Journal of Medical and Scientific Research

JMSR
www.jmsronline.com

Shampa D et al. J Med Sci Res. 2026; 14(2):47-52
DOI: http://dx.doi.org/10.17727/JMSR.2026/14-9

ORIGINAL RESEARCH OPEN ACCESS

Awareness, coverage, and utilization of Ayushman Bharat–Pradhan Mantri Jan Arogya Yojana in Rural and Urban Tripura: A comparative cross-sectional study

Das Shampa[1,*], Mog Chanda[1], Datta Dwaipayan[1], Pal Achintya[2], Mura Singh Kumar Krishi[1], and Akshara N[1]

[1]Department of Community Medicine, Agartala Government Medical College, Agartala, Tripura 799006, India
[2]Department of General Medicine, Agartala Government Medical College, Agartala, Tripura 799006, India

Abstract

Introduction: Ayushman Bharat–Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) is a flagship health insurance scheme aimed at providing financial protection against catastrophic health expenditure. This study aimed to assess the awareness, coverage, and utilization of AB-PMJAY among households in the Urban Health Training Centre (UHTC) and Rural Health Training Centre (RHTC) areas of Agartala Government Medical College (AGMC), Tripura, and to compare these parameters between the two areas.

Methods: A community-based comparative cross-sectional study was conducted among 200 households in the UHTC and RHTC areas of AGMC using a multistage sampling technique. Data were collected using a pretested, predesigned semi-structured interview schedule and analyzed using SPSS version 29.

Results: Good awareness regarding AB-PMJAY was observed among 31.25% of urban and 45.26% of rural participants among those who heard about it. Coverage under the scheme was reported by 57% of households in urban areas and 64% in rural areas. The utilization rate was 22% in urban areas and 42% in rural areas. Significant rural–urban differences were observed in ever using the AB-PMJAY card ($p = 0.02$), type of healthcare facility utilized ($p = 0.003$), and incurring out-of-pocket expenditure despite possessing an AB-PMJAY card ($p = 0.004$). The common reasons for non-utilization included lack of knowledge regarding the purpose of the card (44%) and lack of awareness about where and how to use it (37%).

Conclusion: Awareness, coverage, and utilization of AB-PMJAY were comparatively better among rural households than urban households. Strengthening community awareness campaigns may improve the utilization of the scheme.

Keywords: Awareness; coverage; utilization; Ayushman Bharat–Pradhan Mantri Jan Arogya Yojana; AB-PMJAY.

Introduction

Ayushman Bharat–Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) is one of the flagship health initiatives of the Government of India aimed at achieving Universal Health Coverage (UHC) by providing financial protection against catastrophic health expenditure to economically vulnerable populations [1]. Launched in September 2018, the scheme provides health insurance coverage of up to INR 5 lakh per family per year for secondary and tertiary care hospitalization. AB-PMJAY seeks to improve access to quality healthcare services, reduce out-of-pocket expenditure, and enhance health outcomes among the underprivileged sections of society [2–4]. The scheme is considered the world's largest government-funded health assurance programme in terms of the number of beneficiaries covered and has the potential to substantially reduce the economic burden associated with healthcare expenditure [1,2].

***Corresponding author:** Dr. Shampa Das, Department of Community Medicine, Agartala Government Medical College, Agartala, Tripura 799006, India. Email: drshampa777@gmail.com

Received 16 January 2026; *Revised* 4 March 2026; *Accepted* 16 March 2026; *Published* 25 March 2026

Citation: Shampa D, Chanda M, Dwaipayan D, Achintya P, Krishi MSK, Akshara N. Awareness, coverage, and utilization of Ayushman Bharat–Pradhan Mantri Jan Arogya Yojana in Rural and Urban Tripura: A comparative cross-sectional study. J Med Sci Res. 2026; 14(2):47-52. DOI: http://dx.doi.org/10.17727/JMSR.2026/14-9

