
**“ASSESSMENT OF KNOWLEDGE AND ATTITUDE
TOWARDS HEALTH INSURANCE AND UTILIZATION
PATTERN OF COMMUNITY HEALTH CARE
PROVIDERS – A FACILITY BASED CROSS-
SECTIONAL STUDY”**

**Submitted by
(REG. NO. BD0120010)**

Dissertation

*Submitted to
KAHER, Belagavi, Karnataka,
In partial fulfilment of the requirements for the degree of*

**M. D. (Doctor of Medicine)
In
COMMUNITY MEDICINE**

**DEPARTMENT OF COMMUNITY MEDICINE,
JAWAHARLAL NEHRU MEDICAL COLLEGE, KAHER,
BELAGAVI – 590010
KARNATAKA, INDIA**

JUNE/JULY 2023

**KLE ACADEMY OF HIGHER EDUCATION AND RESEARCH,
BELAGAVI**

**Endorsement by the HOD & Principal / Head of
the Institution**

“This is to certify that the dissertation entitled “ASSESSMENT OF KNOWLEDGE AND ATTITUDE TOWARDS HEALTH INSURANCE AND UTILIZATION PATTERN OF COMMUNITY HEALTH CARE PROVIDERS – A FACILITY BASED CROSS-SECTIONAL STUDY” is a bona fide research work done by the candidate (Reg. No. BD0120010).



Dr. Chandra S. Metgud MD PhD
Professor and Head,
Department of Community Medicine,
J. N. Medical College,
KAHER, Belagavi – 590010,
Karnataka, India.



Place: Belagavi

Date: 30/12/22



Dr. (Mrs.) N. S. Mahantshetti MD
Principal
PRINCIPAL
J.N. Medical College,
BELAGAVI - 590010
KAHER, Belagavi – 590010,
Karnataka, India.

Place: Belagavi

Date: 02/01/2023

UNDERTAKING

“I, (Reg. No. **BD0120010**), hereby declare that the information and the data mentioned in my dissertation entitled **“Assessment of Knowledge and Attitude towards Health Insurance and Utilization pattern of Community health care providers – A facility based cross-sectional study”** belongs to me and is original. I am aware of the definition of plagiarism as detailed below:

- An act or instance of using or closely imitating the language and thoughts of another author without authorization and the representation of that author’s work as one’s own, as by not crediting the original author.
- A piece of writing or other work reflecting such unauthorized use or imitation.
- The deliberate or reckless representation of another’s words, thoughts or ideas as one’s own without attribution in connection with submission of academic work, whether graded or otherwise.

I hereby declare that the dissertation prepared by me is original-one and does not involve plagiarism anywhere. In case at a later stage, it is found that I have indulged in plagiarism, then I am solely responsible for the same and the institution is at liberty to take any disciplinary action against me including cancellation of dissertation or any other penalties imposed by the University”.

Date: 29-12-2022

Place: Belagavi



(REG NO: **BD0120010**)

PLAGIARISM ACCEPTANCE LETTER



JAWAHARLAL NEHRU MEDICAL COLLEGE

(Recognized by Medical Council of India, New Delhi)



Accredited 'A+' Grade by NAAC (3rd Cycle)

Placed in Category 'A' by MHRD (GoI)

0831 - 2471350



0831 - 2470759



www.jnmc.edu

principal@jnmc.edu

Ref No: MDC/PG/

Date: 29-11-2022.

ACCEPTANCE LETTER

The softcopy of thesis entitled: "ASSESSMENT OF KNOWLEDGE AND ATTITUDE TOWARDS HEALTH INSURANCE AND UTILIZATION PATTERN OF COMMUNITY HEALTH CARE PROVIDERS - A FACILITY BASED CROSS - SECTIONAL STUDY" has been submitted for Anti-Plagiarism check through Turnitin software. The scan has been carried out and the scanned output reveals a match percentage of 09% which is within the acceptable limits of 10% as per the guidelines given by UGC.

Shivalammy
Guide.



N.S.
Dr. (Mrs.) N.S. Mahantashetti.
Chairperson-Anti plagiarism Committee &
Principal,
J. N. Medical College, Belagavi.

To,
Reg. No. BD0120010.
Postgraduate Student,
2020-21 Batch,
Department of Community Medicine,
J. N. Medical College, Belagavi.

ETHICAL CLEARANCE LETTER



K.L.E. ACADEMY OF HIGHER EDUCATION AND RESEARCH

(Deemed – to- be- University)

Accredited 'A' Grade by NAAC (2nd Cycle)

Placed in Category 'A' by MHRD (GoI)

**JAWAHARLAL NEHRU MEDICAL COLLEGE,
NEHRU NAGAR, BELAGAVI-590010 (KARNATAKA-INDIA)**

Website: <http://www.jnmc.edu>

E-Mail : dome@jnmc.edu

Phone: (+ 91-(0)831 Office : 2472550

Principal: 2471701

Fax No. +91 (0)831 – 2470759

Ref: MDC/DOME/ 80

Date: 25/01/2021

To,

(REG. NO. BD0120010)

PG student in Community Medicine,
J.N.Medical College,
BELAGAVI.

Sub: Institutional Ethical Clearance for the study.

With reference to the above, we wish to inform you that your proposed research project titled
“ASSESSMENT OF KNOWLEDGE AND ATTITUDE TOWARDS HEALTH
INSURANCE AND UTILIZATION PATTERN OF COMMUNITY HEALTH CARE
PROVIDERS – A FACILITY BASED CROSS-SECTIONAL STUDY”, is ethical and
justifiable. The proposed research project has been cleared by the JNMC Institutional Ethics
Committee on Human Subjects Research.

(Dr. Smita Sonoli)

Member Secretary

JNMC Institutional Ethics Committee
on Human Subjects Research,
J.N.Medical College, Belagavi.

(Dr. Harsha Hegde)

Chairman,

JNMC Institutional Ethics Committee
on Human Subjects Research,
J.N.Medical College, Belagavi.

LIST OF ABBREVIATIONS USED

Sl. No.	Abbreviation	Expansion of the Abbreviation
1	AB-ArK	Ayushman Bharat- Arogya Karnataka Yojana
2	AB-PMJAY	Ayushman Bharat Pradhan Mantri Jan Arogya Yojana
3	AMUL	Anand Milk Union Limited
4	ANM	Auxiliary Nurse Midwife
5	ASHA	Accredited Social Health Activist
6	AWW	Anganwadi Worker
7	BPL	Below Poverty Line
8	CBHI	Community-Based Health Insurance
9	CHE	Catastrophic Health-related Expenditure
10	CHIS	Comprehensive Health Insurance Scheme
11	COPD	Chronic Obstructive Pulmonary Disease
12	COVID-19	Coronavirus disease
13	ESI	Employees' State Insurance
14	FGD	Focus Group Discussion
15	GIC	General Insurance Corporation
16	GOI	Government of India
17	Govt	Government

18	HH	Households
19	ICICI	Industrial Credit and Investment Corporation of India
20	INR	Indian Rupee
21	IPD	In-patient Department
22	IRDAI	Insurance Regulatory and Development Authority of India
23	ITI	Industrial Training Institute Course
24	JNMC	Jawaharlal Nehru Medical College, Belagavi
25	KAHER	KLE Academy of Higher Education and Research (Belagavi)
26	KLE	Karnataka Lingayat Education Society (Belagavi)
27	LHV	Lady Health Visitor
28	LIC	Life Insurance Corporation (of India)
29	LMIC	Low and Middle Income Countries
30	MCH	Maternal and Child Health
31	MGIMS	Mahatma Gandhi Institute of Medical Sciences
32	NGO	Non-Governmental Organizations
33	NHIS	National Health Insurance Scheme
34	NSS	National Sample Survey
35	OBC	Other Backward Caste
36	OOP	Out-Of-Pocket

37	OOPE	Out-Of-Pocket Expenditure
38	PFHI	Publicly Funded Health Insurance
39	PG	Post-Graduation
40	PHC	Primary Health Centre
41	PMSBY	Pradhan Mantri Suraksha Bima Yojana
42	PUC	Pre-University Course
43	RSBY	Rashtriya Swasthya Bima Yojana
44	SC	Scheduled Castes
45	SECC	Socio-economic and Caste Census
46	SES	Socio-economic Status
47	SEWA	Self Employed Women's Association
48	SKDRDP	Shri Kshetra Dharmasthala Rural Development Project
49	SPSS	Statistical Package for Social Sciences
50	ST	Scheduled Tribes
51	TV	Television
52	UHC	Urban Health Centre
53	USD	United States Dollar
54	WHO	World Health Organization
55	χ^2	Chi - square

ABSTRACT

“Assessment of Knowledge and Attitude towards Health Insurance and Utilization pattern of Community health care providers – A facility based cross-sectional study”

Introduction: Achieving ‘Universal Health Coverage’ with financial risk protection is one of the crucial components of the United Nations’ Sustainable Development Goals 2016-2030. Globally, approximately 3.65 billion people lack access to health care services that they require and annually 100 million are pushed into poverty availing it. In India, 40 crore individuals are devoid of any financial protection like health insurances. The ranks of uninsured add to the economic and disease burden of the country along with the ever-increasing cost of health care. This is especially reflected on the low-income workers and their families.

Government of India spends only 1.28% of Gross Domestic Product for the country’s healthcare services.⁽⁸⁾ This has led to high out-of-pocket expenditure (OOPE) in those devoid of any financial protection while seeking healthcare services and made them vulnerable to catastrophic spending, culminating in impoverishment.

India has more than 32.63 lakh registered nursing personnel, over 13 lakh allied and healthcare professionals. There are over 10 lakh ‘Accredited Social Health Activist’ workers (ASHA) and 24.87 lakh Anganwadi staff in India. But there is no data available on the healthcare related expenditure pattern of these health care workers. Thus, this study was conducted to assess the knowledge, attitudes of the community health care providers regarding the available innumerable health insurances and benefits and also obtain a clear picture regarding the utilization of the same.

Objectives: To assess the knowledge and attitude towards various health insurance schemes and their utilization pattern among community health care providers in selected health centres of Belagavi taluka/district.

Materials and methods: A facility based cross-sectional study was conducted among community health care providers covering 5 primary health centres of Belagavi Taluka over a period of one year from 1st January 2021 to 31st December 2021 (12 months). Universal sampling method was adopted and 420 workers were interviewed by the investigator using a pre-designed, pre-tested questionnaire regarding socio-demographic details, knowledge, attitude of participants towards various health insurance schemes and their utilization patterns after obtaining their written informed consent.

Results: The mean age of the participants was 40 ± 8.2 years (Ranging between 21-60 years). Of the 420 participants, 96.7% were females. 3/5th of the participants were Anganwadi workers and 1/5th were ASHA workers. 2/3rd study participants had studied till 10th class.

Among the participants, 99.8% of them were aware of health insurance. Of them, around 60% of them had known for more than five years, The most common types of health insurance coverage known to the participants in this study were full family coverage (88.8%), followed by government subsidized schemes (64.4%) for eligible population, employer provided (63.2%) ones like ESI scheme, employees under private companies' insurance coverage and insurance coverage for dependents (33.2%). 87.1% participants showed a positive attitude towards opting health insurance and 83.3% of them had some health insurance. Of those having health insurance, most (95.1%) of the participants had purchased / enrolled their health insurances in the last 5 years. Of the 350 study participants having health insurance, 90.6% of them were enrolled under AB-

ARK / AB-PMJAY scheme. Only 17 (4.8%) had utilized their health insurance in the last one year and 13 (3.7%) had incurred out-of-pocket expenditure. It was also found that 76.9% participants had some life insurance.

The participants residing in rural areas, those with higher education status (studied above 5th standard) and field workers like ASHA workers and Anganwadi workers had high preference for health insurance. Participants who were residing in rural areas, females, higher educational status and field workers with longer duration of service and lower socio-economic status showed higher levels of enrolment as well as utilization of health insurance.

Conclusion: The study participants had a high level of awareness regarding health insurance schemes. The major sources of this information were the participants' colleagues, family and friends and mass media like television, radio and newspapers. Their positive attitude towards health insurance was greatly influenced by the covid-19 pandemic. There was a gap between knowledge, enrollment and utilization of health insurance schemes by the participants. Even with high levels of awareness, enrollment and utilization rates were found to be low. Many had incurred out-of-pocket health-related expenditure during pandemic, which even resulted in catastrophic healthcare expenditure to their family.

Keywords: community health care providers, health insurance, out-of-pocket expenditure, catastrophic healthcare expenditure.

TABLE OF CONTENTS

Sl. No	Contents	Page No.
1	INTRODUCTION	1-3
2	OBJECTIVES OF THE STUDY	4
3	REVIEW OF LITERATURE	5-19
4	METHODOLOGY	20-25
5	RESULTS	26-105
6	DISCUSSION	106-128
7	CONCLUSION	129-130
8	RECOMMENDATIONS	131-132
9	STRENGTHS OF THE STUDY	133
10	LIMITATIONS OF THE STUDY	134
11	SUMMARY	135-140
12	BIBLIOGRAPHY	141-150
13	ANNEXURES	151-166
	ANNEXURE I – INFORMED CONSENT FORM	151-154
	ANNEXURE II – RESEARCH QUESTIONNAIRE	155-160
	ANNEXURE III – KEY TO MASTERCHART	161-166
	ANNEXURE IV – MASTERCHART	167

LIST OF TABLES

Sl. No	Table	Page No.
1	Distribution of the study participants according to their age	27
2	Distribution of the study participants according to their gender	28
3	Distribution of the study participants according to their area of residence	29
4	Distribution of the study participants according to their place of employment	30
5	Distribution of the study participants according to their occupation	31
6	Distribution of the study participants according to their occupation in PHC/UHC	33
7	Distribution of the study participants according to duration of service	35
8	Distribution of the study participants according to their religion	36
9	Distribution of the study participants according to their category	37
10	Distribution of the study participants according to their education status	38
11	Distribution of the study participants according to their marital status	39
12	Distribution of the study participants according to type of family	40
13	Distribution of the study participants according to Socio-economic status (according to the Modified B.G. Prasad's classification)	41
14	Distribution of the study participants according to BPL ration card	42
15	Distribution of the study participants according to habits	43

16	Distribution of the study participants according to chronic medical illness	44
17	Distribution of the study participants according to chronic medical illness in the family	45
18	Distribution of the study participants according to their awareness about health insurance	47
19	Distribution of the study participants according to duration of awareness about health insurance	48
20	Distribution of the study participants according to number of health insurance schemes known	49
21	Distribution of the study participants according to source of information regarding health insurance	51
22	Distribution of the study participants according to type of health insurance coverage known	53
23	Distribution of the study participants according to preference to opt for health insurance	54
24	Distribution of the study participants according to the attribute they valued most while choosing health insurance	56
25	Distribution of the study participants according to preference of factors related to scheme in choosing health insurance	58
26	Distribution of the study participants according to influence of Covid-19 pandemic on preferring health insurance	60
27	Distribution of the study participants according to preference of mode of seeking health insurance	61
28	Distribution of the study participants according to possession of health insurance	62

29	Distribution of the study participants according to when they purchased health insurance	63
30	Distribution of the study participants according to their health insurance schemes enrolled	64
31	Distribution of the study participants according to health insurance provider	66
32	Distribution of the study participants according to various health insurance related parameters	67
33	Distribution of the study participants according to the health insurance utilization in the past year	68
34	Distribution of the study participants according to the health insurance utilization pattern	69
35	Distribution of the study participants according to the health expenses incurred in the past one year	70
36	Distribution of the study participants according to the health-related out-of-pocket expenditure in the past one year	72
37	Distribution of the study participants according to the effect of presence of chronic medical illnesses in their family on their attitude and utilization pattern of health insurance	73
38	Distribution of the study participants according to the influence of source of their information regarding health insurance on their attitude and utilization pattern of health insurance	74
39	Distribution of the study participants according to difficulties faced while claiming health insurance	75
40	Distribution of the study participants according to possession of life insurance	76

41	Distribution of the study participants according to life insurance scheme company	77
42	Association of the study participant's socio-demographic features and their knowledge regarding health insurance	78-79
43	Association of the study participant's socio-demographic features and their duration of awareness regarding health insurance	81-83
44	Association of the study participant's socio-demographic features and their preference towards opting health insurance	84-85
45	Association of the study participant's socio-demographic features and influence of COVID-19 towards opting health insurance	86
46	Association of the study participant's socio-demographic features and their mode of preference for seeking health insurance	88-89
47	Association of the study participant's socio-demographic features and their health insurance ownership	91-93
48	Association of the study participant's socio-demographic features and their preferred health insurance provider	94-95
49	Association of the study participant's socio-demographic features and utilization of health insurance in the past one year	97-99
50	Association between ownership of health insurance by the study participants and catastrophic health-related expenditure incurred	101
51	Association between health insurance utilization pattern by the study participants and catastrophic health related expenditure incurred	102
52	Association between the place of employment of the study participants and their awareness, attitude and utilization pattern of health insurance	103-104

LIST OF GRAPHS

Sl. No	Graphs	Page No.
1	Distribution of the study participants according to their age	27
2	Distribution of the study participants according to their gender	28
3	Distribution of the study participants according to their area of residence	29
4	Distribution of the study participants according to their place of employment	30
5	Distribution of the study participants according to their occupation	32
6	Distribution of the study participants according to their occupation in PHC/UHC	34
7	Distribution of the study participants according to duration of service	35
8	Distribution of the study participants according to their religion	36
9	Distribution of the study participants according to their category	37
10	Distribution of the study participants according to their education status	38
11	Distribution of the study participants according to their marital status	39
12	Distribution of the study participants according to type of family	40
13	Distribution of the study participants according to Socio-economic status (according to the Modified B.G. Prasad's classification)	41
14	Distribution of the study participants according to BPL ration card	42

15	Distribution of the study participants according to chronic medical illness	44
16	Distribution of the study participants according to chronic medical illness in the family	45
17	Distribution of the study participants according to awareness about health insurance	47
18	Distribution of the study participants according to awareness about health insurance	48
19	Distribution of the study participants according to number of health insurance known	50
20	Distribution of the study participants according to source of information regarding health insurance	51
21	Distribution of the study participants according to type of health insurance coverage known	54
22	Distribution of the study participants according to preference to opt health insurance	55
23	Distribution of the study participants according to the attribute they valued most while choosing health insurance	57
24	Distribution of the study participants according to preference of factors related to scheme in choosing health insurance	59
25	Distribution of the study participants according to influence of Covid-19 pandemic on preferring health insurance	60
26	Distribution of the study participants according to preference of mode of seeking health insurance	61

27	Distribution of the study participants according to possession of health insurance	62
28	Distribution of the study participants according to their health insurance	65
29	Distribution of the study participants according to the health insurance provider	66
30	Distribution of the study participants according to the health insurance utilization in the past year	67
31	Distribution of the study participants according to life insurance scheme company	77

INTRODUCTION

The World Health Organization (WHO) defines ‘health’ “as a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity”.⁽¹⁾

The foundation of ‘Universal Health Coverage’ is based on the declaration by WHO in 1948, which stated that “health is a fundamental human right” and all actions are directed to ensure attainment of highest level of health for all across the globe. This entails ensuring all people have access to quality health services including preventive, promotive, curative, rehabilitative and palliative care without incurring financial hardship. It focuses on three key elements – access, quality and financial protection.⁽²⁾

Achieving ‘Universal Health Coverage’ is one of the crucial components of the United Nations’ Sustainable Development Goals 2016-2030, which focuses on achievement of good health and well-being by all the people around the globe through easy access to quality healthcare services, when in need with financial risk protection thus preventing the escalation into poverty.

