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Original Research Article

Study on awareness and utilization of Ayushman Bharat Arogya Karnataka scheme in Chamarajanagar taluk: a cross-sectional study

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ABSTRACT

Background: Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) is India's government-funded health insurance scheme that covers over 10.74 crore poor and vulnerable families. Karnataka has been at the forefront of successfully implementing this health scheme which named as Ayushman Bharat Arogya Karnataka (ABArK) through Suvarna Arogya Suraksha trust (SAST).
Methods: This cross-sectional study was conducted in Chamarajanagar Taluk. All the 22 rural and urban field practice area of Chamarajanagara medical college and hospital were enlisted and the study subjects were randomly selected. After obtaining consent, the head of the family or in his absence the eldest adult in the households were taken as respondents.
Results: The study included 1027 households; out of which 452 (44%) are card holders. The majority of ABArK card holders 434 (96%) are BPL card holders and rural residents (60%). The totals of 666 (65%) study subjects are aware about the scheme, out of which 68% are the beneficiaries. Unfortunately, only 3% of the card holders were utilized the scheme and get benefitted.
Conclusions: The ABArK scheme and service utilisation by the study population were inadequate. The lack of adequate awareness and poor communication between health workers are the major factors for under-utilization of the scheme.

Keywords: ABArK scheme, Awareness, Coverage, Beneficiaries, Utilisation

INTRODUCTION

Health is a human right; it's accessibility and affordability has to be ensured in all sections of the community. The world health organization (WHO) defines universal health coverage (UHC) as means to enable all people and communities to use all health services they need, which of sufficient quality to be effective. Hence, the concept of health insurance came into existence. AB-PMJAY is India's government-funded health insurance scheme that covers more than 10.74 crore poor and vulnerable families which comprises a population of 65 crores all over India.

Karnataka has been at the forefront of successfully implementing this health care scheme earlier through SAST on March 02, 2018, on an Assurance Mode, for the benefit of a large section of BPL and APL families.

Since both Arogya Karnataka and Ayushman Bharat have the same goal and scope, both the schemes were integrated under a co-branded name ABArK and being implemented in an insurance mode from October 30, 2018, which envisages reducing Out-of-pocket expenditure (OOPE) and catastrophic expenditure on health care through the participation of the private sector in addition to the existing network of public hospitals.[1]

The integrated scheme covers simple secondary, complex secondary, tertiary, and emergency treatment procedures. Basic sum assured is 5 lakhs per family per annum for eligible household. The scheme benefits around 1 crore BPL families. 19 lakh APL families are eligible for assistance of 30% of the package rates up to 1.5 lakhs per family per year.[1]

There are many factors which act as barrier between people and the health care scheme such as illiteracy, ignorance, improper knowledge about the scheme and poor connectivity with the hospitals. These factors made them unable to utilize the facilities properly even after enrolling into the scheme. For successful implementation of any health scheme, above mentioned factors must be dealt properly, and people should be motivated to reach out to these health schemes by IEC regarding the benefits of the scheme.

The present study focuses on awareness and utilization of AB-ArK scheme, since most of the families in rural and urban areas of Chamarajanagara taluk are BPL card holders and belong to lower socioeconomic class. For these families it is financially challenging to afford health care whenever it required if they don't have any existing health insurance scheme.

Review of literature

A cross-sectional study was conducted among 300 households in Mappedu region of Thiruvallur district by Saveetha Medical College found that, out of total households interviewed only 42.33% were covered under Ayushman Bharat scheme in which 47.24% households have availed Ayushman Bharat scheme in the past 1 year and 10% of those availed the scheme has spent additional amount for health care. Around 40% of the households not having Ayushman Bharat scheme has faced financial burden because of health care expenditure. From this study it was clear that financial burden caused by healthcare expenditure is lower in the households covered under Health Insurance scheme.[2]