Despite its ambitious objectives and extensive coverage, the success of AB-PMJAY largely depends on the awareness, acceptability, and utilization of the scheme by the eligible beneficiaries. Awareness regarding the benefits, eligibility criteria, and procedures for availing services is crucial for ensuring optimal utilization of the scheme. Previous studies have demonstrated that awareness significantly influences the acceptability, enrolment, and utilization of health insurance schemes among the target population [5]. Low literacy levels, ignorance, inadequate dissemination of information, and lack of knowledge regarding the scheme have been identified as important barriers to accessing and utilizing health insurance services [6]. In addition, disparities in awareness and utilization may exist between rural and urban populations due to differences in socioeconomic status, educational attainment, and access to healthcare facilities.

Very few studies have assessed the awareness, coverage, and utilization of AB-PMJAY in Tripura. The present study was undertaken to assess the level of awareness, coverage, and utilization of Ayushman Bharat–Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) among households residing in the Urban Health Training Centre (UHTC) and Rural Health Training Centre (RHTC) areas of Agartala Government Medical College, Tripura. The study also aimed to compare the awareness, coverage, and utilization of the scheme between the urban and rural populations and to identify factors associated with its utilization.

Materials and Methods

A community-based comparative cross-sectional study was conducted in the Urban Health Training Centre (UHTC) and Rural Health Training Centre (RHTC) areas of Agartala Government Medical College (AGMC), Tripura, over a period of two months from 1st February 2025 to 31st March 2025. All adults aged 18 years and above who had been residing in the urban and rural field practice areas for more than one year were eligible for inclusion in the study.

The sample size was calculated using the formula $(Z_{1-\alpha/2})^2[p_1(100-p_1) + p_2 (100-p_2)]/ d^2$, considering awareness regarding the benefits of the AB-PMJAY scheme to be 9% in urban areas and 18.8% in rural areas, based on a previous study [7]. Assuming a 95% confidence level and an absolute error of 10%, the estimated sample size was 200, comprising 100 participants each from the urban and rural areas.

A multistage sampling technique was adopted for the selection of study participants. The RHTC area comprised 13 subcentres, of which four subcentres were selected by simple random sampling. Subsequently, 25 households were selected randomly from each selected subcentre area to achieve the desired sample size of 100 households. The UHTC area consisted of four wards, and 25 households were selected randomly from each ward to obtain a total of 100 households. The head of the household or any adult family member aged 18 years or above who was available at the time of the survey was interviewed after obtaining written informed consent. Households that remained locked despite two consecutive visits were excluded from the study.

Data were collected using a predesigned, pretested semi-structured interview schedule. Awareness regarding the AB-PMJAY scheme was assessed by assigning a score of 1 for each correct response and a score of 0 for an incorrect or "don't know" response across all awareness-related items. The overall awareness score ranged from 0 to 8. The mean awareness score of the study participants was calculated, and respondents scoring above the mean were categorized as having good awareness, whereas those scoring below the mean were considered to have poor awareness. Coverage of the scheme was defined as enrolment under AB-PMJAY and possession of an AB-PMJAY card. Utilization of the scheme was defined as having used AB-PMJAY services at least once since enrolment.

The study protocol was approved by the Institutional Ethics Committee of Agartala Government Medical College. Data were entered and analysed using Statistical Package for the Social Sciences (SPSS) version 29. Continuous variables were summarized using mean and standard deviation, while categorical variables were expressed as frequencies and percentages. The Chi-square test was used to assess associations between categorical variables. A p-value of less than 0.05 was considered statistically significant.

Results

A total of 200 participants, comprising 100 each from the Urban Health Training Centre (UHTC) and Rural Health Training Centre (RHTC) areas, participated in the study. The majority of the participants belonged to the 31–40 years age group. The mean age of the study participants was 42.63 ± 13.60 years. Most of the participants were married, accounting for 85% and 91% in the urban and rural areas, respectively. Homemakers constituted the largest occupational group, representing 60% of participants in the urban area and 62% in the rural area. More than 60% of the participants in both urban and rural areas belonged to the Below Poverty Line (BPL) category (Table 1).