Globally, approximately 3.65 billion people lack access to health care services that they require and annually 100 million are pushed to poverty availing it. The burden of expenses incurred by the people leaves them with catastrophic poverty, borne majorly by two giant continents of Asia and Africa.⁽⁴⁾ Any health-related expenditure more than or equal to 40% of the competence to pay or any expenditure that exceeds 10% of annual income or exceeds the ability to pay is called as ‘catastrophic expenditure’.^(3,5,6)

In a developing country like India, access to quality health services at an affordable and on an equitable basis remains an unfulfilled aspiration to the majority of the population. In India, 30% of the population or 40 crore individuals are devoid of any financial protection by means of coverage of health insurance.⁽⁷⁾ The ranks of uninsured add to the economic and disease burden of the country along with the ever-increasing cost of health care. This especially is reflected on the low-income workers and their families.

Governmental expenditure on healthcare services is low in context of quality and capacity, with only 1.28% Gross Domestic Product of the country being spent.⁽⁸⁾ Hence the public health sector falls short in catering to the health needs of the people, who are thus forced to seek services from costlier private sector. This leads to high out-of-pocket expenditure (OOPE) in those without any financial protection. As majority of the country's population has poor financial protection, it is vulnerable to catastrophic spending, culminating in impoverishment.

'Financial protection' by means of 'health assurance or insurance' is the cornerstone for improving health seeking behaviour among people and ultimate actualization of 'Right to health'. The concept of 'right to health' as stated by the United Nations 'Universal Declaration of Human Rights', in 1948 encompasses the idea that "Everyone has the right to a standard of living adequate for the health and well-being of himself and his family..."⁽⁹⁾ Some countries use the term "right to health protection", which is assured by a comprehensive system of social insurance that provides material security in cases of illness or accident, and free medical education, medicaments and other necessary materials and the right to be cared for by society in old age and invalidity. However, due to limitation of resources and modest economic growth in India, Government of India cannot provide all of the

needed health services. This gap is bridged to a comparable extent by the private sector. As per 75th National Sample Survey Organization report (2017-18), the private health sector accounted for over 60% of all hospitalizations and 70% of out-patient services.⁽¹⁰⁾

Over the last decade, there has been a focus in the health insurance coverage of direct medical support staff, those that fall under the broad cover of community health care providers employed under government health care facilities as an important indicator of health economics and testament of developing health provisional status of a country. India has more than 32.63 lakh registered nursing personnel and over 13 lakh Allied and Healthcare professionals. There are over 10 lakh ‘Accredited Social Health Activist’ (ASHA) workers and 24.87 lakh Anganwadi staff in India. But there was no data available on the healthcare related expenditure pattern of these health care workers.⁽¹¹⁾

The present study focuses on the ‘community health care workers / providers’ who form the bridge between the demand and supply of quality health care to the peripheries of our country and their access to quality health care. As they act as the providers and consumers of the same service, this study concentrates to answer the many generated questions related to ‘right to health’ in terms of knowledge, attitudes of the community health care providers regarding the available innumerable health insurances and benefits and also obtain a clear picture regarding the utilization of the same.

The present study intends to identify the problems perceived by the target population and lower the gap between availability and utilization of the said services. This will go a long way in improving the quality health care services utilization by the health care providers and by extension, majority of population of India.

OBJECTIVES OF THE STUDY

- 1) To assess the knowledge and attitude towards various health insurance schemes among community health care providers in selected health centres of Belagavi taluka / district.

- 2) To assess the utilization pattern of various health insurance schemes by the community health care providers in selected health centres of Belagavi taluka / district in 12 months preceding the survey.

REVIEW OF LITERATURE

‘Insurance’ is a mechanism of risk transfer and sharing by pooling of risks and funds among a group of individuals who are exposed to similar kinds of risks for the benefit of those who suffer loss on account of the risk. So, it is a financial tool which is aimed at reducing the detrimental impact of unforeseen events and to create financial security in a group of individuals.⁽¹²⁾

History of Health Insurance in India:

In 1912, Insurance Act was passed, following which it was amended in 1938. In 1956 Life insurance industry was nationalized by Government of India. Then, in 1972, General Insurance industry was nationalized and in 1999, Insurance Regulatory and Development Authority of India (IRDAI) was constituted as an autonomous body to regulate and develop the insurance industry and private insurance was permitted.⁽¹²⁾

The main **objective of the insurance** is to financially guard the beneficiaries and their family members against unpredictable life occurrences like death, disability and unemployment etc.

Insurance may cover life, health and non-life attributes like accident, property, legal liabilities etc. ‘Health insurance’ is a type of insurance that covers medical expenses that arise due to an illness. These expenses could be related to hospitalization costs, cost of medicines, treatment of diseases and / or injury or doctor consultation fees.⁽¹²⁾ The health insurance industry in India covers only about 13% of the total population.⁽¹³⁾

The health insurances are broadly classified into:

- **Voluntary / private-for-profit insurances** are those offered by public sector like General Insurance Corporation (GIC), (LIC) etc, or privately owned companies like Bajaj Alliance, ICICI etc.
- **Employer-based insurances** are those covering the employees of the organized sector like that of the railways, Defence and security forces, mining, Life Insurance Corporation medical services. They are compulsory and contributory in nature where both employer (government / private enterprise) and employee contribute towards the premium.
- **Government sponsored insurances** include Ayushman Bharat Pradhan Mantri Jan Arogya Yojana and other government subsidized schemes for target populations like poor and marginalized section of the country.
- **Social insurances** are those that benefit special groups like postpartum mothers, labourers etc and include Maternity Benefit Act, Mines Labour Fund Act, Workmen's Compensation Act.
- **Community-based insurances** are those where expenditure is shared among the community or sponsored by Non-Governmental Organizations (NGOs) like Self Employed Women's Association (SEWA), Karuna trust, AMUL Dairy Cooperatives in Gujarat.⁽¹³⁾

‘Ayushman Bharat Pradhan Mantri Jan Arogya Yojana’ (AB-PMJAY) was launched in the year 2018 by Government of India to provide cashless health coverage of Rs. 5 lakh per family for secondary and tertiary health care services to its beneficiaries as listed under SECC 2011.⁽¹⁴⁾

Arogya Karnataka scheme was introduced by Government of Karnataka on 2nd February 2018. Upon the launch of Ayushman Bharat by GOI in the same year, both the schemes were integrated and launched under the name 'Ayushman Bharat-Arogya Karnataka Yojana'(AB-ArK) on 30th October 2018 to provide 'Universal Health Coverage' to all the residents of the Karnataka state.^(14,15)

Review of recent literature:

A descriptive study conducted in Enugu state, Nigeria in the year 2011, to evaluate the knowledge, attitudes and utilization of National Health Insurance Scheme (NHIS) among 328 health care providers in the University of Nigeria Teaching Hospital showed that 98.2% had awareness and 1.8% had never heard of the scheme prior to the research study. The knowledge accumulated was from colleagues (36.3%), mass communication (37.3%) and internet (3.7%). 63.4% were registered beneficiaries of NHIS against 36.6% who were unregistered. 70.1% registered beneficiaries had availed the scheme before. 65.7% of the participants believed that the scheme was not expensive, while only 16.7% wanted discontinuation of the scheme. It was noted that the participants had high awareness of the scheme and its benefits, but with discouraging utilization rates.⁽¹⁶⁾

A randomized trial conducted among 234 frontline health providers in Ghana conducted in the year 2013-14 sought to ascertain the significance and effect of systematic community engagement interventions on perspectives of frontline health care providers of Ghana regarding NHIS and its impact on quality of delivery of health service. It was found that perceptions on NHIS by the front-line health care providers were predominantly positive, but delayed reimbursement of service

providers coupled with administrative lapses, posed critical challenges for the successful implementation and utilization of NHIS.⁽¹⁷⁾

A descriptive study in Moldova conducted using publicly available databases and the annual Moldova Household Budgetary Survey, the trends in health system financing, health care utilization, health insurance coverage, and costs incurred by individuals for the years 2006–2012 was examined. Logistic regression was used to assess the likelihood of having health insurance, incurring a cost for health care, and forgoing health care when ill, controlling for socio-economic and demographic covariates. Private expenditure accounted for 55.5% of total health expenditures in 2012. 83.2% of private health expenditures was Out-of-pocket expenditure – especially for medicines. The need for wider health insurance coverage was highlighted in the study.⁽¹⁸⁾

A cross sectional study using Anderson behavioural model as a guideline was conducted in Thailand in 2017 involving 328 participants to identify the possible factors effecting the Community based health insurance scheme enrolment. It was found that a number of socio-economic characteristics were statistically significant, those being- marital status, occupation, financial status and area of residence in choosing different health insurance schemes.⁽¹⁹⁾

A mixed method study was conducted in Maharashtra state, India, from 2011 to 2014 covering 6,000 households across 22 districts, out of which 5 districts were taken for qualitative data analysis. The aim was to assess awareness, enrolment, and utilization patterns of ‘Rashtriya Swasthya Bima Yojana’ (RSBY) a National Health Insurance Scheme in Maharashtra, among the low-income households of Maharashtra. Out of 6,000 households, only 29.7% were aware about the scheme and

21.6% were enrolled during the period of 2010-2012. Although 1,886 (33.1%) households reported at least one case of hospitalization in the preceding one year, only 16 (0.3%) households were able to actually utilize the benefits during hospitalization. It was seen that at each step, there was an increase in the exclusion of eligible households from the scheme. It was evident from the study that the proportion of awareness, enrolment rate and utilization of RSBY was quite low and this was attributed to poor awareness, program design, schedules of enrolment and the need for annual reenrollment.⁽²⁰⁾

A cross-sectional survey was done in Dakshina Kannada, Uttara Kannada and Gadag of Karnataka state, India in 2011 among 1,146 households to evaluate the effectiveness of 'Sampoorna Suraksha Programme', a micro health insurance scheme from SKDRDP Trust and Insurance Companies, on the health seeking behaviour of households during illness. The total sample households of 1,146 (4,961 individuals) included 416 insured households (37.2% individuals), 366 newly insured households (32.13% individuals) and 364 uninsured households (30.57% individuals). It was found that insured individuals sought care more at private hospitals as compared to public hospitals due to the reduced monetary barrier. Equity in health seeking behaviour was observed among insured individuals.⁽²¹⁾

A descriptive online cross-sectional survey was conducted in the year 2016 in Republic of South Africa among 336 beneficiaries of various medical schemes to assess their knowledge and degree of satisfaction with their respective medical schemes. It was found that the participants had good knowledge of their medical schemes. 81% participants were satisfied with the quality of services delivered, however, only 9% were satisfied with access to doctors. 25% were satisfied with

scheme contributions and 46% with the advocated minimum benefit package. There was a need for further development of the schemes and provision of comprehensive benefits package.⁽²²⁾

India introduced RSBY scheme to protect the poor families from healthcare related out-of-pocket expenditure and improve their health seeking behaviour. In 2011, a cross-sectional survey was conducted in Pathan district, Gujarat, India to analyze the extent of RSBY contribution to universal health coverage by reducing household OOP payments. 2,920 BPL households that were enrolled in RSBY scheme were included in the survey. The average hospital admission rate was 40/1,000 among the enrolled, for the period 2010–2011. 44% of patients who had enrolled in RSBY still made OOP payments during hospitalization and was similar across both government and private hospitals. Nearly 60% of insured and in-patients made OOP payments for medicines and diagnostics, though the same were already included in the benefit package. This study revealed that RSBY has high enrolment but has failed provide complete financial coverage.⁽²³⁾

A cross-sectional study was conducted in the year 2015 in the city of Bengaluru, India to assess the awareness levels of health insurance among the residents. Of the 399 respondents, 302 (75.7%) of them were aware of health insurance. Among 302 only 202 (66.9%) had procured health insurance. Of these, 187 (92.5%) had government insurance and 15 (7.5%) of them had private health insurance. The determinants of high level of awareness of health insurance were higher levels of education and socio-economics status.⁽²⁴⁾

Results from two cross-sectional National Sample Surveys conducted in 2004 and 2014 focusing on Publicly Funded Health Insurance (PFHI) programmes implementation in 3 pioneer states - Andhra Pradesh, Karnataka and Tamil Nadu were analyzed to evaluate the PFHI in above three states in improving utilization of hospital services and financial protection against expenses of hospitalization. It was found that enrolment under PFHI was not associated with increase in utilization of hospital care in the three states. Out of Pocket Expenditure and incidence of Catastrophic Health Expenditure did not decrease with enrolment under PFHI in the three states. The size of OOPE was significantly greater in private sector, irrespective of insurance enrolment. There was a gap between implementation and financial protection that was promised by the scheme. ⁽²⁵⁾

A study was conducted in 2020 to find out the effect of enrolment under Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) in increasing utilization of hospital services and reducing financial burden in Chhattisgarh using 3 cross-sections from the National Sample Survey (NSS) health rounds of 2004, 2014 and 2019. This study found that enrolment under any of the publicly funded schemes did not show any increased utilization of hospital services in Chhattisgarh and incidence of catastrophic health-related expenditure also did not decrease with enrolment under PMJAY or any other PFHI schemes. The OOPE was significantly higher in private sector. PMJAY claims to provide larger financial protection than any other PFHI schemes in India, but it was unable to improve access or financial protection so far in that state. ⁽²⁶⁾

A qualitative study was conducted between 2013 and 2017 in Kenya and Ghana to assess the quality of health services being provided to poor patient populations by the private sector as a part of social health insurance schemes. In-depth interviews with 204 private health service providers and 106 client exit interviews, 10 FGDs, 13 in-depth interviews with Insurance agencies were conducted. There was a general agreement regarding the beneficial effects of the said scheme, but certain limitations were identified like delayed reimbursement, limited coverage and high out-of-pocket expenditure despite the scheme and high premium. These were associated with high rate of lapse of their scheme enrolment.⁽²⁷⁾

A qualitative study was conducted in urban and rural impoverished areas in Tamil Nadu in 2017, on 'Chief Minister's Comprehensive Health Insurance Scheme'. It involved 33 women and 16 men with a recent history of hospital admission and other 14 stakeholders. They wanted to identify the gender barriers in the implementation of the scheme. Gender barriers recognized were financial dependence on males, mobility constraints, unpaid work and gender norms. Social inequalities caused the exclusions from insurance enrolment activities at the community level. These gender barriers were found at all levels which resulted in lower utilization of the scheme by women. This study identified gender as a crucial social determinant related to access and utilization of the scheme.⁽²⁸⁾

A comparative cross-sectional survey conducted in Trivandrum, Kerala to compare the socio-demographics, health care utilization pattern, and out-of-pocket (OOP) expenses among 149 insured and 147 uninsured below-poverty-line households insured by Comprehensive Health Insurance Scheme. Family size more than 4, family member with chronic disease, high socioeconomic status and an

employed household head were significantly associated with insured households. Insured households had 1.5 times higher inpatient service utilization. Only 40% of inpatient service utilization among the insured was covered by insurance. The mean OOP expenses for inpatient services among insured (INR 448.95) was higher than among uninsured households (INR 159.93); The major objective of CHIS was to protect poor people from financial catastrophe, which was not achieved by the scheme. Even though CHIS has increased the utilization of health care services, it did not enroll the poorest households among BPL. Both these findings have huge policy implications. ⁽²⁹⁾

The data from the 71st Round National Sample Survey, 2014 of the GOI were used in this study to examine the effect of Public Health Insurance Programs for the Poor on hospitalizations and inpatient Out-of-Pocket costs. Propensity score matching was used to identify comparable non-enrolled individuals for individuals enrolled in health insurance programs. There were 64,270 BPL people in the sample. Insured poor individuals were found to have 1.21 higher odds of hospitalization compared to matched poor uninsured individuals. Chronic illness, household size and SES class had significant effects on hospital length of stay. Enrolment in the public health insurance programs for the poor increased the utilization of inpatient health care as well as financial protection against catastrophic health expenditure. ⁽³⁰⁾

