

AYUSHMAN BHARAT HEALTH ACCOUNT (ABHA) AMONG THE SELECTED UNDERPRIVILEGED RURAL AND URBAN POPULATION OF KASHMIR, INDIA: A CROSS-SECTIONAL STUDY

Anjum Fazili¹, Javid Ahmad², Javeed Ahmad³, Rohul Jabeen Shah⁴, Neeta Kumar⁵, Shamila Hamid⁶, Ajaz Ahmad Lone⁷, Deeba Farhat⁸

Received : 25/08/2023
Received in revised form : 20/09/2023
Accepted : 26/09/2023

Keywords:

Ayushman Bharat Health Account (ABHA), Ayushman Bharat Digital Mission (ABDM), Rural, Underprivileged, Urban.

Corresponding Author:

Dr. Javeed Ahmad,
Email: Parrayjaveed@gmail.com.

DOI: 10.47009/jamp.2023.5.5.181

Source of Support: Nil,
Conflict of Interest: None declared

Int J Acad Med Pharm
2023; 5 (5); 923-928



^{1&4}Professor, Department of Community Medicine, SKIMS, India.

²Addl. Professor, Department of Community Medicine, SKIMS, India.

³Sociologist, Department of Community Medicine, SKIMS, India.

⁵Scientist-E, ICMR, New Delhi, India.

⁶Associate Professor, Department of Community Medicine, SKIMS, India.

⁷Social worker, ICMR project, India.

⁸Scientist-C, ICMR Project, India.

Abstract

Background: Ayushman Bharat Health Account (ABHA) was launched by Honourable Prime Minister of India Shri Narendra Modi Ji under the umbrella of Ayushman Bharat Digital Mission (ABDM) on the 3rd anniversary of Ayushman Bharat Paradhan Mantri Jan Aarogya Yojna (AB-PMJAY). The objective was to enable citizens to maintain and secure their health records digitally and ensuring a ready access of health data to doctors and health care providers from anywhere in the country with the individual's consent. The data, thus, generated will serve as a real time feedback for our various healthcare schemes and policy makers. **Material & Methods:** A door to door household survey was undertaken in selected underprivileged rural and urban areas of Kashmir (represented by districts Ganderbal and Srinagar respectively). A total of 1069 households were surveyed wherein, information about socio-demographic characteristics and the Ayushman Bharat Health Account (ABHA) status was gathered from 1069 respondents. In majority of the cases, respondents were the heads of the households. Data were collected using the pre-designed questionnaire and was entered in MS-Excel and analysed using IBM SPSS version 21. **Results:** 41.6% of the respondents belonged to the age group of 31-45 years followed by 26.8% in the age group of 15-30 years. A male preponderance (59.1%) was found. 87.5% belonged to nuclear families and 53.4% were urban dwellers as against 46.6% rural dwellers. Majority (91.3%) did not possess Ayushman Bharat Health Account (ABHA) number and the most common reason for not having Ayushman Bharat Health Account (ABHA) number was lack of awareness about Ayushman Bharat Health Account (ABHA) as cited by 75.0% of the respondents. A statistically significant association was found between ABHA status and family type, area of residence and duration of residence in the area ($P=0.012$, < 0.0001 and 0.03 respectively). **Conclusion:** The study reveals a knowledge gap and thus demands a focus towards creating awareness about Ayushman Bharat Health Account (ABHA) and its benefits among the underprivileged population.

INTRODUCTION

Health systems across the globe have witnessed a paradigm shift in recent decades. This is true of our national health system as well which has experienced significant advances in the recent times. One of the recent innovations in this direction is the digitization of the health data, through the introduction of