Table 1: Socio-demographic profile of study participants (n=200).

Variables	*Residence*	
	Urban (%) (n=100)	*Rural (%) (n=100)*
Age group		
a) 18- 30 years	20	23
b) 31-40 years	35	27
c) 41-50 years	21	22
d) 51-60 years	17	14
e) 61 years & above	7	14
Marital status		
a) Married	85	91
b) Unmarried	4	5
c) Widowed/divorced/ separated	11	4
Educational status		
a) Iliterate	10	8
b) Shakshar	23	14
c) Primary school	21	23
d) Middle school	21	20
e) Secondary	15	20
f) Higher secondary	3	5
g) Graduate & above	7	10
Occupation		
a) Unemployed/ retired	5	7
b) Home maker	60	62
c) Daily labourer/ Unskilled worker	16	12
d) Skilled worker	7	6
e) Clerical/ shop owner/ business	5	6
f) Govt./ Private service	7	7
Type of Family		
a) Nuclear family	65	71
b) Joint family	35	29
SES (Modified BG prasad 2024)		
a) Class I	8	12
b) Class II	26	23
c) Class III	33	20
d) Class IV	30	34
e) Class V	3	11
Religion		
a) Hindu	63	99
b) Muslim	37	1
Category		
a) General	56	26
b) SC	30	54
c) ST	6	5
d) OBC	8	15
Ration card holding status		
a) APL	33	32
b) BPL	60	64
c) Antodaya	7	4

More than 90% of the participants had heard about the AB-PMJAY scheme. However, awareness regarding specific components of the scheme was comparatively low. Awareness about the scheme was assessed among those who have heard about the scheme. knowledge about the eligibility criteria was reported by 47% in the urban area and 66% in the rural area, while awareness regarding the coverage limit of INR 5 lakh per family per year was reported by 56% and 52% in the urban and rural areas, respectively. Overall, good awareness regarding AB-PMJAY was observed among 31.25% of participants in the urban area and 45.26% of participants in the rural area. A statistically significant difference in the level of awareness was observed between the urban and rural populations ($p = 0.04$) (Table 2).

Coverage of the AB-PMJAY scheme, as evidenced by possession of an AB-PMJAY card, was 57% in the urban area and 64% in the rural area. The most common reason reported for not possessing an AB-PMJAY card was lack of knowledge regarding the application process, which was cited by 48% of the participants.

Among the participants who possessed an AB-PMJAY card, the lifetime utilization of the scheme was 22% in the urban area and 42% in the rural area. The majority of the beneficiaries availed healthcare services under AB-PMJAY from government healthcare facilities, accounting for 62% of users in the urban area and 96% in the rural area. Statistically significant differences between the urban and rural populations were observed with respect to ever using the AB-PMJAY card ($p = 0.02$), the type of healthcare facility utilized under the scheme ($p = 0.003$), and incurring out-of-pocket expenditure despite possessing an AB-PMJAY card ($p = 0.004$) (Table 3).

The major reasons for non-utilization of the AB-PMJAY card among the beneficiaries included lack of knowledge regarding the purpose of the card (44%), inadequate awareness about the procedure and place of utilization (37%), and absence of an empanelled healthcare facility nearby (19%).

Table 2: Awareness on AB-PMJAY scheme.