Two rounds of annual survey conducted among 3,000 households in Chhattisgarh in 2019 and 2020 revealed that utilization of hospital per 1,000 population reduced from 58.2 in 2019 to 36.6 during the pandemic i.e., in 2020. Utilization of public hospitals increased from 60.1% in 2019 to 67.0% in the year 2020. Catastrophic expenditure was significantly higher during the pandemic. The

median out-of-pocket payments in private hospitals doubled from 2019 to 2020. The extent of OOPE and occurrence of catastrophic expenditure were seen more with private hospitals. Enrolment under PFHI schemes like the Ayushman Bharat-Pradhan Mantri Jan Arogya Yojana (PMJAY) did not reduce OOPE or catastrophic expenditure. While the utilization of hospital care dropped during the pandemic, the private hospitals became more unaffordable. The government policy for financial protection from catastrophic expenditure through health insurance was ineffective during the pandemic.⁽³¹⁾

A descriptive study was conducted in the two Indian states of Gujarat and Maharashtra in the year 2019 among 200 Pradhan Mantri Jan Arogya Yojana (PM-JAY) beneficiaries who attended 14 select hospitals with the aim to study elements of responsiveness by the providers/scheme authorities, accessibility and measure financial burden incurred. Sources of information differed in the two states, government official channels served as a major source of information in Gujarat whereas, in Madhya Pradesh it was the informal sources. Hospitals in Gujarat (82% satisfaction score) performed significantly better than those in Madhya Pradesh (71% satisfaction score) in terms of element of responsiveness. Similarly, financial burden was lower in Gujarat beneficiaries. It was found that with higher level of awareness, there was a higher level of utilization. The need for reinforcement with Information Education and Communication activities and capacity building was highlighted in the study.⁽³²⁾

A systematic review was conducted in 2020 in India to study the impact of public funded health insurance (PFHI) on healthcare utilization and protection from financial risk. Of the 25 studies included, 10 were national and rest were state level

studies. It was observed that there was an increase in utilization of healthcare services among insured beneficiaries in terms of outpatient and in-patient care in both rural and urban areas. However, the healthcare utilization rates differed between the states and there was inconclusive evidence on the impact of different PFHI schemes on financial risk protection. They identified that this was due to the problem of ‘double billing’, monopoly by private providers and administrative problems.⁽³³⁾

A systematic review was conducted in 2015 in India to search for studies focusing on the impact of Indian publicly sponsored health insurance schemes. Of the 43 studies included, 14 had comparison groups and 29 studies without comparison groups. It was found that awareness levels regarding eligibility for the schemes were higher among the participants, as compared to information on travel allowances and diseases/conditions covered and this varied greatly across the different states. This review also showed that enrolment was inversely related to the geographical size of the administrative area and distance of home from health facility. The utilization rate was largely determined by the number of empanelled hospitals in the area and type of service required. Urogenital (33.4%) followed by gynecological (20%) and gastrointestinal (11%) procedures mostly were the common reasons for utilization of the schemes.⁽³⁴⁾

A systematic review and meta-analysis was conducted in 2013 involving 54 studies spanning 56 countries to study the factors determining voluntary uptake of the Community-Based Health Insurance (CBHI) Schemes and their renewal practices in Low- and Middle-Income Countries. The demand-side factors positively affecting enrolment in CBHI included education, age, female headed household and socioeconomic status. Other factors positively associated with the enrolment were

knowledge and understanding of insurance and trust. Barriers to enrolment were found to be affordability, inappropriate benefits packages, cultural beliefs, distance to healthcare facility from home, lack of adequate legal and policy frameworks and strict rules of some CBHI schemes. The thematic synthesis also revealed that positive experience with how the CBHI settled claims was an important enabler for renewal decision.⁽³⁵⁾

A survey was conducted in 2017 among 659 Nivel Dutch Health Care Consumer Panel members in Netherlands to identify the importance of health insurance policy and their ease of comprehension. It identified a gap between their acknowledgement of importance of choice and ease of comprehension of the policies by the participants. A section of the citizens did not possess the appropriate skills in deciding which insurance policy best fits their needs and preferences. This study concluded that insight into the people's health insurance literacy is crucial in tailoring information on health insurances to the specific needs and skills of the individuals. By doing this, citizens will be better supported in making well-informed decisions regarding choice of health insurance policies, which can result in their benefit.⁽³⁶⁾

A cross-sectional household survey in the Udupi district of Coastal Karnataka, on 1,639 households, was carried out, which had 1,108 insured households and 530 non-insured households at a ratio of 2:1. The aim was to study the factors determining enrolment into two community-based health insurances (CBHI) – 'Manipal Arogya Suraksha', a social initiative by one of the leading health care and educational group in Karnataka and 'Sampoorna Suraksha', a component of a rural development project of a temple trust in the state of Karnataka. The

sociodemographic characteristics of the households like female headed households, income and smaller family size (<5 members) positively influenced the acceptability of the CBHI schemes.⁽³⁷⁾

Mahatma Gandhi Institute of Medical Sciences (MGIMS) Sevagram, a college in Wardha, Maharashtra, runs several community-based health insurance schemes like Jawar, Village insurance, Bachat-Gat group scheme that take care to the populations in its vicinity. A cross-sectional survey was conducted in the MGIMS, Wardha catchment area in 2011 in 35 villages to evaluate the effectiveness of this system in terms of enrolment, utilization and protection from catastrophic health events. Of 7,261 households (HHs) surveyed, 2,210 (30.4%) households were uninsured, 4,153 (57.2%) were insured under those schemes, and 898 (12.4%) had family insurance. 30% households were poor and uninsured, while those with CBHI were 14% and family insurance were 21%. Mean hospitalization episodes in an HH were 0.82, 1.13 and 1.21 among uninsured, CBHI insured and those with family insurance. Catastrophic health events were more in uninsured (12.3%) than in CBHI insured (7.9%). Thus, CBHI schemes were successful in improving utilization and offered protection against catastrophic health expenditure.⁽³⁸⁾

India's National Health Insurance Scheme or RSBY was made universal by Chhattisgarh State in 2012. This study examined enrolment, utilization (public and private) and out of pocket expenditure (OOPE) for both insured and uninsured, in Chhattisgarh from the 2014 National Sample Survey (71st Round) on Health. Insurance covered was 38.8% of the population. Rates of hospitalization were 33/1,000 and 29/1,000 among the insured and uninsured respectively. Among insured, 67.2% had utilized the public sector for hospitalization. Females, rural

residents and lower socioeconomic class had predominantly utilized the public sector for hospitalizations. 95.1% private sector users and 66.0% public sector users, still incurred some OOPPE despite being insured. Median OOPPE in the public sector was 1/8th cost of that in the private sector. Of households with at least one member hospitalized, 35.5% had experienced catastrophic health expenditures (that is >10% monthly household consumption expenditure). It was found that despite insurance coverage, the majority still incurred some OOPPE. The public sector was less expensive as well as it catered to the vulnerable people. This study called for further examination of the roles of public and private sectors in financial risk protection through government health insurance.⁽³⁹⁾

A community based cross-sectional study was conducted in the rural field practice area of Saveetha Medical College and Hospital, Chennai in 2020 with the objective to evaluate the coverage, utilization and the impact of the Ayushman Bharat-Pradhan Mantri Jan Arogya Yojana (PMJAY) scheme. The study found that out of 300 households, only about 42.33% of them were covered under PMJAY. Among those covered, 47.24% households had utilized the benefits of the scheme in the past year and only 10% of them had an additional out-of-pocket expenditure, despite being covered under the PMJAY scheme. Around 39.88% of the households without the scheme had faced financial burdens due to health care related expenditure. This study concluded that financial burden due to health-related expenditure was lower in the households covered by the PMJAY scheme.⁽⁴⁰⁾

A record-based, cross-sectional study was conducted by collecting data from the hospital medical records department of 1,367 covid-19 positive patients admitted in 2020 - 2021 at Tertiary Care Hospital of Dakshina Kannada District in Karnataka.

This study aimed to know the utilization of Ayushman Bharat Arogya Karnataka scheme among covid-19 patients admitted in the tertiary care hospital. Out of 1,367 patients, 906 (66.27%), were eligible for Ayushman Bharat Arogya Karnataka (AB-ArK) scheme, of whom, 714 (78.8%) had utilized the scheme. Higher utilization of the scheme was seen in males (62%), younger generation (33%) and in the lockdown period.⁽⁴¹⁾

METHODOLOGY

A facility based cross-sectional study was conducted to assess the knowledge and attitude towards health insurance schemes among community health care providers and to assess the utilization pattern of various health insurance schemes by the community health care providers in the field practice areas of five primary health centres, namely UHC Ashoknagar, UHC Rukmininagar, PHC Vantamuri (rural) and PHC Kinaye, which are under the administrative control of Department of Community Medicine, J.N. Medical College, KAHER, Belagavi and UHC Ramnagar in the city of Belagavi Taluka, Karnataka state, India. This study was conducted over a period of one year from 1st January 2021 to 31st December 2021 (12 months).

Study participants were community health care providers comprising of Health Assistants, ANMs, ASHAs, Anganwadi workers, health centre staff and other support staff employed in the selected primary health centres, sub-centres and villages of Belagavi Taluka/District.

Inclusion criteria: All community health care providers employed for more than one year under UHCs & PHCs that come under the administrative control of KAHER's J.N. Medical College in the Belagavi Taluka and UHC Ramnagar, Belagavi Taluka were included.

Exclusion criteria: Medical Officers of UHCs & PHCs were excluded. All community health care providers employed for less than one year under UHCs & PHCs that come under the administrative control of KAHER's J.N. Medical College in the Belagavi taluka and UHC Ramnagar, Belagavi were excluded.

Sample size estimation- The total number of community health care providers from all four health centres that come under the administrative control of KAHER's J.N. Medical College is **365** according to the data collected. To make the total study population to **422**, the community health care providers from nearby UHC Ramnagar were included. The following number of community health care providers under the five health care centre areas were included in the study (as per the information collected from the respective medical officers and employee registry of respective health centres):

PHC/UHC	ASHA workers	Anganwadi workers	Other staff	Total
PHC Kinaye	46	100	18	164
PHC Vantamuri (rural)	32	58	6	96
UHC Ashok Nagar	0	29	7	36
UHC Rukmini Nagar	18	54	13	85
UHC Ram Nagar	2	25	12	39
TOTAL	98	266	56	420

Universal sampling method - was adopted and all the community health care providers that provided consent were included in the study and were interviewed with a standard questionnaire to assess their knowledge, attitudes and utilization patterns of health insurance.

Ethical clearance was obtained from the Institutional Ethics Committee for Human Subjects' Research of the Medical College dated 25/01/2021 vide under letter MDC/DOME/80. Written informed consent was obtained from all the study participants before the data collection (ANNEXURE – I).

Data collection: Using a pre-designed and pre-tested questionnaire, information regarding socio-demographic details, knowledge, attitude of participants towards various health insurance schemes were obtained and utilization patterns of health insurance schemes (in 12 months preceding the survey) were studied. If any health care provider was not available at the time of survey, two more attempts were made to collect the data by the investigator.

Data analysis: The data collected was entered into the Microsoft Excel sheet and master chart was prepared. Coding was done to encrypt the data for each option in the questionnaire. Data was analyzed using SPSS software (Trial version 20, IBM SPSS South Asia). Frequency and percentage were used for describing categorical variables. Chi square test and Fisher's exact test were used to know the association between two categorical variables and p-value of < 0.05 was considered as statistically significant.

Pilot study: A pilot study was conducted among 40 community health care providers under the field practice area of Belagavi Institute of Medical Sciences, Belagavi before starting the study and the questionnaire was revised.

Definition of study variables

1. Socio-demographic Variables:

- **Age in years:**

Age was recorded as told by the participant to the nearest completed years.

- **Sex:**

Male/Female

- **Area of residence:**

All areas listed under Urban areas as per Census 2011 was taken as urban areas.

All areas not listed in the urban areas list as per Census 2011 were taken as rural areas.

- **Religion (as told by the participants):**

Hinduism followers listed as Hindus,

Islamic followers as Muslims

Christianity followers as Christians and others

- **Category:**

Category was recorded as per SECC 2011.

The categories used: Scheduled Caste, Scheduled Tribe, Other Backward Castes & Others / General category as per the Govt. of Karnataka list.

- **Educational status:**

Divided into 5 levels:

No formal schooling – those who did not attend any school.

Class 1-5 – participant who had attended schooling between first and fifth standard.

Class 6-10 - participant who had attended schooling between sixth and tenth standard.

PUC/Diploma/ITI – Participant had studied up to PUC or Diploma or ITI

Graduate/PG – Participant who had Bachelor’s / Master’s Degree.

- **Type of family:**

Nuclear family - The family consisting of married couple along with their dependent children.

Joint family: It consists of number of married couples and their children who live in the same household.

- **Socio-economic status:** classified using Modified B.G. Prasad’s Classification (2021)

Socio-economic class	Per capita income in INR as per original classification in 1961 ⁽⁴²⁾	Per capita in INR as per modified classification for 2021 ⁽⁴³⁾
Class I	≥ 100	≥ 7863
Class II	50-99	3931 – 7862
Class III	30-49	2359 – 3930
Class IV	15-29	1179 – 2358
Class V	<15	< 1179

- **BPL card holder:** those families that have BPL ration card.

2. Personal History: (as self-reported by the study participant)

- Smoking: recreation / habitual usage of cigarettes and beedis anytime in the last one year.
- Alcohol consumption: history of consumption of alcohol anytime in the last one year.
- Tobacco consumption: consumption of tobacco in any form like chewing, snorting etc, anytime in the last one year.
- Illicit drug use: abuse of any illegal/illicit drugs as identified by GOI.

3. Medical History: as diagnosed previously by a registered medical practitioner/ record from the PHC/UHC.

4. Health expenses: Mentioned in INR as well as US dollars. The average exchange rate of USD to INR in the year 2021 was **1 USD = 73.93 INR.**

RESULTS

The present study was a facility based cross-sectional study conducted among 420 community health care providers in the field practice areas of five primary health centres, namely UHC Ashoknagar, UHC Rukmininagar, PHC Vantamuri (rural) and PHC Kinaye, which are under the administrative control of Department of Community Medicine, J.N. Medical College, KAHER, Belagavi and UHC Ramnagar in the city of Belagavi Taluka, Karnataka state, India. This study was conducted over a period of one year from 1st January 2021 to 31st December 2021 (12 months). The results of this study are presented under the following sections:

I A: Socio-demographic details

I B: Personal and family history

II: Knowledge regarding Health Insurance

III: Attitude towards Health Insurance

IV: Utilization pattern of Health Insurance

Section – I A: Socio-demographic details

Table 1: Distribution of the study participants according to their age (n=420)

Age in years	Frequency	Percentage
18-30	60	14.29%
30-40	164	39.05%
40-50	153	36.42%
50-60	43	10.24%
Total	420	100.00%

Among the 420 study participants, 164 (39.05%) participants belonged to the age group of 30-40 years, 153 (36.42%) belonged to 40-50 years, 60 (14.29%) to 18-30 years and 43 (10.24%) to 50-60 years.

Graph 1: Distribution of the study participants according to their age (n=420)

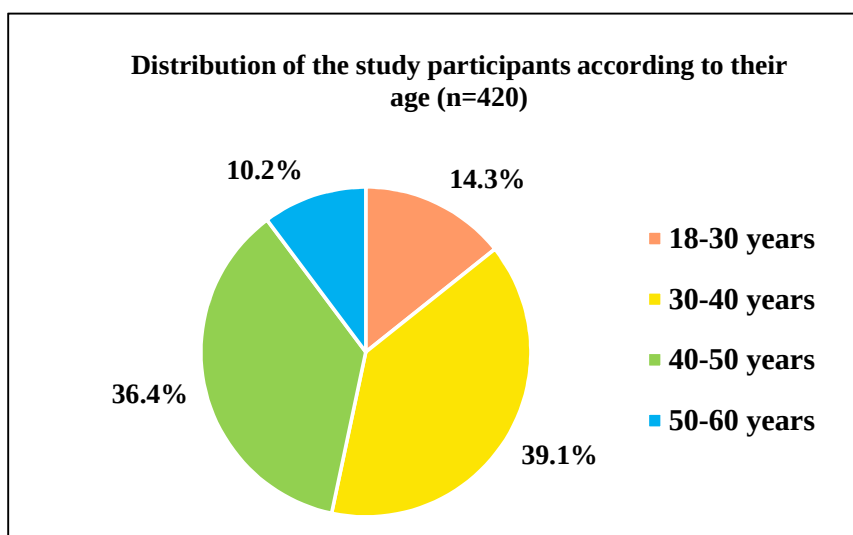


Table 2: Distribution of the study participants according to their gender (n=420)

Gender	Frequency	Percentage
Male	14	3.3%
Female	406	96.7%
Total	420	100.0%

Of 420 study participants, 406 (96.7%) participants were females and 14 (3.3%) were males.