Ayushman Bharat Health Account (ABHA),^[1] under the umbrella mechanism of Ayushman Bharat Digital Mission (ABDM).^[2] Ayushman Bharat Health Account (ABHA) is one of the key components of Ayushman Bharat Digital Mission (ABDM) which is a step forward towards making India "atmanirbhar" (self-sufficient). The concept of Ayushman Bharat Digital Mission (ABDM) was put forth by Ministry

of Health and Family welfare based on National Health Policy 2017 with the objective of bringing about the digital transformation in country's health care sector and it was nationally rolled out on 27th September 2021 by introducing an integrated uniform and inter-operable ecosystem in the form of Ayushman Bharat Health Account (ABHA) number. The Ayushman Bharat health account (ABHA) is a unique 14-digit health identification number which will serve as the primary repository of health-related information and will help the users, doctors, hospitals insurance and other related organizations etc. to access and share the health records digitally on National health Information portal from any part of the globe. This is a milestone step towards promoting and achieving the goal of telehealth by providing health care providers with access to patient medical records, enabling them to provide remote consultations and treatments. Thus, the facility will help in bridging the health gaps especially with regard to the rural, remote and underprivileged sections of population of the country, who do not get proper access to health services due to inherent physical and economic challenges. In totality, the change will have positive and far-reaching implications on national health system and will play a pivotal role in achieving the universal health coverage.

To achieve this end, statecraft has made it mandatory for all the respective Government health facilities across the country to facilitate the creation of Ayushman Bharat Health Account (ABHA) for the visiting patients at their registration counters. Apart from this, the citizens of the country have been enjoined upon to open their Ayushman Bharat Health Account (ABHA) utilizing the services of existing Common Service centers. To create an Ayushman Bharat Health Account (ABHA) account, certain fundamental pre-requisites must be fulfilled which include possession of an Aadhar for verification, availability of cell phone, Linkage of Aadhar with phone number for getting the necessary One Time Password (OTP).^[3] However, all this necessitates a multi-disciplinary approach as the ultimate adaptability and success of Ayushman Bharat Health Account (ABHA) and, hence, telehealth in India hinges upon a spectrum of social, economic, technological, and policy-related factors. Given this, and considering the existing cultural lags in the country, the present study is a step forward to actually find the status of Ayushman Bharat Health Account (ABHA) among the study participants of selected underprivileged rural and urban pockets of Kashmir valley besides identifying the various impediments in the process of its implementation.

Objectives of the study

Primary objective

- To assess the Ayushman Bharat Health Account (ABHA) status among the selected underprivileged rural and urban population.

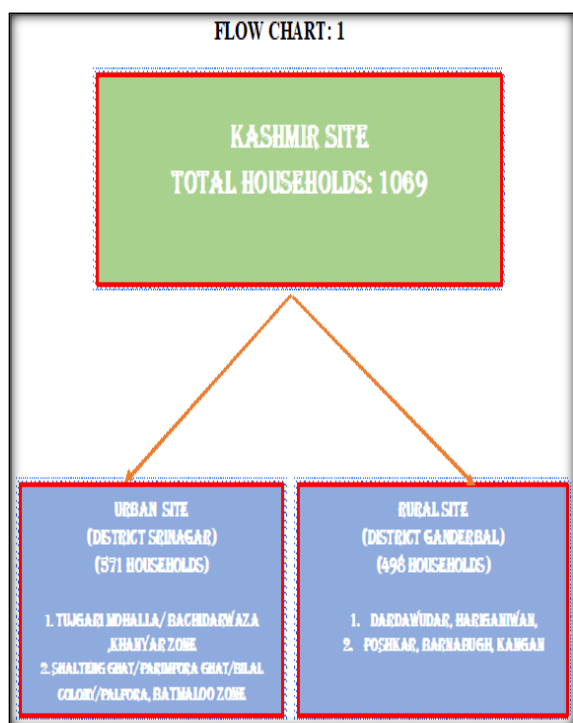
Secondary objective

- To identify the reasons for non-availability of Ayushman Bharat Health Account (ABHA) among study population.
- To find the association between the Ayushman Bharat Health Account (ABHA) status and various socio-demographic characteristics of the study population.

