that more than half of the enrolled households benefited from the available healthcare services, although a considerable number of respondents did not use the scheme during the study period.

4.7 Association between Hospitalization and Utilization of CMCHIS–PMJAY

Hospitalization is an important factor influencing the use of health insurance benefits. Table 4.6 examines the association between hospitalization during the last 12 months and the utilization of CMCHIS–PMJAY among households enrolled in the scheme.

Table 6

Association between Hospitalization During the Last 12 Months and Utilization of CMCHIS–PMJAY among Enrolled Households (N = 127)

Hospitalization During the Last 12 Months	Did Not Utilize CMCHIS–PMJAY N (Per cent)	Utilized CMCHIS–PMJAY N (Per cent)	Total (N)	Chi-square	p-value	Significance
No	36 (100.0)	0 (0.0)	36	70.149	<0.001	Significant
Yes	17 (18.7)	74 (81.3)	91			
Total	53 (41.7)	74 (58.3)	127			

Source: Computed from Primary Data.

The Table 4.6 shows the association between hospitalization during the last 12 months and the utilization of CMCHIS–PMJAY among enrolled households. Among the 91 households that reported hospitalization, 74 (81.3 Per cent) utilized CMCHIS–PMJAY, while 17 (18.7 Per cent) did not use the scheme. In contrast, none of the 36 households without hospitalization utilized CMCHIS–PMJAY. The Chi-square test showed a statistically significant association between hospitalization and utilization of CMCHIS–PMJAY (Chi-Square = 70.149, $p < 0.001$). The findings indicate that households requiring hospital care were significantly more likely to utilize the benefits available under the scheme.

5. Discussion

The findings of this study suggest that awareness is an important first step in improving access to CMCHIS–PMJAY, but awareness alone does not ensure enrollment. Although many households were familiar with the scheme, a considerable proportion remained unenrolled. This indicates that factors beyond awareness, such as the ease of the enrollment process and access to support services, may influence participation. Improving these aspects would help extend the benefits of the scheme to a larger section of the eligible population.

The study also highlights the importance of healthcare need in determining the utilization of CMCHIS–PMJAY. Households that required hospitalization were more likely to use the scheme, indicating that health insurance serves as a valuable source of financial support during episodes of illness. However, the presence of some hospitalized households that did not utilize the scheme suggests that practical barriers to accessing benefits still exist. Addressing these barriers would improve the effectiveness of the programme and ensure that eligible households receive timely healthcare services.

The study demonstrates that CMCHIS–PMJAY has made a positive contribution to improving access to healthcare among enrolled households. At the same time, strengthening enrollment efforts, simplifying access to benefits, and improving beneficiary support remain important for expanding the reach of the programme. These measures can enhance the effectiveness of the scheme and contribute to more equitable access to healthcare in Tamil Nadu.

6. Conclusion

The present study examined access to CMCHIS–PMJAY through the dimensions of awareness, enrollment, and healthcare utilization among households in Kanyakumari District. The findings indicate that improving access to health insurance requires not only increasing public awareness but also strengthening enrollment and ensuring that eligible households can effectively utilize the available benefits when healthcare is needed. Although the scheme has contributed to improving access to hospital care, further efforts are required to simplify enrollment procedures, enhance beneficiary support, and remove barriers that limit effective utilization. Strengthening these aspects will improve the overall performance of CMCHIS–PMJAY and support the goal of equitable and accessible healthcare for all eligible households...

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