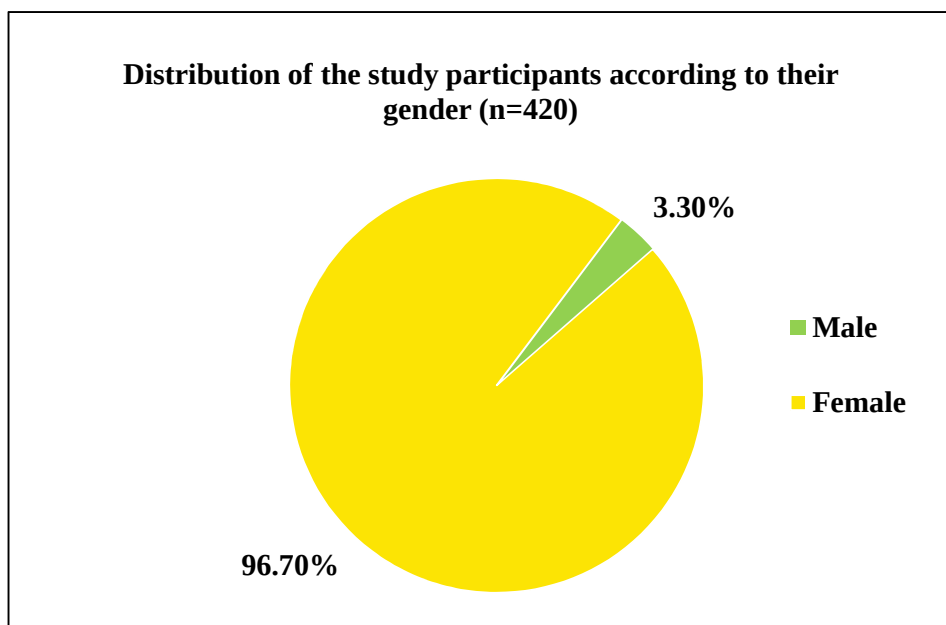
Graph 2: Distribution of the study participants according to their gender (n=420)

Table 3: Distribution of the study participants according to their area of residence (n=420)

Area of residence	Frequency	Percentage
Rural	257	61.2%
Urban	163	38.8%
Total	420	100.0%

Out of 420 study participants, 257 (61.2%) resided in rural areas and 163 (38.8%) in urban areas.

Graph 3: Distribution of the study participants according to their area of residence (n=420)

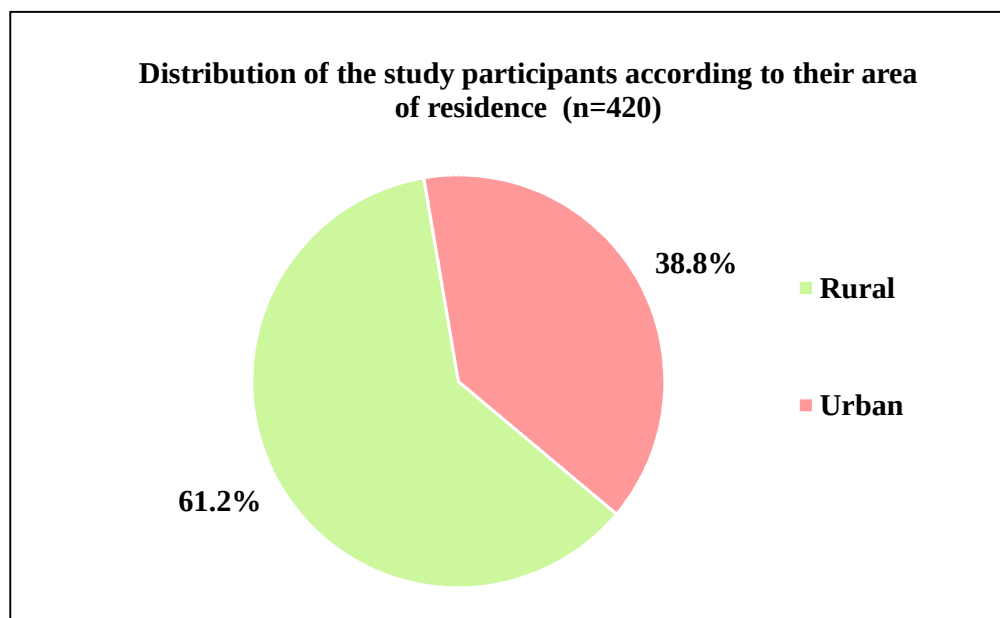


Table 4: Distribution of the study participants according to their place of employment (n=420)

Place of employment	Frequency	Percentage
PHC Kinaye	164	39.0%
PHC Vantamuri (rural)	96	22.9%
UHC Ashoknagar	36	8.5%
UHC Rukmininagar	85	20.3%
UHC Ramnagar	39	9.3%
Total	420	100.0%

Out of 420 study participants, 164 (39.0%) are employees of PHC Kinaye, 96 (22.9%) of PHC Vantamuri (rural), 85 (20.3%) of UHC Rukmininagar, 39 (9.3%) of UHC Ramnagar and 36 (8.5%) of UHC Ashoknagar.

Graph 4: Distribution of the study participants according to their place of employment (n=420)

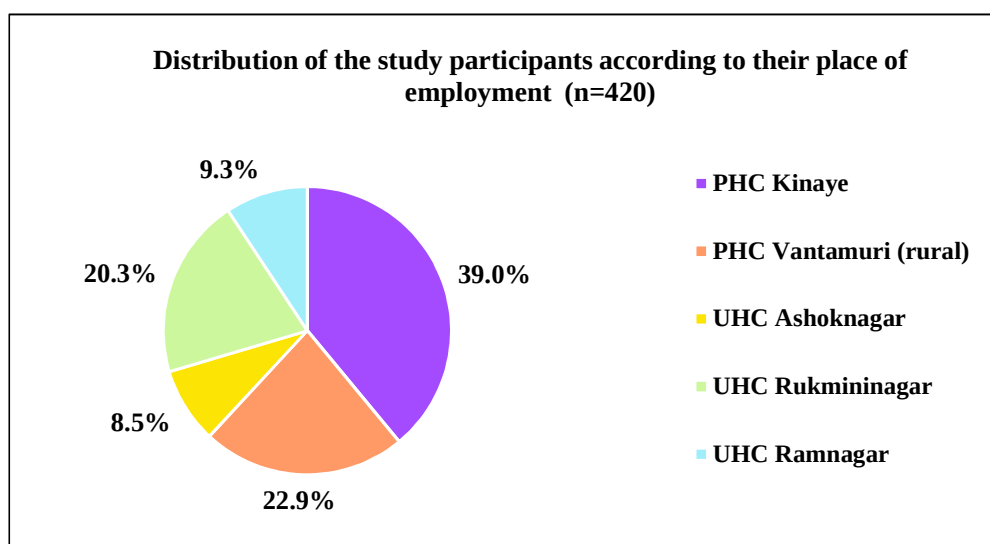


Table 5: Distribution of the study participants according to their occupation (n=420)

Sl. No.	Occupation	Frequency	Percentage
01	ASHA worker	98	23.3 %
02	Anganwadi worker	266	63.3%
03	Auxiliary Nurse Midwife	25	6.0%
04	Lady Health Visitor	2	0.5%
05	Nurse	5	1.3%
06	Male Health worker	7	1.7%
07	Pharmacist	1	0.2%
08	Clerk	4	0.9%
09	Lab Technician	4	0.9%
10	Group-D manual worker	6	1.4%
11	Others	2	0.5%
	Total	420	100.0%

Of 420 study participants, 266 (63.3%) were Anganwadi workers, 98 (23.3%) were ASHA workers, 25 (6.0%) were ANMs, 7 (1.7%) were male health workers, 6 (1.4%) were group-D manual workers, 5 (1.3%) were nurses, 4 (0.9%) were lab technicians, 4 (0.9%) were clerks, 2 (0.5%) were LHVs, 2 (0.5%) were other support staff and only one (0.2%) was pharmacist.

Graph 5: Distribution of the study participants according to their occupation (n=420)

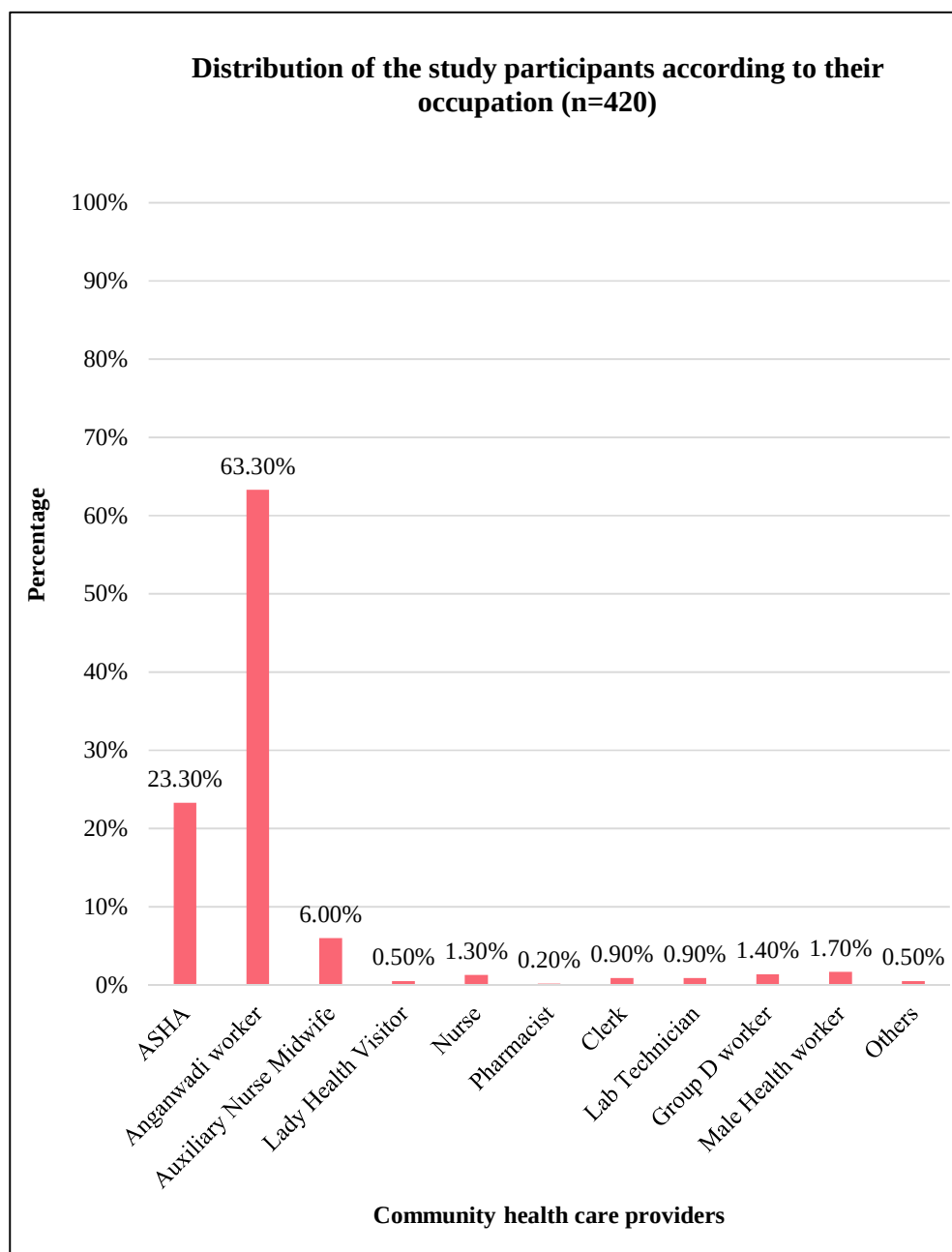


Table 6: Distribution of the study participants according to their occupation in PHC/UHC (n=420)

Health centre	ASHA worker	AWW	Others*	Total
PHC Kinaye	46	100	18	164
PHC Vantamuri (rural)	32	58	6	96
UHC Ashoknagar	0	29	7	36
UHC Rukmininagar	18	54	13	85
UHC Ramnagar	2	25	12	39
Total	98	266	56	420

[*Others included ANM, nurse, LHV, Male health worker, Pharmacist, clerk, lab technician, group-D worker and other support staff]

Of 420 study participants, 164 were employees of PHC Kinaye comprising of 46 ASHA workers, 100 Anganwadi workers and 18 others, 96 were employees of PHC Vantamuri (rural) comprising of 32 ASHA workers, 58 Anganwadi workers and 6 others, 85 were employees of UHC Rukmininagar comprising of 18 ASHA workers, 54 Anganwadi workers and 13 others, 39 were employees of UHC Ramnagar comprising of 2 ASHA workers, 25 Anganwadi workers and 12 others, 36 were employees of UHC Ashoknagar comprising of 29 Anganwadi workers and 7 others.

**Graph 6: Distribution of the study participants according to their occupation in
PHC/ UHC (n=420)**

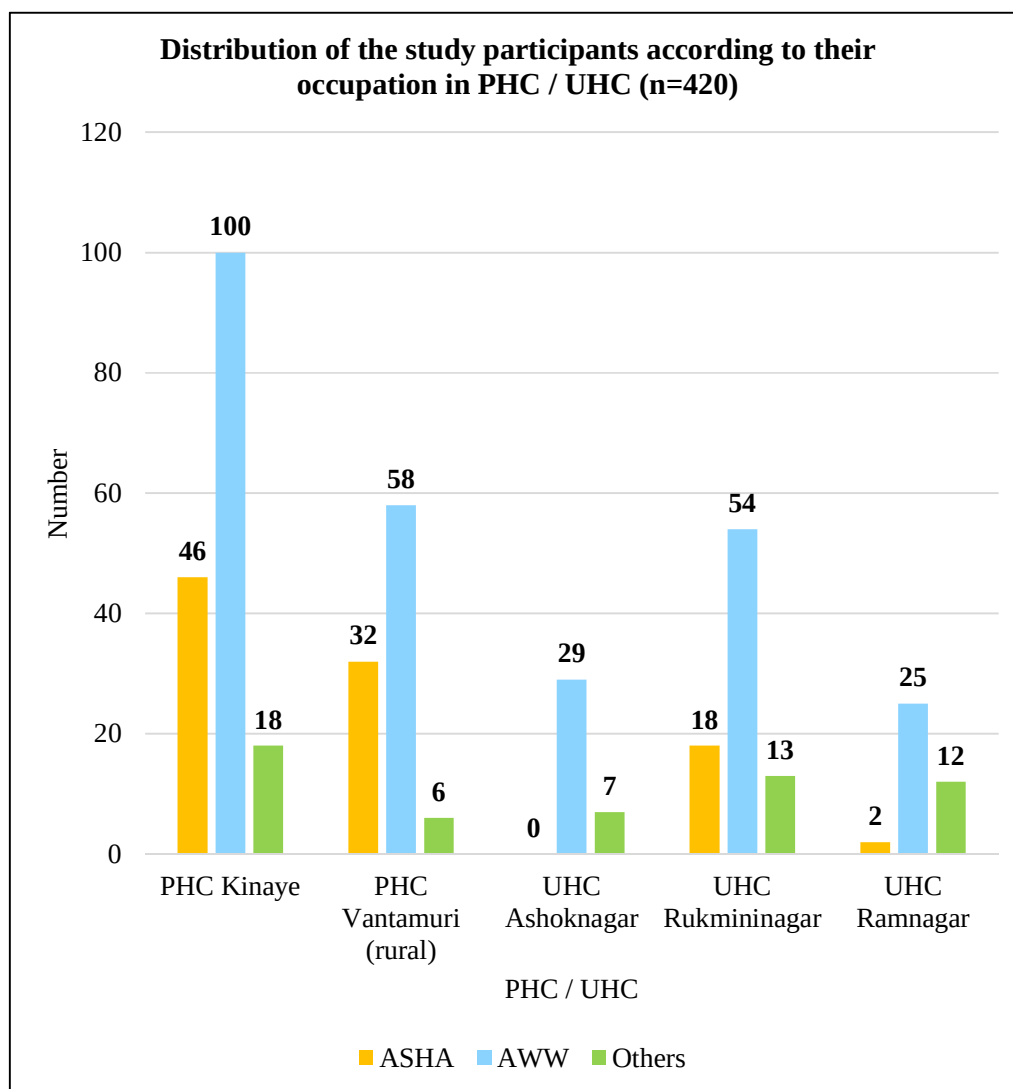


Table 7 : Distribution of the study participants according to duration of service (n=420)

Duration of service (in years)	Frequency	Percentage
1-10	154	36.7%
10-20	176	42.0%
20-30	88	20.9%
30-40	2	0.4%
Total	420	100.0%

Out of 420 study participants, 176 (42.0%) belonged to 10-20 years of service group, 154 (36.7%) to 1-10 years group, 88 (20.9%) to 20-30 years group and 2 (0.4%) to 30-40 years of duration of service group.

Graph 7: Distribution of the study participants according to duration of service (n=420)

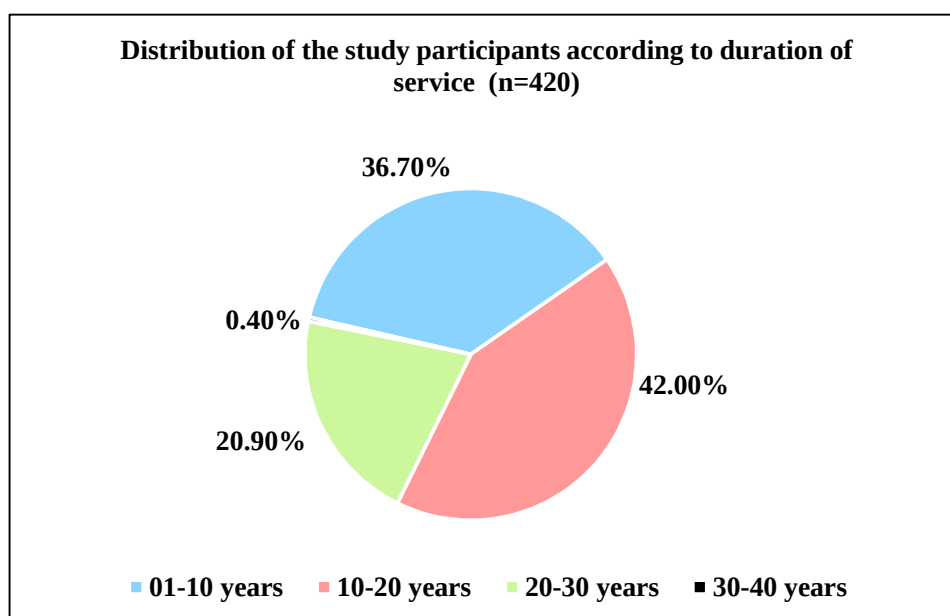


Table 8: Distribution of the study participants according to their religion (n=420)

Religion	Frequency	Percentage
Hindu	380	90.5%
Muslim	25	6.0%
Christian	4	0.9%
Jain	11	2.6%
Total	420	100.0%

380 (90.5%) out of 420 study participants were Hindus, 25 (6.0%) were Muslims, 11 (2.6%) were Jains and only 4 (0.9%) were Christians.