MATERIALS AND METHODS

A door-to-door household survey was undertaken among selected underprivileged rural and urban population as a part of baseline survey in connection with multi-centric study under ICMR Task Force Project titled, "Task force study for evaluation of community level acceptability, scalability and linkage within health system of ICMR pre-validated Labike technologies for screening & diagnosis in rural and urban population– An Implementation research". The study is being conducted in seven study sites including our Kashmir site which represents the Union Territory of J&K with a pre-determined total sample size of 35000 (5000/site). To cover the sample size of 5000 populations (i.e., 1000 households assuming an average household size of 5 members), the study subjects had to be drawn from the selected underprivileged rural and urban areas of two districts of Kashmir valley representing rural and urban background. Accordingly, Srinagar and Ganderbal districts were selected as urban and rural sites respectively. From District Srinagar (urban field site), study sites surveyed included Parimpora/Shalteng Ghat/ Palpora/Qamarwari of Batmallo zone and Tujgari Mohalla/Bachidarwaza of Khanyar zone. From district Ganderbal (rural field site), study sites surveyed included Poshkar Barnabugh and Dardawudar, Hariganiwan from block Kangan. (Refer Flow Chart 1). A total of 1069 households were surveyed catering to a population of 5300(approx.). The study was conducted for a period of 6 months from November 2022 to April 2023. Owing to the lingua franca of the Kashmiri people, written informed consent was provided to the respondents in bilingual mode of English and Urdu as the entire Kashmiri population is not well versed with English language but, have a fair good understanding of Urdu language. However, in case of illiterate respondents, consent was read in local language (Kashmiri) before taking the consent from them. The responses were sought from the heads of the households only except for the Households where head wasn't available, responses were sought from an adult family member available. The households which were found locked, were visited twice, so as to ensure that all the households of the selected sites are included in the study. Households which were found locked on the second visit were excluded from the study. Data, thus collected, were properly checked for accuracy and missing information before finally

entering it into MS excel and analyzing it using SPSS version 21.



RESULTS

Table 1 shows the socio-demographic characteristics of the study respondents. The age distribution of the respondents reveals that 445 (41.6%) of the

respondents belonged to the age group of 31-45 years, 287 (26.8%) belonged to the age group of 15-30 years, 235 (22.0%) belonged to age group of 46-60 years while as 102(9.6%) belonged to the age group of ≥ 61 years. With regard to the gender, a male preponderance was found with 632 (59.1%) males as against 437 (40.9 %) females. 935 (87.5%) respondents belonged to nuclear families while as 134 (12.5%) belonged to joint families. Residential status of the respondents revealed that 571 (53.4%) were urban and 498 (46.6%) were rural dwellers. As far as, the duration of residence is concerned, majority of the respondents i.e., 789 (73.8%) had a duration of >10 years, 190 (17.8%) had been the residents for 1-5 years while as a least of 90 (8.4%) respondents had a residential stay of 6-10 years. Further, marital status of the respondents revealed that 930 (87.0%) were married, 57 (5.3%) were either widows or widowers, 73 (6.8%) had never married while as 9 (0.8%) were found to be divorced. Family structure of the respondents revealed that 935 (87.5%) of the respondents belonged to a nuclear family set up against 134 (12.5%) who belonged to a joint family set up. Educational profile of the respondents revealed 450 (42.1%) literates as against 619 (57.9%) illiterates. Further, employment status of the respondents revealed that majority of the respondents 770 (72.0%) were unemployed/homemakers/students as against 299 (28.0%), who were employed/skilled/professional. The total number of family members was 4-7 in 749 (70.0%) respondents followed by ≤ 3 in 213 (20 %), 8-11 in 98 (9.2 %) and >12 in 9 (0.8%) respondents.

Table 1: Distribution of respondents by various socio-demographic characteristics (N=1069)

Variable	Category	Frequency (N)	%age
Age	15-30	287	26.8
	31-45	445	41.6
	46-60	235	22.0
	>61	102	9.6
Gender	Female	437	40.9
	Male	632	59.1
Family Type	Joint	134	12.5
	Nuclear	935	87.5
Marital status	Currently Married	930	87
	Divorced	9	.84
	Never married	73	6.83
	Widow/Widower	57	5.33
Religion	Muslim	1069	100
Residence	Rural	498	46.6
	Urban	571	53.4
Duration of residence	1 to 5 years	190	17.8
	6 to 10 Years	90	8.4
	Above 10 Years	789	73.8
Education	Literate	450	42.1
	Illiterate	619	57.9
Employment status	Unemployed/homemaker/student	770	72.0
	Employed/skilled/professional	299	28.0
Total family members	≤ 3	213	20.0
	4-7	749	70.0
	8-11	98	9.2
	>12	9	.8
Total		1069	100.00

Table 2: ABHA status of respondents(N=1069)

Possess ABHA	Frequency (N)	Percentage
Yes	93	8.7
No	976	91.3
Total	1069	100.0

Table 2 shows the ABHA status of respondents. The tabulated data shows that, only 93(8.7%) respondents possessed ABHA.