	Residence		*P value*
	Urban	*Rural*	
Aware about AB-PMJAY (n= 200)			
a) Yes	96	95	X2= 0.116
b) No	4	5	P value= 0.73
Primary source of information on AB-PMJAY (n= 191)			
a) Friends/relatives	32 (33.33)	23(24.21)	
b) PHC/CHC/UPHC/Other health facility	12 (12.50)	27 (28.42)	
c) ASHA/AWW/Health worker/Arogya Mitra	33 (34.38)	35 (36.84)	X2= 10.09
d) Newspaper/TV/Radio/ internet	15 (15.62)	8 (8.42)	P value= 0.03
e) Others	4 (4.17)	2 (2.10)	
Eligibility criteria of AB-PMJAY [n= 191 (Urban 96, Rural 95)]			
a) All	25 (26.04)	15 (15.79)	
b) Vulnerable population (poor & BPL)	45 (46.88)	63 (66.32)	X2=7.378
c) Don't know	26 (27.08)	17 (17.90)	P value= 0.02
Maximum coverage limit per family per year under PM-JAY [n= 191 (Urban 96, Rural 95)]			
a) 5 lakhs	40 (41.67)	44 (46.32)	
b) Don't know	54 (56.25)	50 (52.63)	X2= 0.672
c) Others	2 (2.08)	1(1.05)	P value= 0.71
Is there a cost to apply or obtain an AB-PMJAY card [n= 191 (Urban 96, Rural 95)]			
a) Yes	15 (15.62)	12 (12.63)	
b) No	59 (61.46)	68 (70.83)	X2=2.290
c) Don't know	22 (22.92)	15 (15.79)	P value= 0.31
Type of health care services covered under AB-PMJAY [n= 191 (Urban 96, Rural 95)]			
a) Outdoor	2 (2.08)	4 (4.17)	
b) Indoor	66 (68.75)	69 (71.88)	X2= 1.448
c) Don't Know	28 (29.17)	22 (22.92)	P value= 0.48
Can beneficiary choose any hospital for treatment under AB-PMJAY [n= 191 (Urban 96, Rural 95)]			
a) Yes	22 (22.92)	23(24.21)	
b) No	33 (34.38)	29 (30.53)	X2= 0.322
c) Don't know	41 (42.70)	43 (45.26)	P value= 0.85
Does it cover all pre-existing diseases [n= 191 (Urban 96, Rural 95)]			
a) Yes	14 (14.58)	21 (22.10)	
b) No	15 (15.62)	16 (16.84)	X2= 2.075
c) Don't know	67 (69.80)	58 (61.05)	P value= 0.35
Does it cover any pre hospitalization expenses [n= 191 (Urban 96, Rural 95)]			
a) Yes	12 (12.50)	18 (18.95)	
b) No	22 (22.92)	21 (22.11)	X2= 1.523
c) Don't know	62 (64.58)	56 (58.95)	P value= 0.46
Does it cover post hospitalization expenses [n= 191 (Urban 96, Rural 95)]			
a) Yes	30 (31.25)	42 (44.21)	
b) No	8 (8.33)	8 (8.42)	X2= 3.635
c) Don't know	58 (60.42)	45 (47.37)	P value= 0.16
Level of awareness [n= 191 (Urban 96, Rural 95)]			
a) Good	30 (31.25%)	43 (45.26%)	X2= 3.97
b) Poor	66 (68.75%)	52 (54.74%)	P value= 0.04

Table 3: Utilization of AB-PMJAY scheme by study participants.

Variables	*Residence*		*P value*
	Urban N=57	*Rural N= 64*	
Ever used AB-PMJAY card for hospitalization			
a) Yes	13 (22.80)	27 (42.18)	X2= 5.117 P value= 0.02
b) No	44 (77.20)	37 (57.81)	
Type of health facility where AB-PMJAY card utilized [N= 13 (urban), 27 (rural)]			
a) Govt. Health facility	8 (61.53)	26 (96.30)	X2= 8.314 P value= 0.003
b) Private hospital	5 (38.47)	1 (3.70)	
Number of times AB-PMJAY card utilized in last one year			
a) Once	10 (76.92)	21(77.77)	X2= 0.003 P value= 0.95
b) 2-3 times	3 (23.08)	6 (22.23)	
Purpose of utilization of AB-PMJAY card			
a) Medical treatment	8 (61.54)	14 (51.85)	X2= 0.383 P value= 0.82
b) Surgery	3 (23.08)	7 (25.92)	
c) Both	2 (15.38)	6 (22.23)	
Have you paid out of your pocket for buying medicines despite having AB-PMJAY card			
a) Yes	9 (69.23)	6 (22.23)	X2= 8.273 P value= 0.004
b) No	4 (30.77)	21 (77.77)	
Availability of services which was need at hospital where AB-PMJAY card was used			
a) Fully available	11(84.62)	18 (66.66)	X2= 1.417 P value= 0.23
b) Partially available	2 (15.38)	9 (33.33)	
Difficulties faced while utilizing Ayushman benefits			
a) No issue faced	9 (69.23)	22 (81.48)	X2= 0.755 P value= 0.38
b) Issues faced (Long waiting time, facilities were not available, others)	4 (30.77)	5 (18.52)	