Graph 8: Distribution of the study participants according to their religion (n=420)

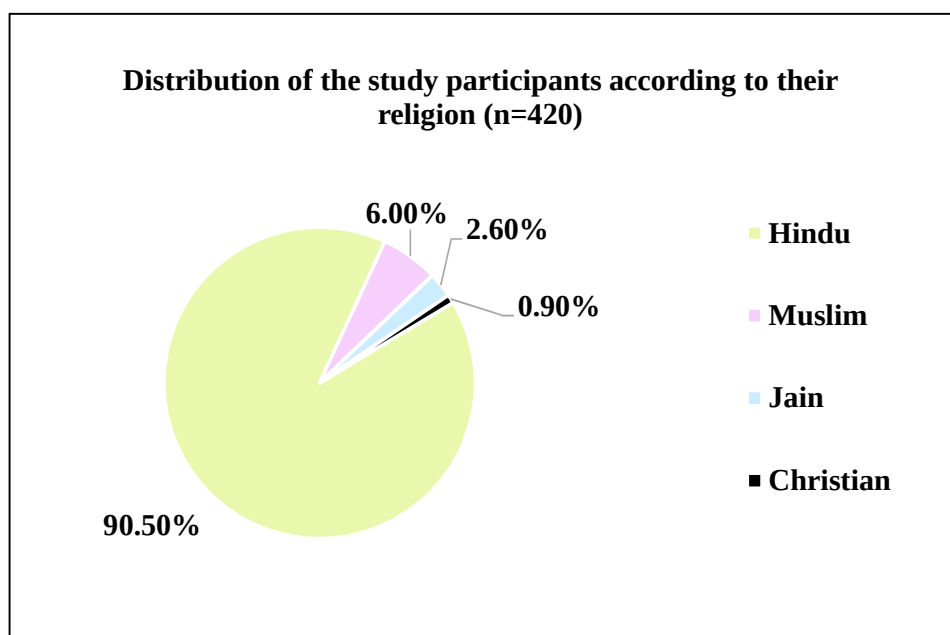


Table 9: Distribution of the study participants according to their category (n=420)

Category	Frequency	Percentage
SC	35	8.3%
ST	53	12.6%
OBC	202	48.1%
Others/ General	130	31.0%
Total	420	100.0%

202 (48.1%) out of 420 study participants belonged to OBC category, 130 (31.0%) to others/General category, 53 (12.6%) to ST category and 35 (8.3%) to SC category.

Graph 9: Distribution of the study participants according to their category (n=420)

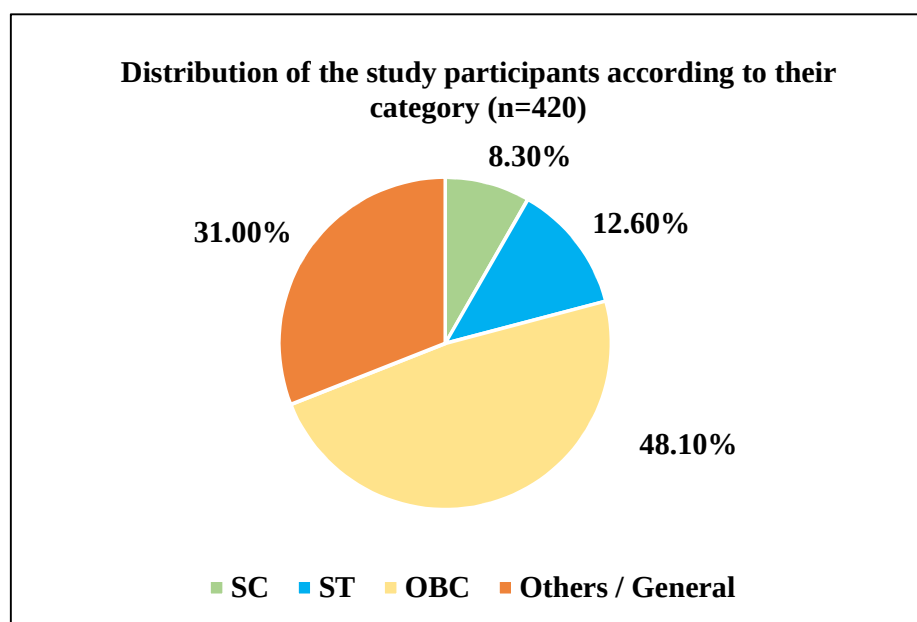


Table 10: Distribution of the study participants according to their education status (n=420)

Education status	Frequency	Percentage
No formal schooling	2	0.5%
Class 1-5	4	0.9%
Class 6-10	290	69.0%
PUC/ Diploma/ ITI	96	22.9%
Graduation/PG	28	6.7%
Total	420	100.0%

Out of 420 study participants, 290 (69.0%) had studied till 10th class, 96 (22.9%) till PUC/ Diploma/ ITI, 28 (6.7%) were graduates/ PG, 4 (0.9%) had attended school till class 5 and only 2 (0.4%) had no formal schooling.

Graph 10: Distribution of the study participants according to their education status (n=420)

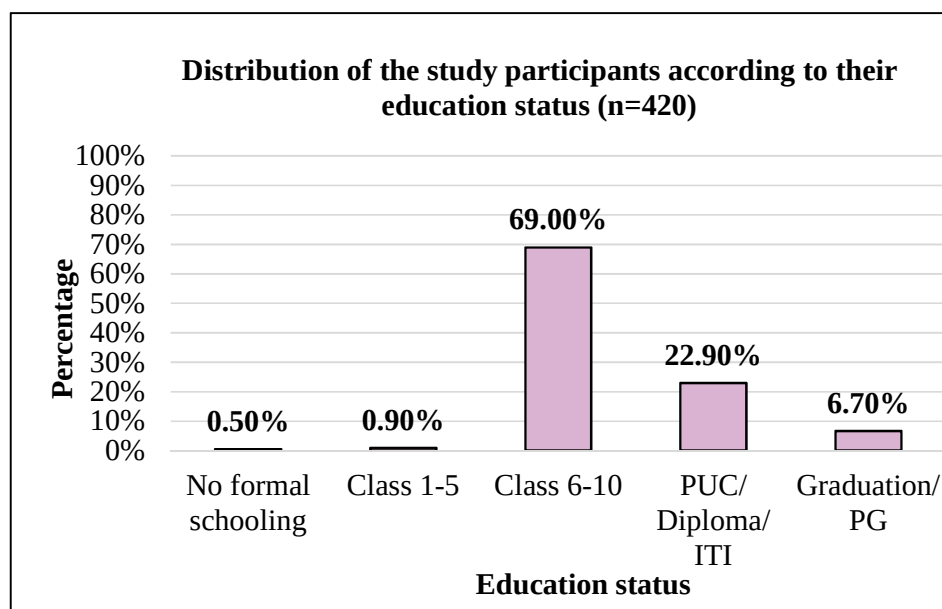


Table 11: Distribution of the study participants according to their marital status (n=420)

Marital Status	Frequency	Percentage
Married	366	87.1%
Unmarried	18	4.4%
Widow/widower	35	8.3%
Divorced/separated	1	0.2%
Total	420	100.0%

Of 420 study participants, 366 (87.1%) were married, 35 (8.3%) were widowed, 18 (4.4%) were unmarried and only one (0.2%) was divorced.

Graph 11: Distribution of the study participants according to their marital status (n=420)

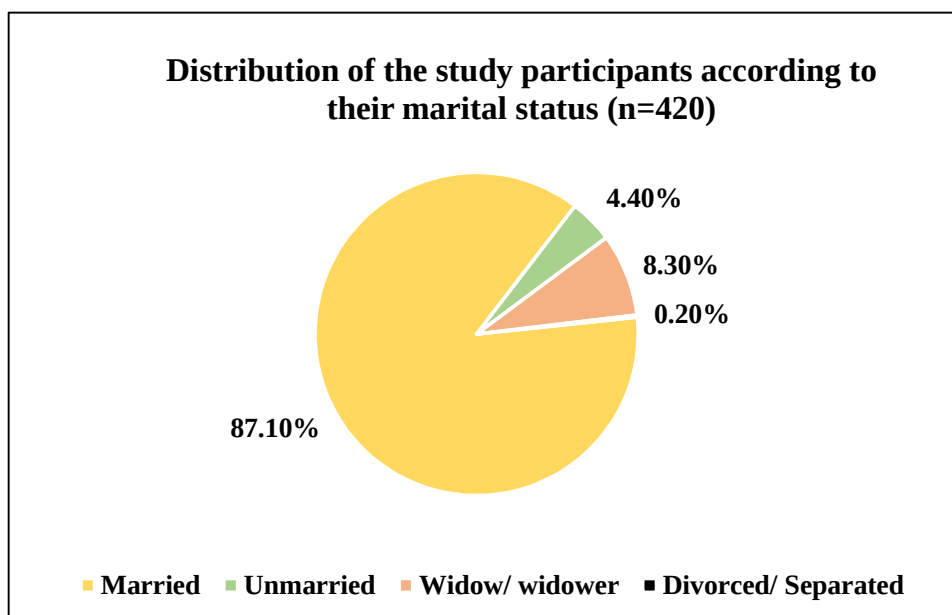


Table 12: Distribution of the study participants according to type of family (n=420)

Type of Family	Frequency	Percentage
Nuclear	272	64.8%
Joint	148	35.2%
Total	420	100.0%

272 (64.8%) out of 420 study participants belonged to nuclear family and 148 (35.2%) belonged to joint family.

Graph 12: Distribution of the study participants according to type of family (n=420)

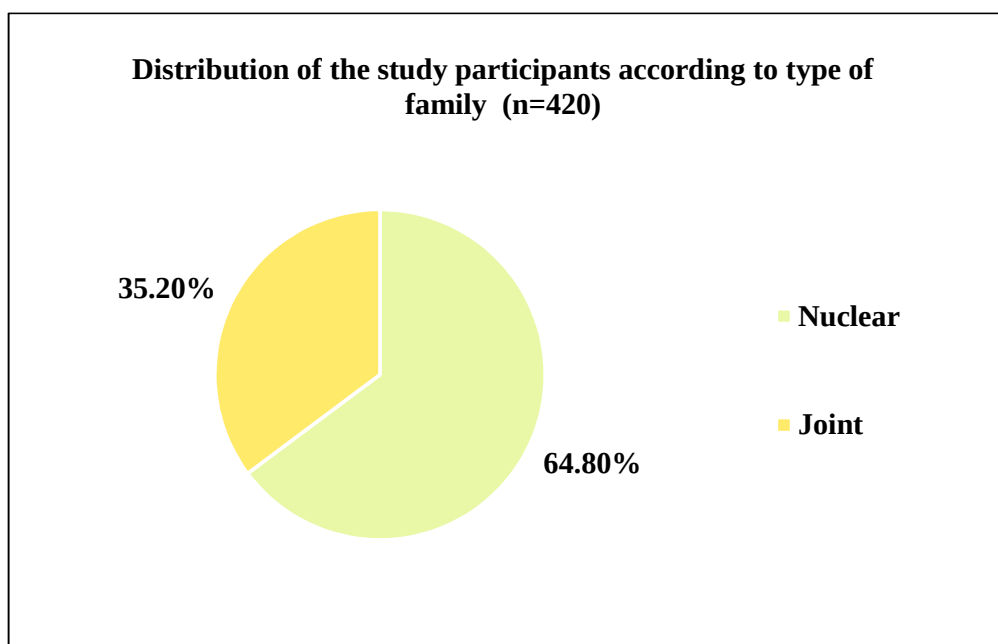


Table 13: Distribution of the study participants according to Socio-economic status (according to the Modified B.G. Prasad's classification) (n=420)

Socio-economic status (according to the Modified B.G. Prasad's classification)	Frequency	Percentage
Class 1	40	9.5%
Class 2	123	29.3%
Class 3	135	32.1%
Class 4	95	22.7%
Class 5	27	6.4%
Total	420	100.0%

Out of 420 study participants, 135 participants (32.1%) belonged to SES class 3, 123 (29.3%) to class 2, 95 (22.7%) to class 4, 40 (9.5%) to class 1 and 27 (6.4%) to class 5 as per modified B.G. Prasad's classification.

Graph 13: Distribution of the study participants according to Socio-economic status (according to the Modified B.G. Prasad's classification) (n=420)

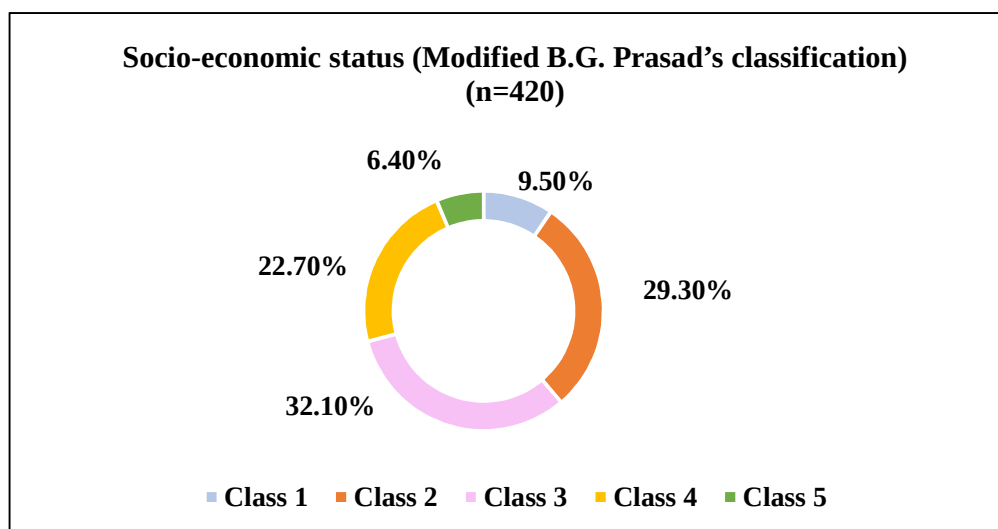
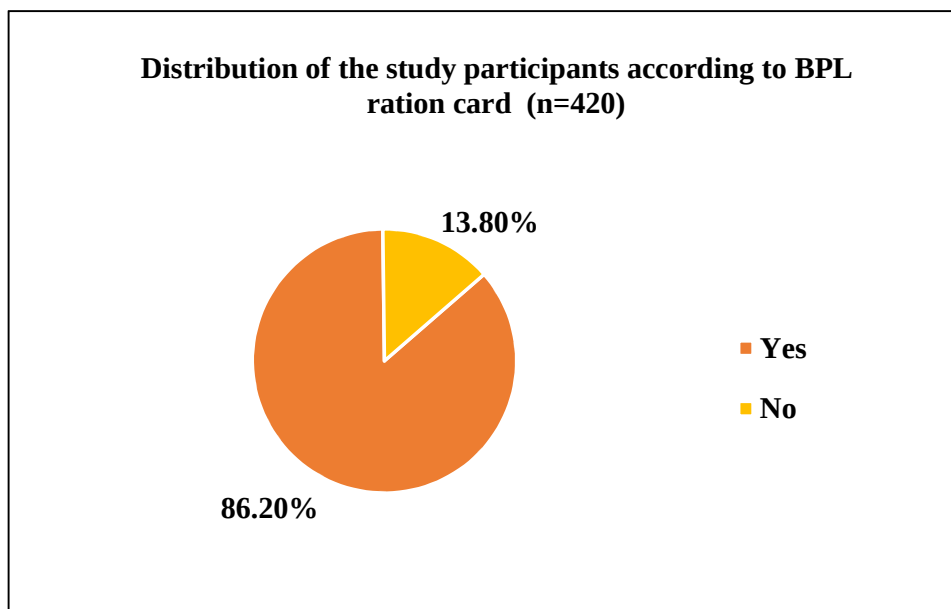


Table 14: Distribution of the study participants according to BPL ration card (n=420)

BPL Ration Card	Frequency	Percentage
Yes	362	86.2%
No	58	13.8%
Total	420	100.0%

362 (86.2%) out of 420 study participants had BPL ration card and 58 (13.8%) did not have it.

Graph 14: Distribution of the study participants according to BPL ration card (n=420)



Section – I B: Personal and Family History**Table 15: Distribution of the study participants according to habits (n=420)**

Habits	Frequency	Percentage
Smoking	0	0%
Alcohol consumption	2	0.40%
Tobacco consumption	0	0%
Illicit drug usage	0	0%
Total	2	0.40%

Of 420 study participants, 2 (0.4%) were habitual alcohol consumers. None had smoking/ tobacco consumption/ illicit drug usage habits.