Table 3: Reasons for not having ABHA (N=976)

Reason	Count	Percentage
Mobile phone not available	36	3.7
Internet available yet not able to use/don't know how to use	3	0.3
Aadhar is not available	22	2.2
Aadhar is available but not linked to a mobile phone	184	18.8
Not aware of ABHA No.	731	75.0
Total	976	100.0

Table 3 reveals the reasons cited by the respondents for not having Ayushman Bharat Health Account (ABHA). As depicted by the table, majority of the respondents i.e., 731 (75%) were not aware about Ayushman Bharat Health Account (ABHA). 184 (18.8%) of respondents did not have their ADHAAR linked to their cell phone numbers- one of the pre-requisites for Ayushman Bharat Health Account (ABHA). Moreover, 36 (3.7%) of the respondents did not possess cell phone, and 22 (2.2%) of the respondents did not have ADHAAR cards. 3 (0.3 %) respondents did not have the technical know-how of the use of internet.

Table 4: Association between socio-demographic characteristics and ABHA status (N=1069)

Variable	Category	ABHA Generated		Total	χ^2	df	p
		Yes N (%)	Yes N (%)				
Gender	Female	40 (9.2)	397(90.8)	437 (100.0%)	0.191	1	0.662
	Male	53(8.4)	579(91.6)	632 (100.0%)			
Age Structure (Years)	15-30	21(7.3)	266(92.7)	287(100.0%)	2.607	3	0.456
	31-45	46(10.3)	399(89.7)	445(100.0%)			
	46-60	18(7.7)	217(92.3)	235 (100.0%)			
	>60	8(7.8)	94(92.2)	102 (100.0%)			
Duration of residence	1 to 5 years	19(10.0)	171(90.0)	190 (100.0%)	6.921	2	0.031
	6 to 10 Years	14(15.6)	76(84.4)	90 (100.0%)			
	Above 10 Years	60 (7.6)	729 (92.4)	789 (100.0%)			
Family Structure	Joint	4(3.0)	130(97.0)	134(100.0%)	6.299	1	0.012
	Nuclear	89(9.5)	846(90.5)	935(100.0%)			
Marital status	Currently Married	82(8.8)	848(91.2)	930(100.0%)	0.895	3	0.8265
	Divorced	0(0.0)	9(100.0)	9(100.0%)			
	Never married	6(8.2)	67(91.8)	73(100.0%)			
	Widowed/Widower	5(8.8)	52(91.2)	57(100.0%)			
Education	Literate	31 (7.0)	419 (93.0)	450(100.0%)	3.208	1	0.0732
	Illiterate	62 (10.0)	557 (90.0)	619(100.0%)			
Employment	Unemployed/homemaker/student	62 (8.0)	708(92.0)	770(100.0%)	1.454	1	0.2278
	Employed/skilled/professional	31(10.0)	268 (90.0)	299(100.0%)			
Residence	Rural	7(1.4)	491(98.6)	498 (100.0%)	62.45	1	<.001
	Urban	86 (15.0)	485 (85.0)	279(100.0%)			

Table 4 shows the association of socio-demographic characteristics with the Ayushman Bharat Health Account (ABHA) status of the respondents. A chi square test of independence to determine association was performed. The tabulated data revealed that all the expected frequencies were greater than five. A statistically significant association was found between ABHA status with the family type, area of residence and duration of residence [$\chi^2(df)=16.7(3)$, $p<.001$; $\chi^2(df)=6.29(1)$, $p<.012$; $\chi^2(df)=62.45(1)$, $p<.001$ respectively]. Higher number of subjects belonging to nuclear families had Ayushman Bharat Health Account (ABHA) as compared to subjects from joint ones (9.5% vs 3%). Further, a higher

proportion of urban respondents 86 (15%) possessed Ayushman Bharat Health Account (ABHA) while as only 7 (1.4 %) rural respondents had Ayushman Bharat Health Account (ABHA). Ayushman Bharat Health Account (ABHA) status was better in respondents, whose duration of residence in the area was 6-10 years.