Another study conducted for empanelment of health care facilities under AB PM-JAY which analysed the state wise distribution, type and sector of empanelled hospitals and services offered through PM-JAY scheme across all the states and UTs. Found that, in 2020 out of the total facilities empanelled (n=20,257) under the scheme more than half (56%) were in the public sector, while (40%) facilities were private for profit, and (4%) were private not for profit entities. State wise distribution of hospitals showed that five states (Karnataka (14.9%), Gujarat (13.3%), Uttar Pradesh (13%), Tamil Nadu (11.5%) and Rajasthan (10.4%) contributed to more than 60% of empanelled PMJAY facilities: it was also observed that 40% of facilities were offering between two to five specialties while 14% of empanelled hospitals provided 21-24 specialties out of total 26 specialities. The majority of the hospitals empanelled under the scheme are in states with previous experience of implementing publicly funded health insurance schemes, with the exception of Uttar Pradesh.[3]

Study on trends in cardiac care utilization under AB PM-JAY shows that claims from cardiac (cardiology as well as cardiothoracic and vascular surgery) specialty accounted for 5% of the total PM-JAY claim volume. However, it shares in the total claim volume was significantly higher at 26% indicating that a very high proportion of the scheme was utilized to provide free cardiac care to beneficiaries coming from the poorest segment of the population. The analysis also indicates significant variation in the supply of the cardiac facilities and the need to further develop health infrastructure for cardiac care, particularly in certain states where the supply is found to be inadequate.[4]

A study on the utilisation of ABArK among COVID patients [shrisharath et al], a cross sectional study was conducted by collecting data from the hospital medical records department, by taking prior permission at a tertiary care hospital of Dakshina Kannada District, Karnataka.

In the study total 1367 COVID-19 positive cases were admitted and majority of them were from Karnataka accounting for 93.92%. The eligible subjects for ABArK were 906 (66.27%), Out of which 714 (78.8%) had utilized the scheme. Among the patients who have utilized the ABArK scheme, 443 (62.04%) were men and 271 (37.95%) were women. Utilization of this scheme requires further improvement by creating awareness activities among general public. This helps in reducing the out-of-pocket expenditure and burden in accessing the healthcare facility.[5]

Another descriptive study on out- of- pocket expenditure among the urology patients' schemes in a teaching hospital was conducted among 160 patients admitted in Urology Department who are covered under various health schemes for the duration of 6 months. Out of the 160 study participants, various health schemes availed were 120 (75%) Arogya Karnataka, 8 (11.25%) RBSY Kerala and 6 (3.75%) Sampoorna Suraksha. Expenses other than medical included home care assistance, adaptations to home and cost of parallel treatment. Prevalence of catastrophic health expenditure in our study was 8.75%. The government should increase the public health spending to reduce the out-of-pocket expenditure by the families and the public must be educated about the availability of insurance scheme and their efficient/optimum utilization.[6]

Non-experimental research to assess the level of knowledge regarding AB-PMJAY among people residing in urban areas and people who consented to participate were selected (n=100). Majority 62% of samples were having poor knowledge, 22% were having average knowledge and 16% were having good knowledge. It was

concluded that a large number of people were not having adequate knowledge about ABPMJAY policy, its eligibility criteria and facilities.[7]

Objectives

Objectives were to assess the awareness and willingness to avail AB-ArK and to know the pattern of study subjects according to utilization and coverage of AB-ArK.

METHODS

This community based cross-sectional study was conducted among the eligible households of rural and urban areas of Chamarajanagara taluk of Karnataka state. Simple random sampling was done and Probability proportional to population size (PPPS) was used to select the households to reach the sample size of 1027. Data was collected using structured and validated questionnaire. After the entry of data, the descriptive statistics was presented in frequency tables and graph.

Study design

This is community-based descriptive cross-sectional study.