Table 16: Distribution of the study participants according to chronic medical illness (n=420)

Chronic medical illness	Frequency	Percentage
Diabetes only	13	3.0%
Hypertension only	10	2.4%
Rheumatoid arthritis only	3	0.7%
Diabetes + Hypertension	3	0.7%
Hypertension + Cardio vascular disease	1	0.2%
Total	30	7%

Of 420 study participants, 13 (3.0%) had diabetes, 10 (2.4%) had hypertension, 3 (0.7%) had rheumatoid arthritis, 3 (0.7%) had both diabetes and hypertension and one participant (0.2%) had diabetes, hypertension and cardiovascular disease.

Graph 15: Distribution of the study participants according to chronic medical illness (n=420)

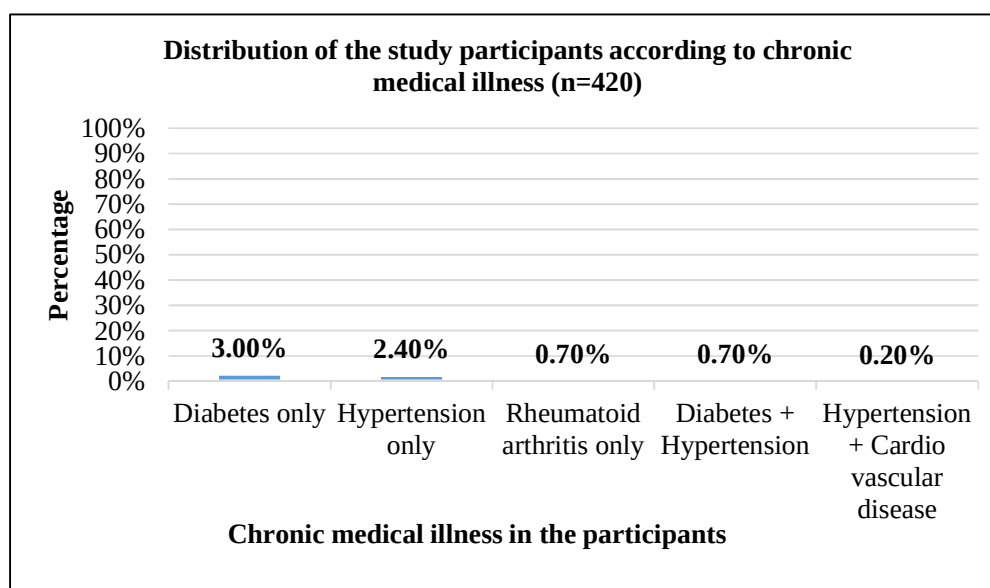
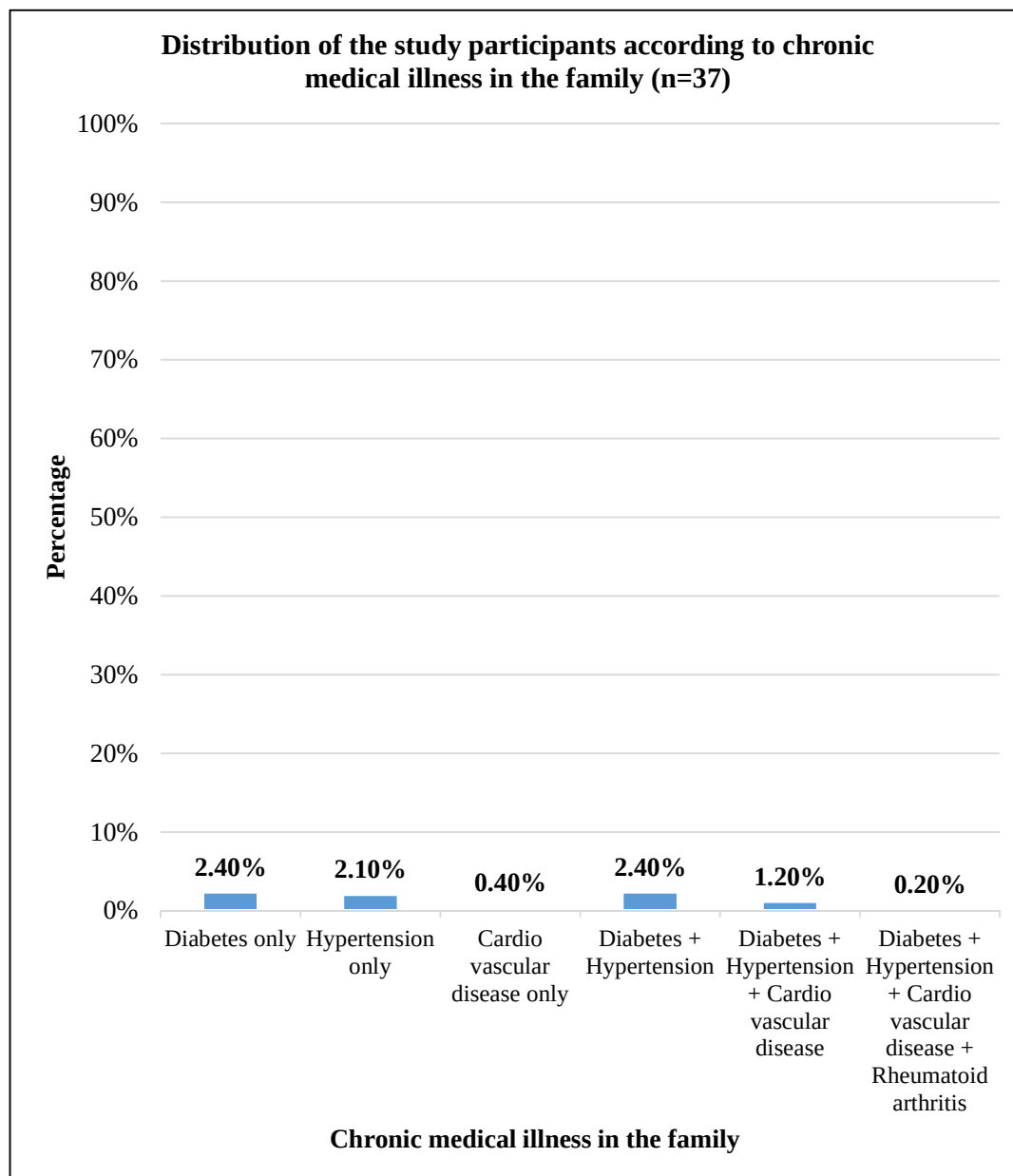


Table 17: Distribution of the study participants according to chronic medical illness in the family (n=37)

Chronic medical illness in the family member	Frequency	Percentage
Diabetes only	10	2.4%
Hypertension only	9	2.1%
Cardio vascular disease only	2	0.4%
Diabetes + Hypertension	10	2.4%
Diabetes + Hypertension + Cardio vascular disease	5	1.2%
Diabetes + Hypertension + Cardio vascular disease + Rheumatoid arthritis	1	0.2%
Total	37	8.7%

Of 420 study participants, 37 had chronic medical illness in the family. Family members of 10 study participants (2.4%) had diabetes, 10 (2.4%) had diabetes and hypertension, 9 (2.1%) had hypertension, 5 (1.2%) had diabetes + hypertension + cardio vascular disease, 2 (0.4%) had cardio vascular disease and only one (0.2%) had diabetes + hypertension + cardio vascular disease + rheumatoid arthritis.

Graph 16: Distribution of the study participants according to chronic medical illness in the family (n=37)



Section – II: Knowledge regarding Health Insurance

Table 18: Distribution of the study participants according to their awareness about health insurance (n=420)

Awareness about Health insurance	Frequency	Percentage
Yes	419	99.8%
No	1	0.2%
Total	420	100.0%

Of 420 study participants, 419 (99.8%) were aware of health insurance and only one (0.2%) was not aware of the same.

Graph 17: Distribution of the study participants according to awareness about health insurance (n=420)

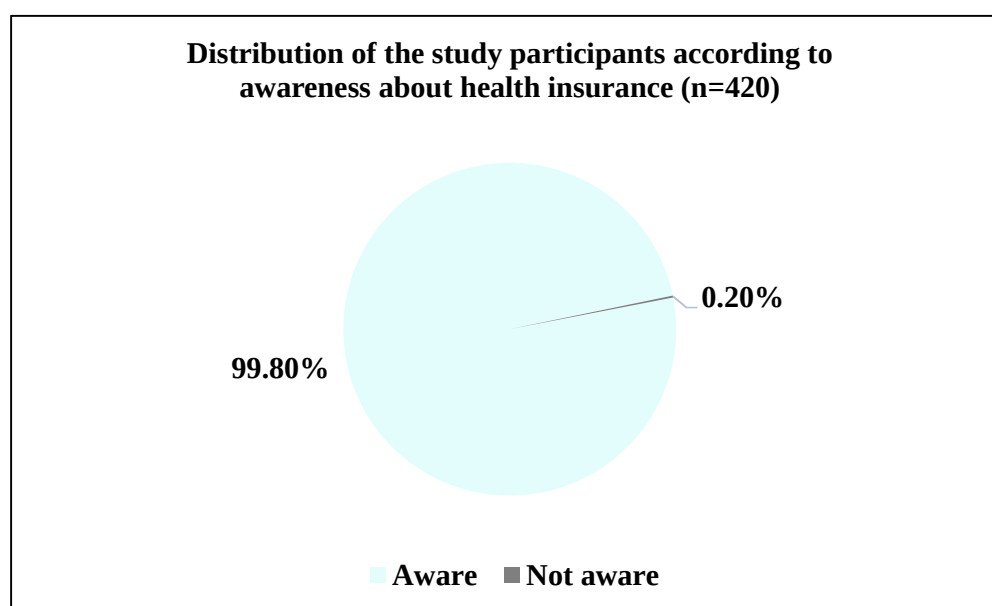


Table 19: Distribution of the study participants according to duration of awareness about health insurance (n=419)

Duration of awareness about Health insurance	Frequency	Percentage
< 1 year ago	31	7.4%
1-5 years	138	32.9%
> 5 years ago	250	59.7%
Total	419	100.0%

Of 419 study participants who were aware of health insurance, 250 (59.7%) had known for more than 5 years, 138 (32.9%) had known for less than 5 years and 31 (7.4%) for less than one year.

Graph 18: Distribution of the study participants according to awareness about health insurance (n=419)

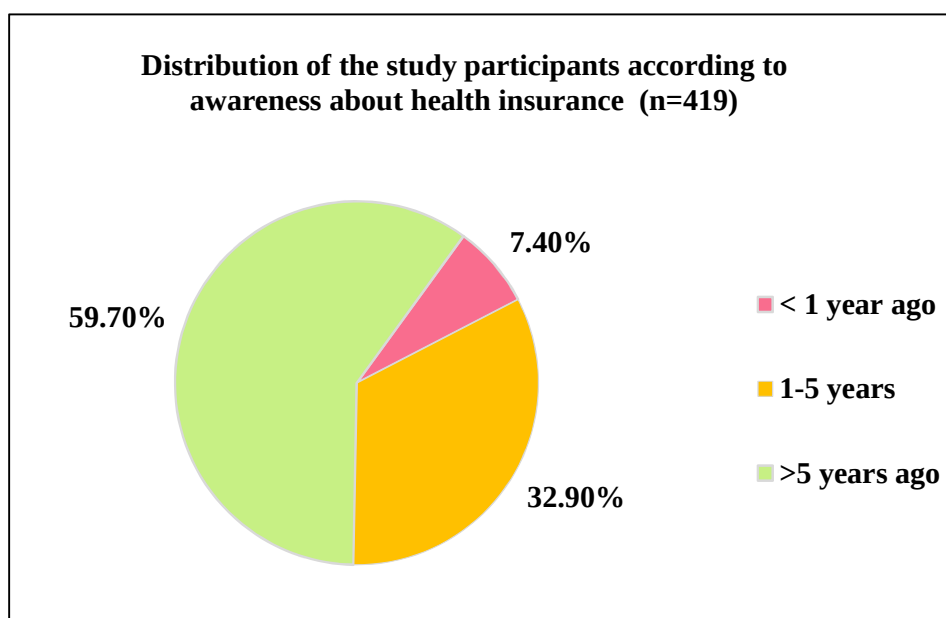


Table 20: Distribution of the study participants according to number of health insurance schemes known (n=420)

Number of Health insurance schemes known	Frequency	Percentage
0	2	0.4%
2	103	24.5%
3	132	31.5%
4	100	23.9%
5	63	15.0%
6	12	2.8%
> 6	8	1.9%
Total	420	100.0%

Of 420 study participants, 132 (31.5%) were aware of 3 health insurance schemes, 103 (24.5%) of 2 schemes, 100 (23.9%) of 4 schemes, 63 (15.0%) of 5 schemes, 12 (2.8%) of 6 schemes, 8 (1.9%) of more than 6 schemes. Only 2 (0.4%) were not aware of any scheme name.

Graph 19: Distribution of the study participants according to number of health insurance known (n=420)

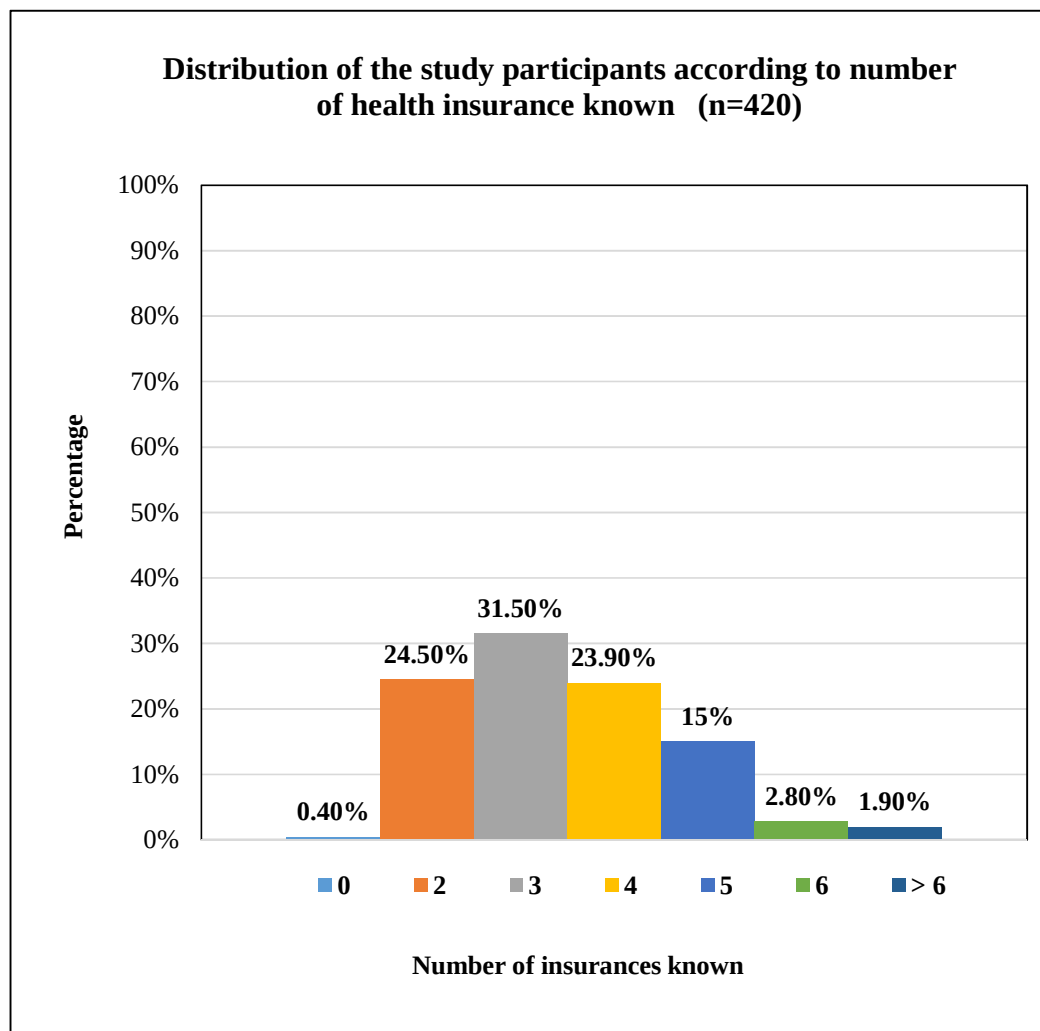


Table 21: Distribution of the study participants according to source of information regarding health insurance (n=419)

Source of information	Frequency	Percentage
Fellow health care workers	213	50.8%
Family & friends	204	48.7%
Television	123	29.4%
Radio	23	5.4%
Newspapers	29	6.9%
Insurance agents	49	11.7%
Government circulars	19	4.5%
Others	4	0.9%
Total	664	158.3% *

[* Total percentage is greater than 100% as multiple responses were recorded for this variable]

Of 419 participants, 213 (50.8%) reported fellow health care workers as source of information regarding health insurance, 204 (48.7%) as family & friends, 123 (29.4%) as Television, 49 (11.7%) as insurance agents, 29 (6.9%) as newspapers, 23 (5.4%) as radio, 19 (4.5%) as government circulars and 4 (0.9%) as other sources.