DISCUSSION

The study provides an overview of Ayushman Bharat Health Account (ABHA) status among the underprivileged rural and urban population of Kashmir valley. The data revealed that a majority

(91.3%) of study respondents did not have Ayushman Bharat Health Account (ABHA) yet. A past report from the Press Bureau of India, reads that 23 crore (approx.) Ayushman Bharat Health Account (ABHA) numbers have been generated as on July 15, 2022.^[4] Further, the current (year 2023) figures from the ABHA dashboard shows that, 45 crore (apprx.) Ayushman Bharat Health Account (ABHA) accounts have been created so far in India.^[5] A comparative analysis of the rate of Ayushman Bharat Health Account (ABHA) generation for the past two years (2022 & 2023), reveals an increasing trend from 16.2% (2022) to 31.5% (2023) based on the total population of the country for the year 2022 (141.71 crore) & 2023(142.86 crore) respectively.^[6] Further, as reflected from the dashboard, the union territory of Jammu and Kashmir (J&K) with 71.2 Lakh (52.35% based on the estimated population of 1.36 crore for year 2023).^[7] Ayushman Bharat Health Accounts (ABHAs) created as on September, 17, 2023, fares better than the national average. However, the findings from our study reveal a dismal picture as only 8.7% study subjects were found to have Ayushman Bharat Health Accounts (ABHAs). This, could be because of the fact that, our study was conducted among the underprivileged rural and urban population only and, hence, points out the significant disparity with general population. Age wise distribution of the Ayushman Bharat Health Account (ABHA) shows that maximum Ayushman Bharat Health Accounts (ABHAs) (9.1%) were generated in 15–45 age group. Our findings are in accordance with the findings of Ayushman Bharat Health Account (ABHA) dashboard with 19–45year age group leading the tally. As against this, number of Ayushman Bharat Health Accounts (ABHAs) generated was comparatively lesser (7.7 %) in the 46–60-year age group and 7.8% in >60-year age group. Further, nuclear households were found to have higher percentage of Ayushman Bharat Health Account (ABHA) (9.5 %) as compared to the joint ones (3.0%). This may be because of the fact that elderly population in joint households are often resistant to changes towards newer initiatives which impacts their attitude and that in turn has an influence on other household members. Gender based distribution of Ayushman Bharat Health Account (ABHA) from our study also differs from that of ABHA dashboard as percentage of Ayushman Bharat Health Account (ABHA) among the women folk (9.2%) was found to be higher than in men (8.4%), though the difference was not statistically significant. Further, Ayushman Bharat Health Account (ABHA) status of the respondents was paradoxically higher among illiterate (10%) respondents than literate respondents (7.0%), though, the difference was again statistically not significant. However, with regard to occupational status of the study respondents the rate of Ayushman Bharat Health Account (ABHA) creation was comparatively better among the employed/skilled/professional class (10.0%) than the Unemployed/Home makers/student class (8.0%), but

the difference was not statistically significant. Our study revealed a better status of ABHA among the urban residents (15.0%) as compared to rural residents (1.4%). This could be attributed to a better availability of requisite avenues (smart phones, internet facility and linkage of Aadhaar with mobile Numbers) for Ayushman Bharat Health Account (ABHA) generation.