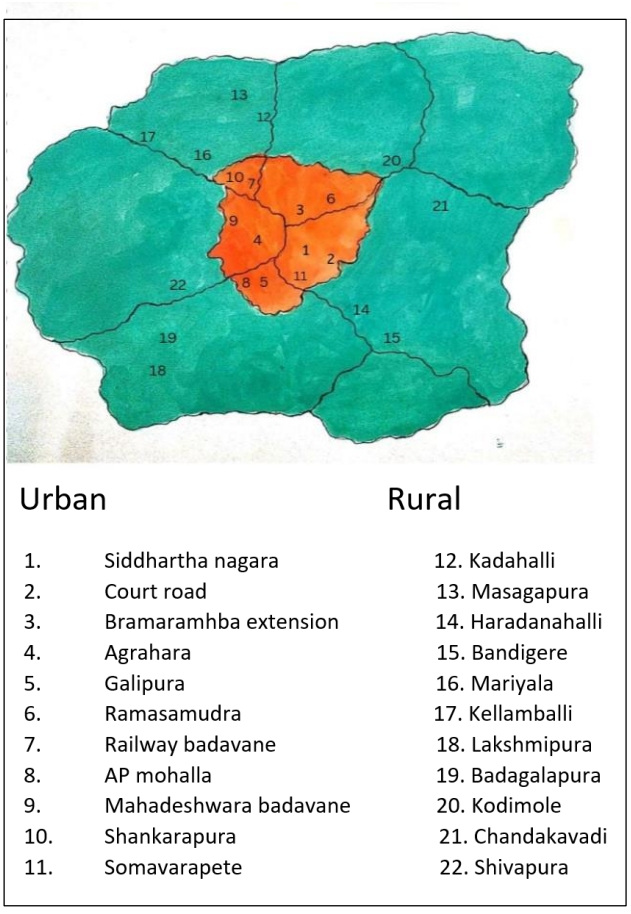

Figure 1: Chamarajnagara taluk map.

Study area and population

The rural and urban field practice area of Chamarajanagara institute of medical sciences, which is in Chamarajanagara taluk was the study area. The study was conducted in 11 rural and 11 urban areas of Chamarajnagara taluk (in the given map below). Simple random sampling using lottery method was used to select the households. The number of households in each ward was selected using probability proportional to size (PPS) technique. Using the formula $4pq/d^2$ with 10% relative allowable error and 95% CI using the prevalence of 25% of overall health insurance coverage in India based on previous report, 1200 is the estimated sample size.[8]

After obtaining consent, the head of the family or in his absence the eldest adult in the households were taken as respondents. Then onwards every household was visited till the required number of subjects was studied. After obtaining consent, head of the family or in his absence the eldest adult in households were taken as the respondents.

Inclusion criteria

The study includes all the households in the study area selected through the sampling method.

Exclusion criteria

The individuals who did not give consent or the households which did not have any member above 18 years or the households that was locked at the time of survey were excluded from the study and the next house fitting the inclusion criteria was selected.

Study period

The study was carried out for the period of 2 months, September and October 2022.

Study tool for data collection

The data was gathered using a structured and internally validated questionnaire. Data collection was done by house to house visit and the head of the family or in his absence the eldest adult or who was educated in the households was interviewed.

The questionnaire consisted of details regarding sociodemographic characteristics, awareness, and coverage of AB-ArK scheme, health care expenditure in past, utilization and willingness to avail AB-ArK scheme.

Statistical analysis

Data was entered in MS excel and analysed. Frequency and percentages were calculated for socio-demographic characteristics and other population parameters.

RESULTS

A total of 1027 samples were collected out of which 452 were card holders in our study. The findings are described in below tables and figures. In our study nearly half of the total participant belongs to 41-60 age group as well as the card holders, which share of 53.3%. Sex wise distribution shows very minute difference among each sex in which males are little predominant in both the groups. In a Hindu predominant population card holders shares exceeds more than 95% and most of the study participants are literate. Interestingly the locality wise distribution shows mixed trend as the urban residents are slightly more among total participants in contrast rural residents contribute 60% of the card holders. Socio-economic status depicts majority of the participants belong to either middle or lower middle class in both the groups and majority of them could possess BPL card.

The study shows only 666 (65%) of total participants have heard about the scheme and among them only 68% could avail the scheme. The major source of information regarding scheme was from health care workers/centres for both the groups. The knowledge regarding scheme was extremely low among the interviewed participants, especially enquiry about age limit, level of benefit, mode and place of services available.