Graph 20: Distribution of the study participants according to source of information regarding health insurance (n=419)

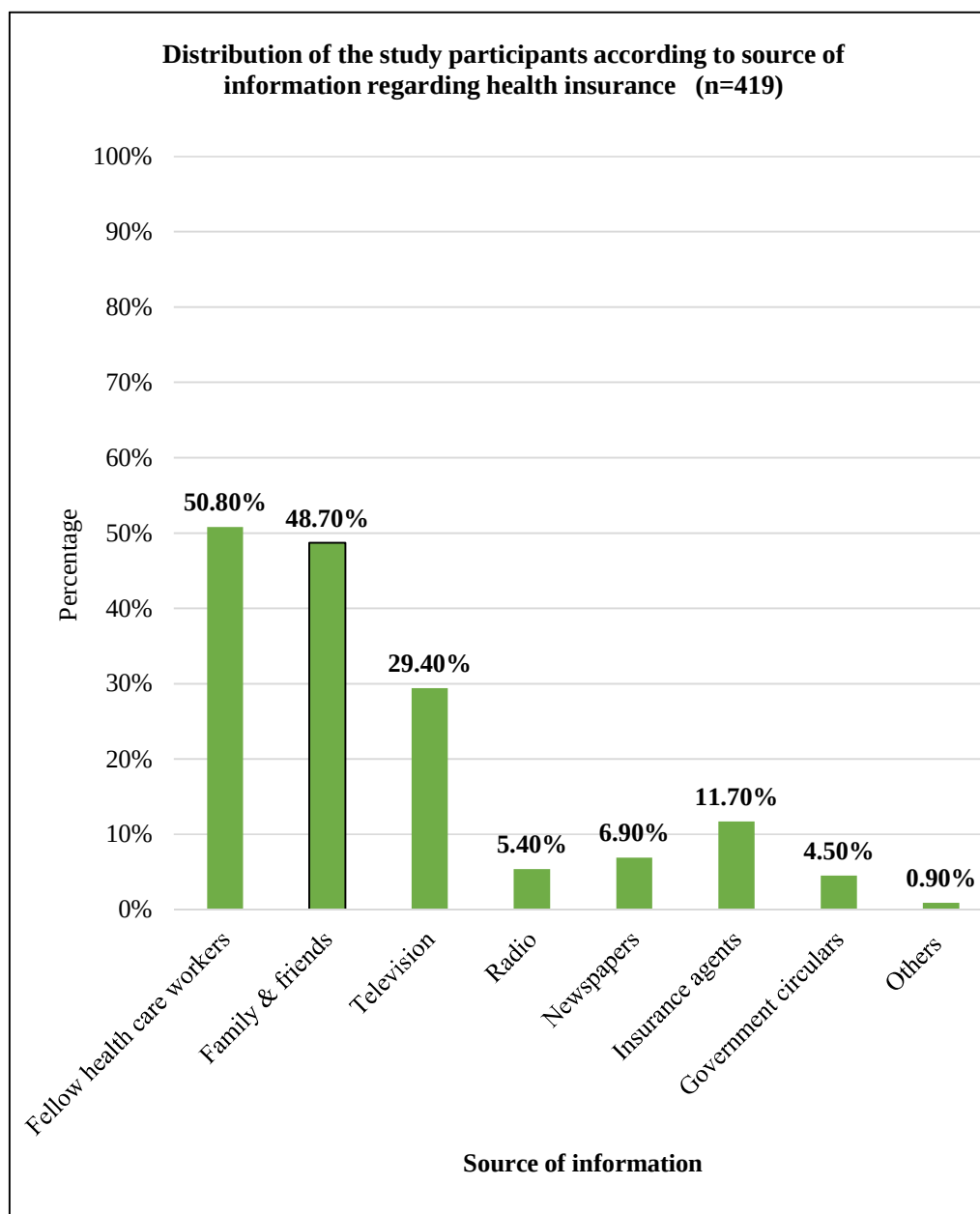


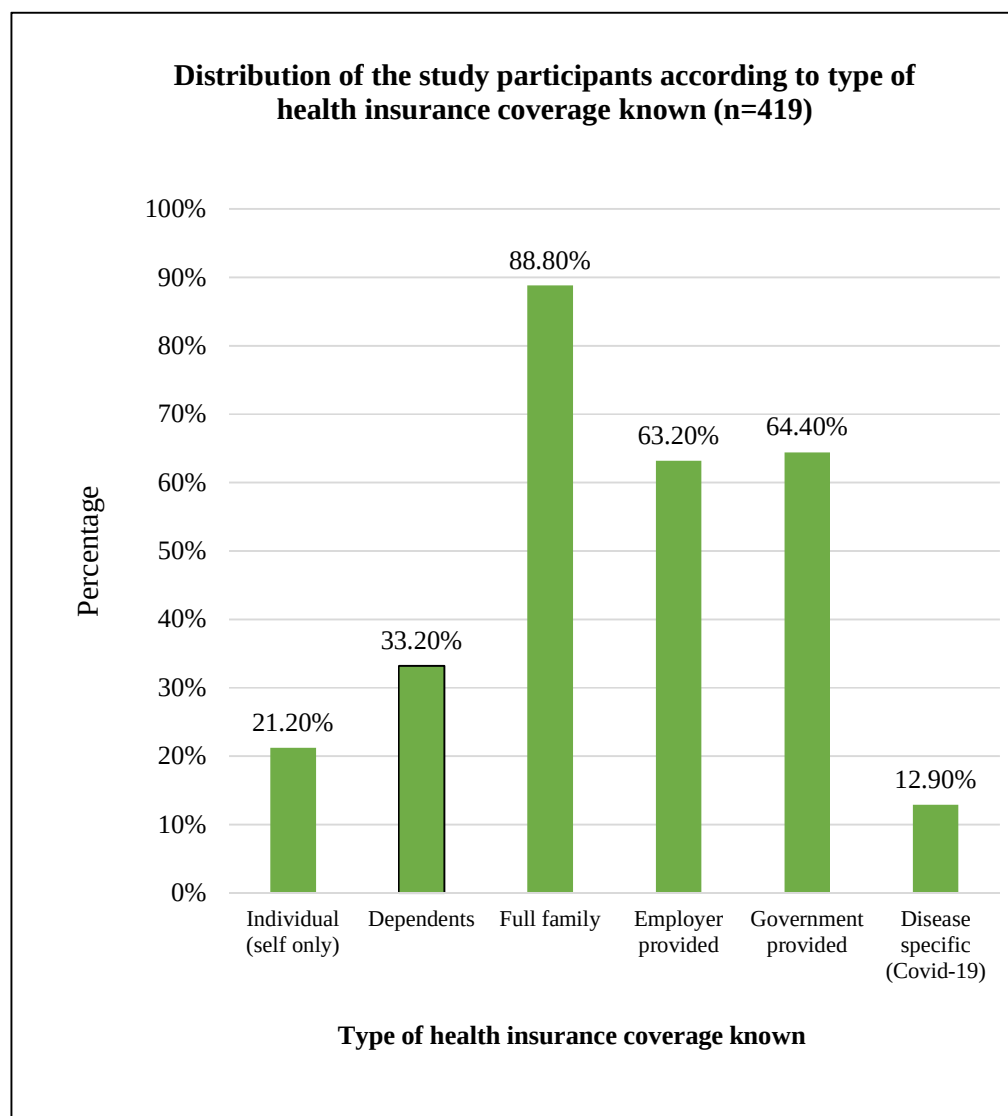
Table 22: Distribution of the study participants according to type of health insurance coverage known (n=419)

Type of health insurance coverage	Frequency	Percentage
Individual (self only)	89	21.2%
Dependents	139	33.2%
Full family	372	88.8%
Employer provided	265	63.2%
Government provided	270	64.4%
Disease specific (Covid-19)	54	12.9%
Total	1189	283.7% *

[* Total percentage is greater than 100 % as multiple responses were recorded for this variable]

Of 419 study participants, 372 (88.8%) were aware of full family type of health insurance coverage, 270 (64.4%) of government provided insurance, 265 (63.2%) of employer provided type, 139 (33.2%) of dependent type of coverage, 89 (21.2%) of individual coverage and 54 (12.9%) of disease specific insurance coverage schemes.

Graph 21: Distribution of the study participants according to type of health insurance coverage known (n=419)



Section – III: Attitude towards Health Insurance

Table 23: Distribution of the study participants according to preference to opt for health insurance (n=420)

Preference	Frequency	Percentage
Yes	366	87.1%
No	4	0.9%
Don't know	50	12.0%
Total	420	100.0%

Of 420 study participants, 366 (87.1%) preferred to opt health insurance, only 4 (0.9%) preferred not to opt and remaining 50 (12.0%) were not sure.

Graph 22: Distribution of the study participants according to preference to opt health insurance (n=420)

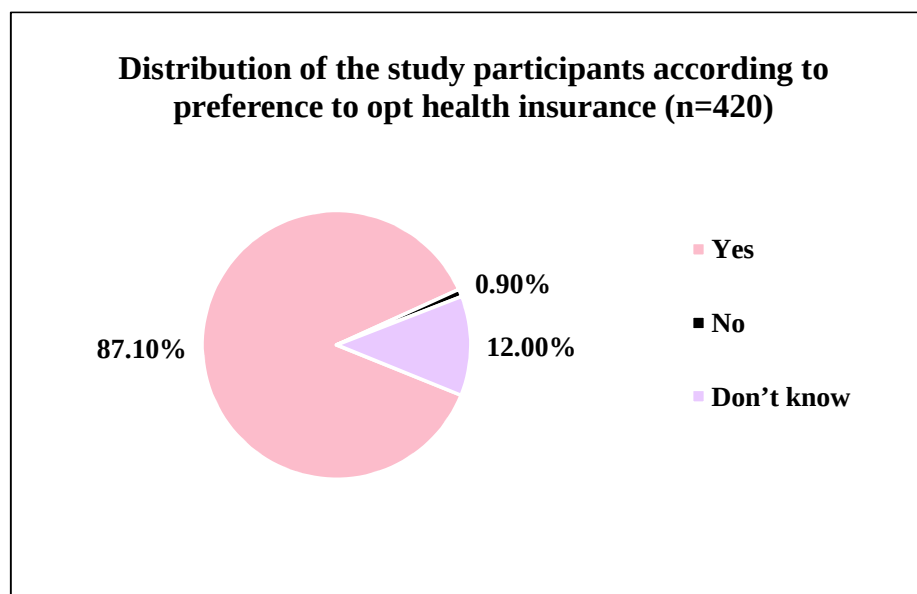


Table 24: Distribution of the study participants according to importance given to services covered by health insurance schemes (n=420)

Importance of services included	Frequency	Percentage
Medications	206	49.0%
In-patient admissions	348	82.9%
Investigation/Diagnostics	279	66.4%
Procedures	301	71.6%
Transit Coverage	148	35.2%
Total	1312	312.2% *

[* Total percentage is greater than 100 % as multiple responses were recorded for this variable]

When asked regarding what services they valued while choosing an health insurance, 348 (82.9%) participants chose IPD admissions, 301 (71.6%) chose procedures, 279 (66.4%) chose diagnostics, 206 (49.0%) chose medications inclusion and 148 (35.2%) chose transit coverage.

Graph 23: Distribution of the study participants according to importance given to services covered by health insurance schemes (n=420)

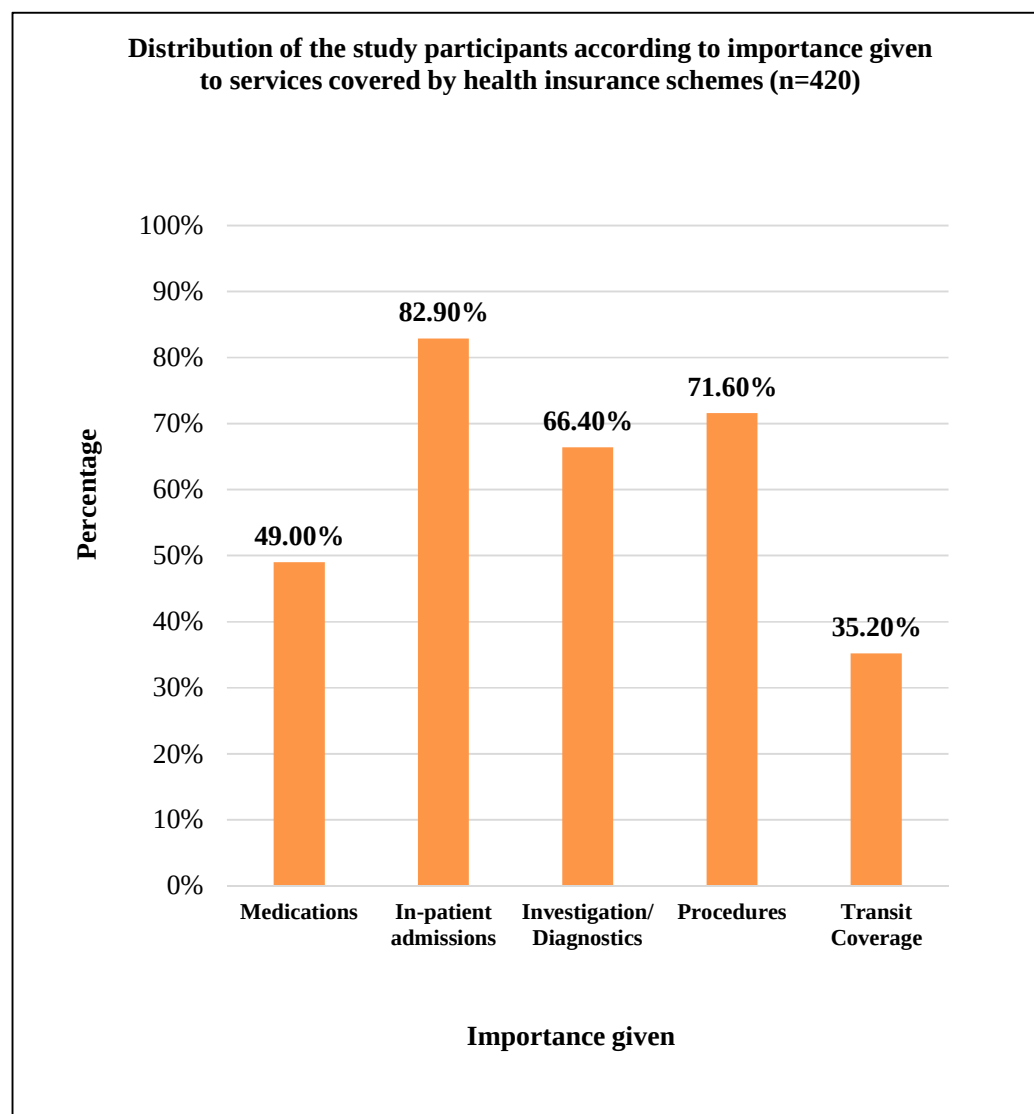


Table 25: Distribution of the study participants according to preference of factors related to scheme in choosing health insurance (n=420)

Factors related to scheme	Frequency	Percentage
Premium	240	57.1%
Coverage	152	36.2%
Ease of reimbursement	44	10.4%
Popularity	7	1.6%
Unsure	47	11.2%
Total	490	116.5% *

[* Total percentage is greater than 100% as multiple responses were recorded for this variable]

Out of 420 study participants, 240 (57.1%) prioritized premium of the scheme, 152 (36.2%) prioritized monetary coverage, 47 (11.2%) were unsure, 44 (10.4%) prioritized the ease of reimbursement and 7 (1.6%) prioritized popularity of scheme.

Graph 24: Distribution of the study participants according to preference of factors related to scheme in choosing health insurance (n=420)

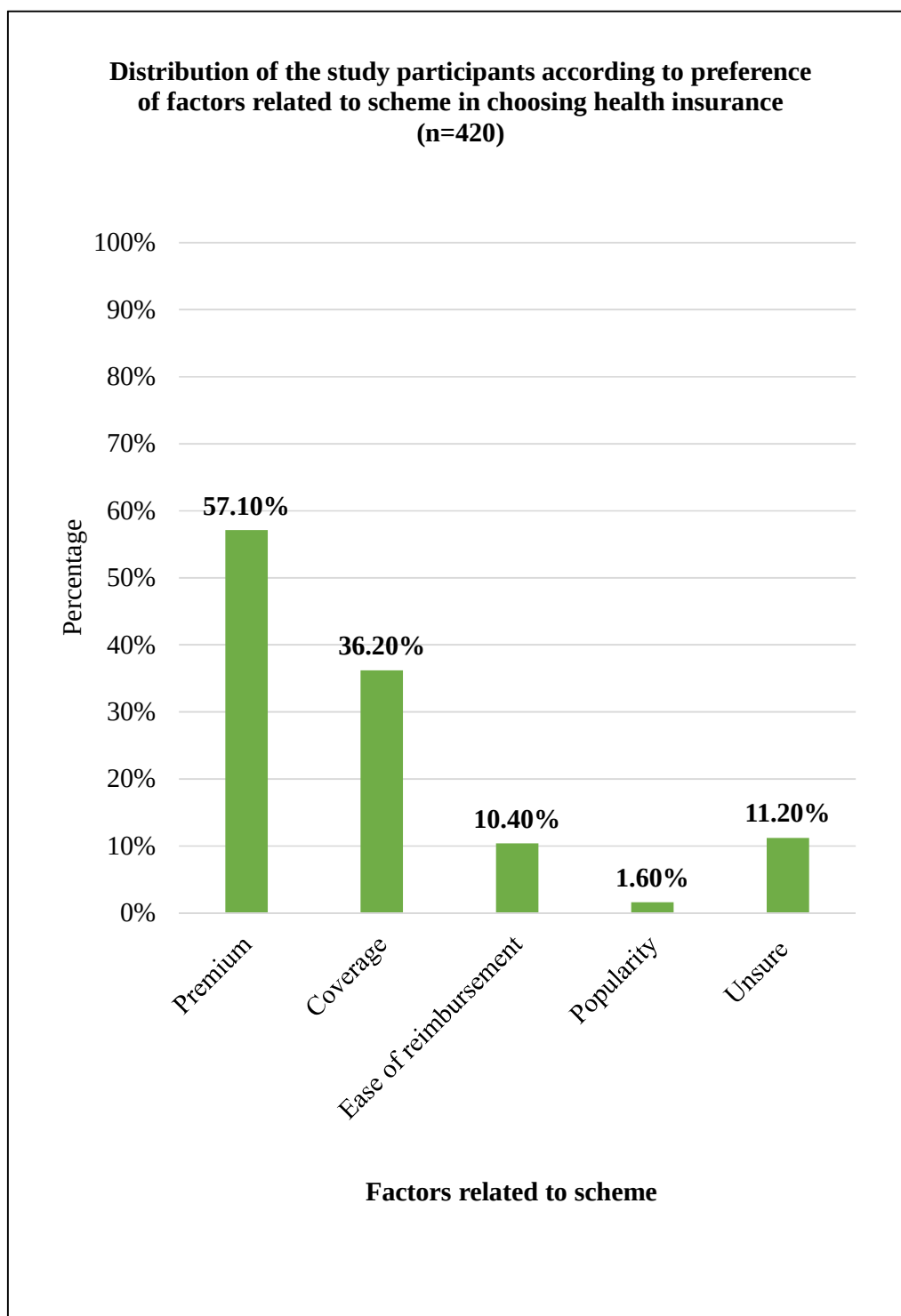


Table 26: Distribution of the study participants according to influence of Covid-19 pandemic on preferring health insurance (n=420)

Influence of Covid-19 pandemic on preferring health insurance	Frequency	Percentage
Yes	268	63.8%
No	152	36.2%
Total	420	100.0%

Of 420 study participants, 268 (63.8%) were influenced by Covid-19 pandemic in preferring health insurance and 152 (36.2%) stated Covid-19 pandemic did not influence their preference for health insurance.