Discussion

The present community-based comparative cross-sectional study was conducted in the Urban Health Training Centre (UHTC) and Rural Health Training Centre (RHTC) areas of Agartala Government Medical College, Tripura. The study demonstrated that although more than 90% of the participants from both urban and rural areas had heard about the AB-PMJAY scheme, their awareness regarding specific components of the scheme, such as eligibility criteria, coverage limits, types of healthcare facilities covered, and pre- and post-hospitalization benefits, was relatively low. Coverage under the AB-PMJAY scheme was found to be comparatively higher in the rural area than in the urban area. Similarly, the utilization of the scheme was higher among rural participants (42%) than among urban participants (22%).

The present study revealed that although the majority of the participants had heard about AB-PMJAY, awareness regarding eligibility, coverage limits, and benefits under the scheme was inadequate in both urban and rural areas. Studies conducted in different parts of India have also reported varying levels of awareness regarding AB-PMJAY. A study conducted in Karnataka reported an awareness level of 65%, whereas another study conducted in Tamil Nadu observed awareness among 77.33% of the participants [8,9]. In the present study, Accredited Social Health Activists (ASHAs) and other healthcare workers were the major sources of information regarding the scheme. Similar findings were reported by Girish B et al. in Karnataka [8]. Rural participants were found to have better awareness than their urban counterparts, which may be attributed to the intensive awareness campaigns and special outreach activities undertaken by health workers in rural areas.

The present study showed that the coverage of the AB-PMJAY scheme was 57% in the urban area and 64% in the rural area. Girish B et al. reported that only 44% of the study participants in Karnataka were enrolled under the scheme [8]. Similarly, a study conducted in Tamil Nadu found that only 42.33% of households in the rural field practice area were covered under AB-PMJAY [9]. Comparable findings were reported by Netra G et al., who observed that 50.2% of families had availed some form of health insurance scheme [10]. The comparatively lower coverage observed in these studies as well as in the present study may be attributed to inadequate awareness regarding the enrolment process and benefits available under the scheme.

A previous study reported that only 8% of beneficiaries in urban areas and 15.2% of beneficiaries in rural areas had utilized the benefits of AB-PMJAY [7]. In contrast, the present study found that the utilization of the scheme among enrolled beneficiaries was 22% in the urban area and 42% in the rural area. Another study reported that among 452 beneficiaries enrolled under the scheme, only 1.8% had utilized the scheme during the preceding years [8]. The present study identified lack of knowledge regarding the purpose of the AB-PMJAY card as the most common reason for non-utilization of the scheme. Similar findings have been reported in other studies, where ignorance and inadequate awareness regarding the scheme were identified as major barriers to its utilization [7,9]. Despite the higher utilization observed in the rural area compared to the urban area, there remains scope for improving the utilization of AB-PMJAY in both settings. Therefore, continued efforts to strengthen public awareness campaigns, enhance health education activities, and facilitate easier access to scheme benefits may further improve the utilization of AB-PMJAY among the eligible population.

This study was carried out in the community and compared both urban and rural areas. Whereas the majority of published studies were conducted in hospital settings [11,12] to assess the awareness and coverage of the AB-PMJAY scheme.