Table 1: Distribution of study subjects according to socio-demographic details.

Socio-demographic characteristics		Total participant, (n=1027) (%)	Card holders, (n=452) (%)
Age (years)	18-40	480 (46.7)	191 (42.3)
	41-60	508 (49.5)	241 (53.3)
	61-70	39 (3.8)	20 (4.4)
Sex	Male	525 (51.1)	228 (51.5)
	Female	502 (48.9)	224 (49.5)
Religion	Hindu	935 (91)	431 (95.4)
	Muslim	79 (7.7)	17 (3.8)
	Christian	13 (1.3)	4 (0.8)
Education	Literate	571 (55.6)	233 (51.5)
	Illiterate	456 (44.4)	219 (48.5)
Locality	Urban	520 (50.6)	181 (40)
	Rural	507 (49.4)	271 (60)
Type of ration card	APL	107 (10.4)	17 (3.8)
	BPL	905 (88.1)	434 (96)
	No card	15 (1.5)	01 (0.2)
Socio-economic status (Modified Kuppuswamy SES)	Upper	73 (7)	16 (3.5)
	Upper middle	220 (21.4)	84 (18.6)
	Middle	323 (31.5)	176 (38.9)
	Lower middle	354 (34.5)	140 (31)
	Lower	57 (5.6)	36 (8)

Table 2: Distribution of subjects according to awareness and willingness to avail AB-ArK scheme.

Awareness about the scheme		Families with knowledge about scheme, (n=666) (%)	Families with ABArk cards, (n=452) (%)
Source of knowledge	HCW	371 (55.7)	296 (65.5)
	Family and friends	177 (26.6)	86 (19)
	Social/ mass media	118 (17.7)	70 (15.5)
Scheme applicable to	BPL	151 (22.7)	86 (19)
	Both APL and BPL	52 (7.8)	31 (6.9)
	Don't know	463 (69.5)	335 (74.1)
Age limit for beneficiaries	Yes	06 (0.9)	02 (0.4)
	No	67 (10.1)	43 (9.5)
	Don't know	593 (89)	407 (90.1)
Level of benefit available at	National	13 (2)	10 (2.2)
	State	62 (9.3)	43 (9.5)
	District	57 (8.6)	41 (9.1)
	Don't know	534 (80.1)	358 (79.2)
Mode of service	Cashless	69 (10.4)	49 (10.9)

Continued.

Awareness about the scheme		Families with knowledge about scheme, (n=666) (%)	Families with ABArk cards, (n=452) (%)
	Partially paid	04 (0.6)	02 (0.4)
	Reimbursement	02 (0.3)	01 (0.2)
	Don't know	591 (88.7)	400 (88.5)
Facilities available at	Government	200 (30)	125 (27.7)
	Both govt. and Prvt.	21 (3.2)	14 (3.1)
	Don't know	445 (66.8)	313 (69.2)

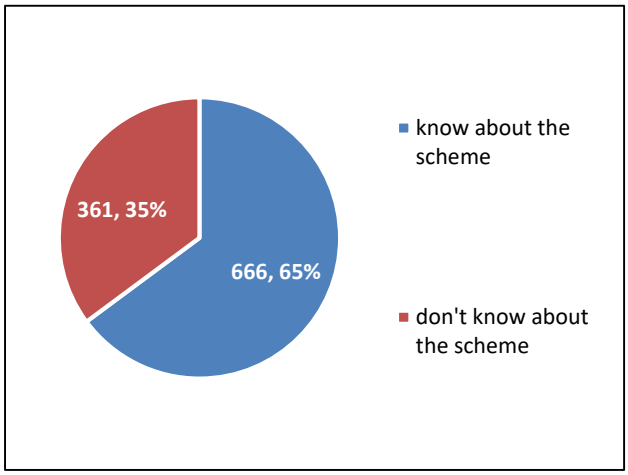

Figure 2: Distribution of participant according to knowledge on scheme.