Among the significant gaps revealed by the study findings, knowledge gap (lack of awareness) happens to be the major obstacles among the study participants for not having the Ayushman Bharat Health Account (ABHA) number. It goes beyond saying that knowledge is of a paramount significance as it provides a cue to the people and, hence, shapes their attitude to perform a particular practice. The acceptability of a change in a society to a large extent depends upon the degree of awareness among the population about that change and vice-versa. Other gaps detected included non-linkage of Aadhaar with the cell phones; non-availability of the cell phones, unavailability of Aadhaar, inability to make use of internet services for the generation of Ayushman Bharat Health Account (ABHA). Additionally, apprehensions about the privacy and security concerns with regard to the storage and transmission of the sensitive health data could also plague the overall rate of Ayushman Bharat Health Account (ABHA) creation. Pertinently, fear psychosis on account of potential risks in data breaches, hacking, or unauthorized access to private health information is a matter of huge concern for both the patients and healthcare system and could prove to be a threat to this initiative. All this necessitates a robust security and privacy mechanism for telehealth platforms, including encryption and access controls.^[8]

CONCLUSION

ABHA is one of the elementary components of Ayushman Bharat Digital Mission (ABDM) which could help in bridging the health disparities among the people especially underprivileged sections of population, who, because of their socio-economic and geographical disadvantage have a very poor access to health care. However, the intended goals of Ayushman Bharat Health Account (ABHA) can't be realized until all sections of the population are not made fully aware about the programme. The study reveals huge existent knowledge gaps among the underprivileged sections of the population with regard to the Ayushman Bharat Health Account (ABHA) and, hence, emphasizes the need towards their early sensitization through the proper dissemination of the necessary information. Once the public is abreast about the pros and cons of the digital change in health sector, they will develop a positive attitude, which can be transformed into practice. Besides this, the digital divide between the various sections of the society ought to be taken care off failing which, health care disparity may further

worsen, which can thwart the very purpose of the Ayushman Bharat Digital mission (ABDM). Further, the differential response towards Ayushman Bharat Health Account (ABHA) across the age structure because of the differential e-compatibility calls for necessary interventions so that all the age strata are brought within the ambit of the digital mission. This can be done by creating the necessary facilitation counters at the Anganwadi centres /sub-centres/primary health centres besides the tertiary care institutions by roping in the grass-root level workers and other paramedical staff/technical staff. Utilizing educational institutions as Ayushman Bharat Health Account (ABHA) registration centres would be a feasible and efficient way to increase the number of Ayushman Bharat Health Account (ABHA) account holders among the students, who are the future users of health care services. A camp approach can even be used to cover a greater number of beneficiaries in a short span of time for ensuring a better coverage. Moreover, to facilitate the creation of a centralized repository of health data at one place, the necessary legislations in place ought to be made more stringent by encrypting the data between the beneficiaries and the authorities at helm, so that privacy is ensured and data breaches are checked. In order to achieve the wider goals of the Ayushman Bharat Health Account (ABHA) under Ayushman

Bharat Digital mission (ABDM), integrating health related schemes with Ayushman Bharat Health Account (ABHA) would be a good option. Moreover, a robust mechanism has to be in place on the lines of Aadhaar and Pan Cards, so that Ayushman Bharat Health Account (ABHA) is made mandatory for the entire population of the country.

REFERENCES

1. D. V. Dimitrov, "Medical internet of things and big data in healthcare," *Healthcare Informatics Research*, vol. 22, no. 3. Korean Society of Medical Informatics, pp. 156–163, Jul. 31, 2016, doi: 10.4258/hir.2016.22.3.156.
2. National Health Authority, "Official website Ayushman Bharat Digital Mission," 2022. <https://abdm.gov.in/> (Accessed August 29, 2023).
3. ABHA number (ndhm.gov.in) (accessed on August 29, 2023).
4. File:///C:/Users/parra/OneDrive/Desktop/PAPERS%20ICMR/ABHA%20GENEARTED%20Press%20Information%20Bureau.html (accessed September, 14, 2023).
5. "ABDM-Insights." <https://dashboard.abdm.gov.in/abdm/>. (Accessed September, 14, 2023).
6. <https://www.macrotrends.net/countries/IND/india/population> (Accessed on September,15,2023).
7. Jammu and Kashmir Population 2022/2023 (populationu.com) (Accessed on September, 17, 2023).
8. H. Suo, J. Wan, C. Zou, and J. Liu, "Security in the internet of things: A review," in *Proceedings - 2012 International Conference on Computer Science and Electronics Engineering, ICCSEE 2012*, 2012, vol. 3, pp. 648–651, doi: 10.1109/ICCSEE.2012.373.