Limitation of the study: The present study was conducted only in the Urban Health Training Centre and Rural Health Training Centre areas of Agartala Government Medical College. Therefore, the findings may not be generalizable to the entire urban and rural population of Tripura. Unoccupied homes or locked houses during survey hours may be associated with specific socioeconomic characteristics (e.g., dual-income families, migrant workers) who may have different health-seeking behaviours. But in our study only two houses in rural area were found locked as they were migrated to urban setup for their children's education.

Conclusion

The present study revealed that although the majority of the participants had heard about the AB-PMJAY scheme, awareness regarding important aspects such as eligibility criteria, coverage limits, and benefits under the scheme was inadequate in both urban and rural areas. The levels of awareness and coverage of the scheme were comparatively better among the rural population than the urban population. Similarly, the utilization of the scheme among beneficiaries was considerably lower in the urban area compared to the rural area. Further strengthening community awareness programmes and facilitating easier access to scheme benefits may enhance the utilization of AB-PMJAY. Improved utilization of the scheme has the potential to enhance access to healthcare services and contribute to better health outcomes in the community.

Acknowledgements

We sincerely acknowledge the students and Medico-Social Workers for their assistance during data collection. We also thank the participants for their valuable cooperation and time.

Conflicts of interest

Authors declare no conflicts of interest.

References

[1] National Health Authority. Ayushman Bharat – Pradhan Mantri Jan Arogya Yojana: Operational Guidelines. New Delhi: Ministry of Health and Family Welfare; 2018.

[2] Sharma A, Kaur R. Evaluation of the Ayushman Bharat Pradhan Mantri Jan Arogya Yojana: a systematic review. Indian J Public Health. 2020; 64:130–136.

[3] Gupta R, Mohan D. Impact of Ayushman Bharat Scheme on health coverage in India. J Health Manag. 2021; 23:55–64.

[4] Singh S, Sharma P. Awareness and utilization of AB–PMJAY in rural India: a study of two districts. Health Policy Plan. 2022; 37:512–519.

[5] Chemin M. Informal groups and health insurance take–up: evidence from a field experiment. World Dev. 2018; 101:54–72.

[6] Gupta M, Patel V. Utilization patterns of Ayushman Bharat Scheme among urban beneficiaries. Health Econ Rev. 2023; 13:15–24.

[7] Dixit R, Chauhan A, Juneja K. Awareness and utilization of Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (ABNHPM) among beneficiaries of Gautam Buddha Nagar district: a comparative study. Indian J Community Med. 2025; 50:213–219.

[8] Girish B, Surendran J, Vishma BK, Jyothika V, Tahreem S. Study on awareness and utilization of Ayushman Bharat Arogya Karnataka scheme in Chamarajanagar taluk: a cross–sectional study. Int J Res Med Sci. 2023; 11:544–550.

[9] Sriee GVVP, Maiya GR. Coverage, utilization, and impact of Ayushman Bharat scheme among the rural field practice area of Saveetha Medical College and Hospital, Chennai. J Family Med Prim Care. 2021; 10:1171–1176.

[10] Netra G, Rao BAV, Kengnal P. Utilization, satisfaction, out–of–pocket expenditure and health–seeking behaviour among the insured residents of rural field area: a cross–sectional study. Int J Community Med Public Health. 2020; 7:1047–1050.

[11] Kanwal S. Assessing awareness, utilization and satisfaction regarding services under Ayushman Bharat (AB–PMJAY) in a tertiary care hospital of North India: a cross–sectional study. Int. J. Sci. Res. 2023; 12: 2277 – 8179.

[12] Kumar R, Suman S, Sinha A. A Cross–Sectional Study on Knowledge, Attitude, Practices, and Utilization of AB–PMJAY among Beneficiaries at NMCH Patna. Int. J. Pharm. Clin. Res. 2024; 16:2561–2564.