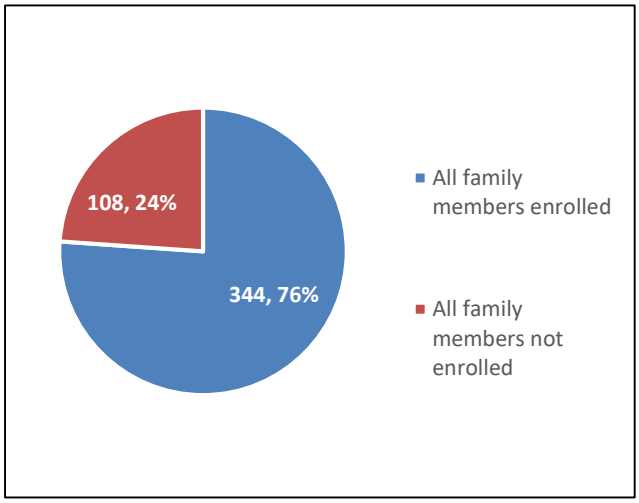

Figure 3: Distribution of family members enrolled in scheme among card holders.

Out of 452 card holders, 344 (76%) could enrol all the family members into the scheme and remaining 108(24%) could not do so. The major reasons for not enrolled were; not registered in ration card, technical errors, personal issues and unawareness about the enrolment process.

Figure 4 shows out of 361 non card holders more than 90% were willing to enrol into the scheme in future, but the remaining were still reluctant to do so.

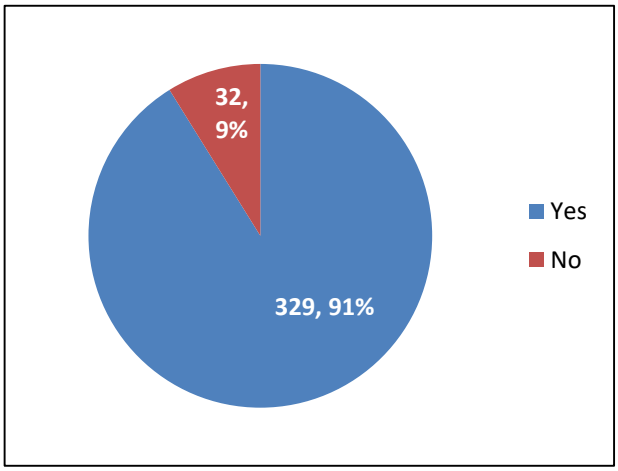

Figure 4: Distribution of participant according to their willingness to enroll into ABArK scheme, (n=361).

Table 3: Distribution of subjects according to utilization and coverage of AB-ArK scheme.

Utilization of the scheme		Families with ABArK card, (n=452) (%)
Enrolled into scheme (Years)	<1	219 (48.5)
	1-3	173 (38.3)
	>3	60 (13.2)
Documents required during enrolment	Aadhar card/ voter ID	101 (22.4)
	Ration card	02 (0.4)
	Both	300 (66.4)
	Don't remember	49 (10.8)
No. of times utilized	0	438 (97)
	1	10 (2.2)
	>2	04 (0.8)
Annual expenditure limit (Lakhs)	<1	03 (0.7)
	1-3	08 (01.7)
	3-5	74 (16.4)
	Don't know	367 (81.2)
Last time utilized, (n=14) (Years)	< 1	04 (28.6)
	1-3	06 (42.8)
	> 3	04 (28.6)
Services utilized, (n=14)	OPD	00
	IPD	08 (56.1)
	BOTH	06 (43.9)

The total of 452 card holders nearly half of them (48.5%) were enrolled into the scheme since last 1 year. Most of the study subjects (66.4%) replied both Aadhar card and ration card were required during the enrolment process. Unfortunately, very few of our study subjects have get benefitted from the scheme (3.1%) which shows their ignorance towards the possible benefits. Out of the total beneficiaries, about 56% has received IPD services through the scheme and 43% have received it within last 1-3 years.

DISCUSSION

Health care is the most essential services required to the community for prevention of disease, promotion of health, rehabilitation of disabled, and curative care of the citizens. An efficient health care can significantly contribute to country's economy, development, and progress towards better future. Unfortunately, due to unexpected illness many families need to pay out of pockets for health services which leads to increase in health care expenditure and been pushed them into poverty. In a developing economy like India due to high out of pocket expenditure, about 3.2% of population fall into below poverty line (BPL) each year and three-fourth of Indians spend most of their earnings on health care deliveries and purchasing drugs.[9]

The main aim of UHC is to make the individual and community to access the health care they required without any financial constraints. So, in order to achieve UHC, Ayushman Bharat scheme has been launched by the government of India. In Karnataka, PMJAY has been integrated with the pre-existing Arogya Karnataka scheme and collectively called as Ayushman Bharath Arogya Karnataka. This study was done to assess the awareness, coverage, utilization, and of Ayushman Bharat scheme.

From the study among 1027 individuals, it's found that 65% of the participants were aware of Ayushman Bharat scheme which was comparatively lower to the results obtained in a survey conducted by the national health authority, where the awareness of Ayushman Bharat scheme was 80% in the state of Tamil Nadu. Another study conducted by Saveetha medical college was found that among 300 households, 77.33% of the households were aware of Ayushman Bharat scheme.[2] Our study also found that awareness of Ayushman Bharat scheme among lower class was slightly low.

Out of total participants, 44% have been enrolled into the scheme while 35.16% were completely unaware of the scheme and remaining was aware but reluctant to enrol into the scheme. Lower results were obtained in data collected from SAST, where only 21% have enrolled for the scheme in Karnataka. Another study among the 300 households, 42.33% households have been covered under the scheme while 57.67% of the households were not covered under the scheme. And it suggests that enrolment for the scheme have been improved over the time.[2]

Among 452 card holders, 96% were BPL card holders while remaining were APL card holders. In the study conducted by SAST in Karnataka, those who have enrolled into the scheme, 82% were BPL card holders while the rest of 18% were APL card holders which are far lower compared to our study. This suggests that there is enhancement of card holders which was mainly focusing on BPL groups. In our study, 39% of card holders belong to lower class and lower middle-class SES which is slightly below the National target of 40%.[10] Almost 65.36% lower class and upper lower class from 300 households have been covered under Ayushman Bharat scheme which is above the national target of 40% according to the study by Saveetha Medical College.[2] Lack of awareness and knowledge about Ayushman Bharat scheme plays a key role for the individuals who are not yet covered under the scheme.

Among the 452 samples that were enrolled under ABArK scheme, only 1.8% of the samples have utilized the scheme in the past years. Lack of knowledge, ignorance and poor communication with health care workers plays the key role for underutilization of the scheme. This leads to the need of making the scheme easier and more accessible to the public which might enhance the utilization of the beneficiaries. The primary health care physician plays a key role in improving health care outcome of the general population where they can help in guiding the patient and create awareness about the scheme in the community.[5]

Total of 57% benefitted participants have used the scheme for both OPD and IPD services in our study. The insurance policies should be revised to encourage more families to utilize the scheme so that out-of-pocket expenses can be reduced. After the completion of survey, each household were educated about the scheme in detail.

Limitation of our study was, not using inferential statistical analysis to find out the significant association between observed population parameters.

CONCLUSION

ABArK scheme is the national health protection scheme which targets poor, socioeconomically backward and weaker section of rural and urban communities.

From this study we found that coverage and utilization of the scheme among the targeted population were extremely low, even though, moderate per cent of participant had awareness and willingness to avail the scheme in future. Due to lack of adequate knowledge many could not utilize or avail the scheme. It was evident that, lack of spread of IEC and inadequate communication between health workers and civilians plays a key role in underutilization of the scheme. The

utilization of the scheme can be improved by creating awareness among public through proper IEC materials and community needs assessment approach. Encouraging the community to utilize the scheme would help in reducing the untoward financial expenditure and reducing burden in accessing the health care facilities. The responsible authorities should properly monitor and govern the functionaries of the scheme for its better improvement and maximum accessibility to needy people.

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Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee

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