Graph 25: Distribution of the study participants according to influence of Covid-19 pandemic on preferring health insurance (n=420)

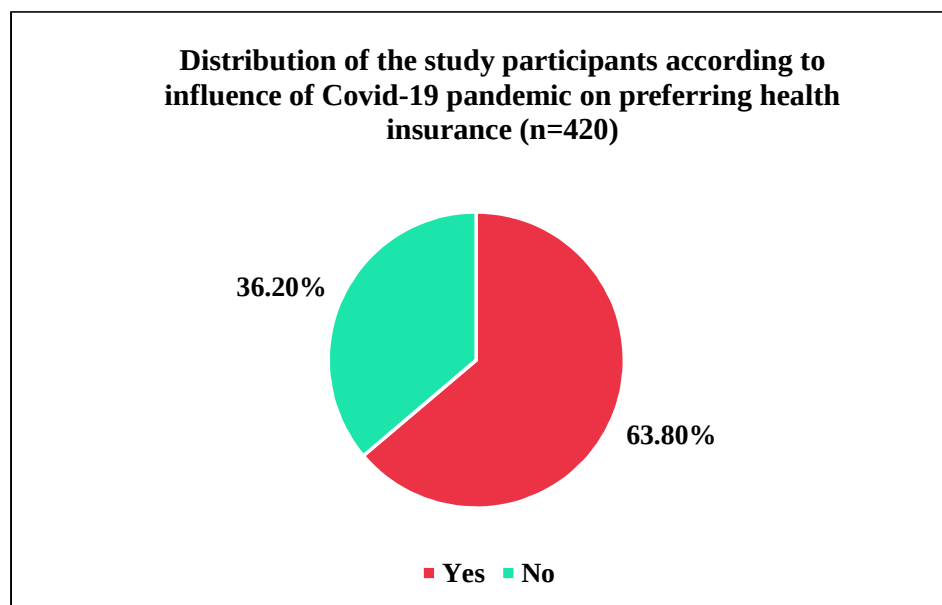
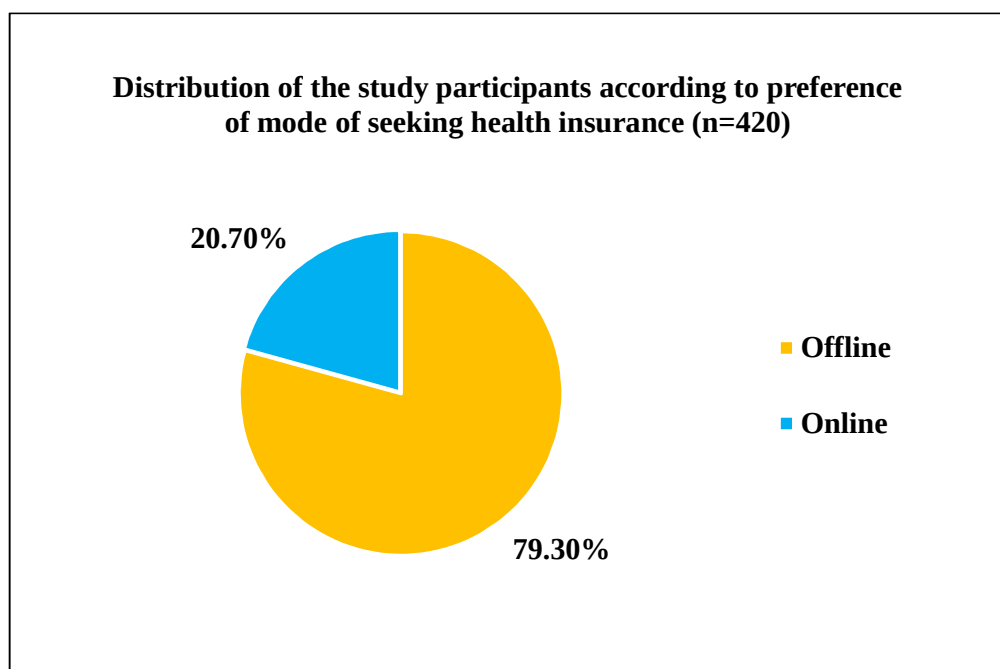


Table 27: Distribution of the study participants according to preference of mode of seeking health insurance (n=420)

Mode of seeking health insurance	Frequency	Percentage
Offline	333	79.3%
Online	87	20.7%
Total	420	100.0%

Of the 420 study participants, 333 (79.3%) preferred offline mode of seeking health insurance and 87 (20.7%) preferred online mode of seeking health insurance.

Graph 26: Distribution of the study participants according to preference of mode of seeking health insurance (n=420)



Section – IV: Utilization Pattern of Health Insurance**Table 28: Distribution of the study participants according to possession of health insurance (n=420)**

Possession of health insurance (n=420)	Frequency	Percentage
Yes	350	83.3%
No	70	16.7%
Total	420	100.0%

Of the 420 study participants, 350 (83.3%) had some health insurance and 70 (16.7%) did not have any health insurance.

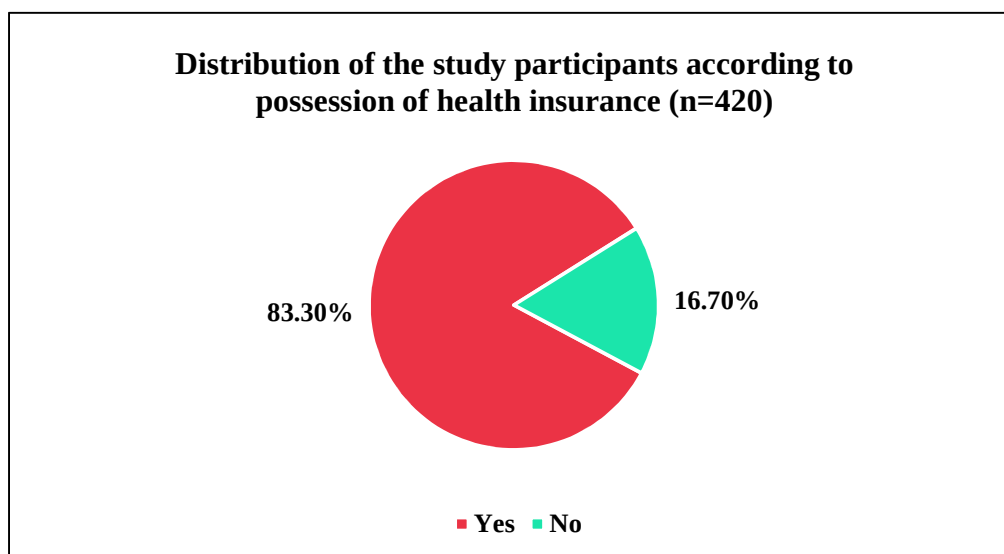
Graph 27: Distribution of the study participants according to possession of health insurance (n=420)

Table 29: Distribution of the study participants according to when they purchased health insurance (n=350)

Time of health insurance purchased (n=350)	Frequency	Percentage
< 1 year ago	9	2.6%
1-5 years ago	333	95.1%
5-10 years ago	6	1.7%
> 10 years ago	2	0.6%
Total	350	100.0%

Of the 350 insurance holders among the study participants, 333 (95.1%) had purchased their health insurances 1-5 years ago, while, 9 (2.6%) had purchased less than a year ago, 6 (1.7%) had purchased 5-10 years ago and only two (0.6%) had purchased over 10 years ago.

Table 30: Distribution of the study participants according to their health insurance schemes enrolled (n=350)

Different health insurance schemes enrolled	Frequency	Percentage
AB-ARK / AB-PMJAY	317	90.6%
ESI health insurance	9	2.6%
PMSBY	9	2.6%
KLE Arogya Card	6	1.7%
Bajaj Allianz	3	0.8 %
Kotak Health Insurance	1	0.3%
Reliance Care	3	0.8 %
Vajyeppee Health Insurance	1	0.3%
Postal Insurance	1	0.3%
Total	350	100.0%

Of the 350 study participants enrolled in various health insurance schemes, 317 (90.6%) had enrolled under AB-ARK/AB-PMJAY, 9 (2.6%) had ESI health insurance, 9 (2.6%) had PMSBY, 6 (1.7%) had KLE Arogya card, 3 (0.8%) had Bajaj Allianz, 3 (0.8%) had Reliance Care, one each (0.3%) in Kotak Health Insurance, Vajyeppee Health Insurance and Postal Insurance.

Graph 28: Distribution of the study participants according to their health insurance schemes (n=350)

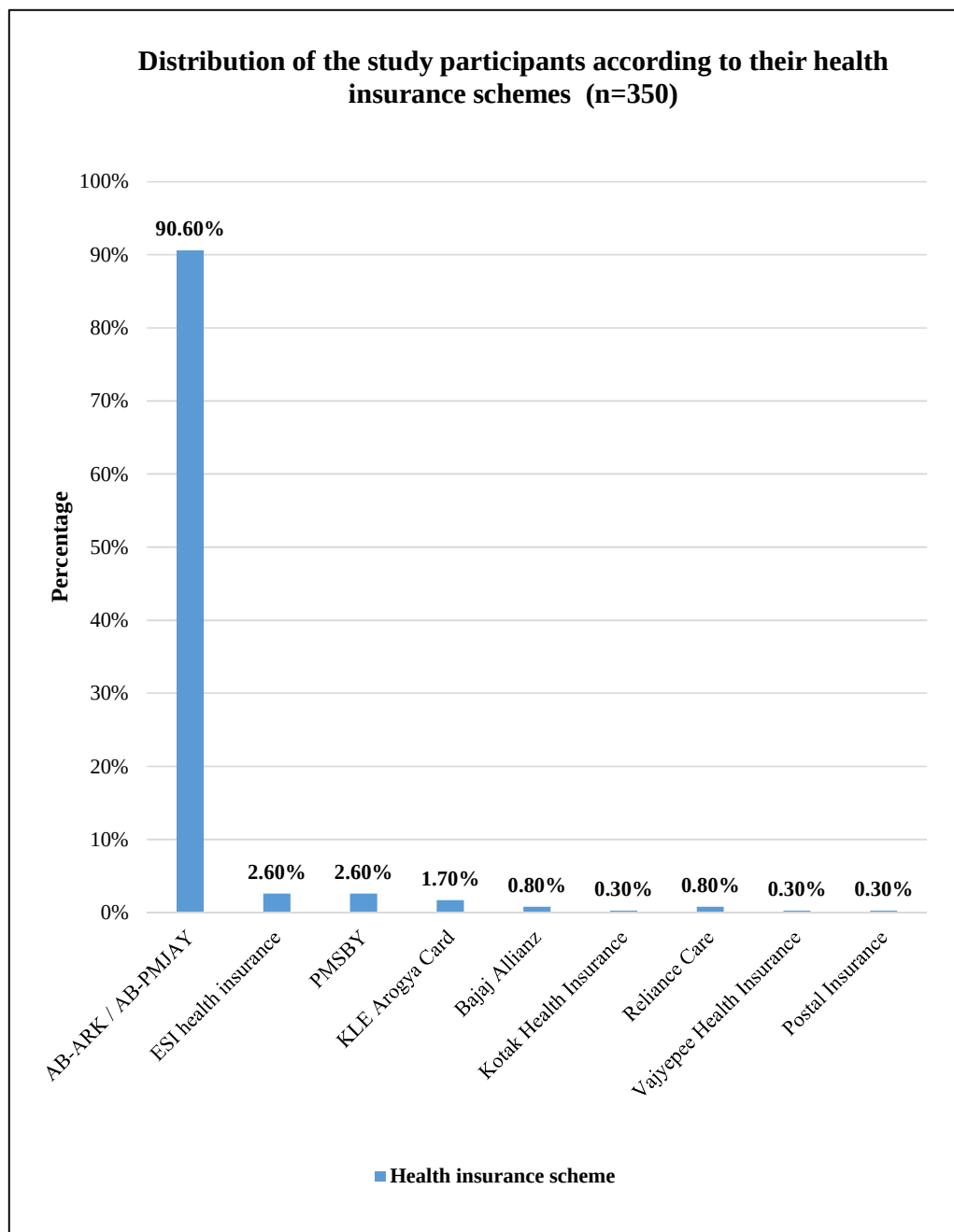


Table 31: Distribution of the study participants according to health insurance provider (n=350)

Preferred Health Insurance Provider	Frequency	Percentage
Government	327	93.4%
Private	13	3.7%
Employer	10	2.9%
Total	350	100.0%

Of the 350 study participants had enrolled in various health insurance schemes, 327 (93.4%) were provided by government, 13 (3.7%) by private sources and 10 (2.9%) were employer-provided insurances.

Graph 29: Distribution of the study participants according to the health insurance provider (n=350)

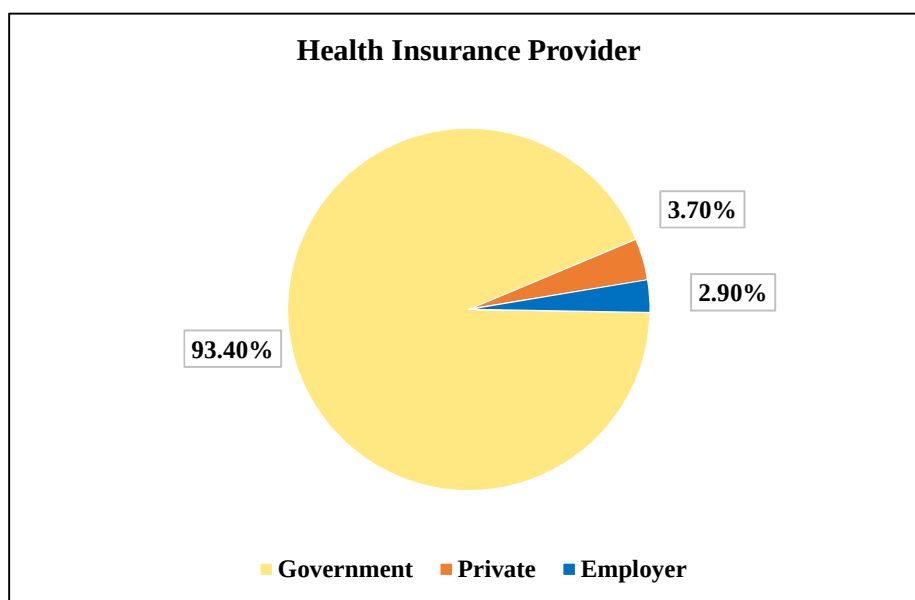


Table 32: Distribution of the study participants according to various health insurance related parameters (n=350)

Health Insurance Coverage	Frequency	Percentage
< 2 lakh rupees	7	2.0%
2-4.99 lakh rupees	17	4.9%
5-9.99 lakh rupees	322	92.0%
≥ 10 lakh rupees	4	1.1%
Total	350	100.0%
Beneficiaries covered under the insurance	Frequency	Percentage
Independent	4	1.1%
Includes Spouse	3	0.8 %
Includes Dependent children	7	2.0%
Full family	326	93.2%
Employee and family	10	2.9%
Total	350	100.0%

Of the 350 health insurance holders, 322 (92%) had a coverage of 5-9.99 lakh rupees, 17 (4.9%) had 2-4.99 lakh rupees, 7 (2%) had less than 2 lakh rupees and 4 (1.1%) had over 10 lakh rupees coverage policies. Similarly, of the 350 insurance holders, 326 (93.2%) had insurance policies that offered full family coverage, 10 (2.9%) insured the employees' families of their respective workplace, 7 (2.0%) included their dependent children, 4 (1.1%) only covered the beneficiaries and 3 (0.8%) covered only the spouse of the beneficiary.

Table 33: Distribution of the study participants according to the health insurance utilization in the past year (n=350)

Health Insurance Utilization in the past one year	Frequency	Percentage
Utilized	17	4.9%
Not utilized	333	95.1%
Total	350	100.0%

Of the 350 insurance holders among the study participants, only 17 (4.9%) had utilized their health insurances in the last one year whereas, 333 (95.1%) insured had not utilized their health insurances in the past year.

Graph 30: Distribution of the study participants according to the health insurance utilization in the past year (n=350)

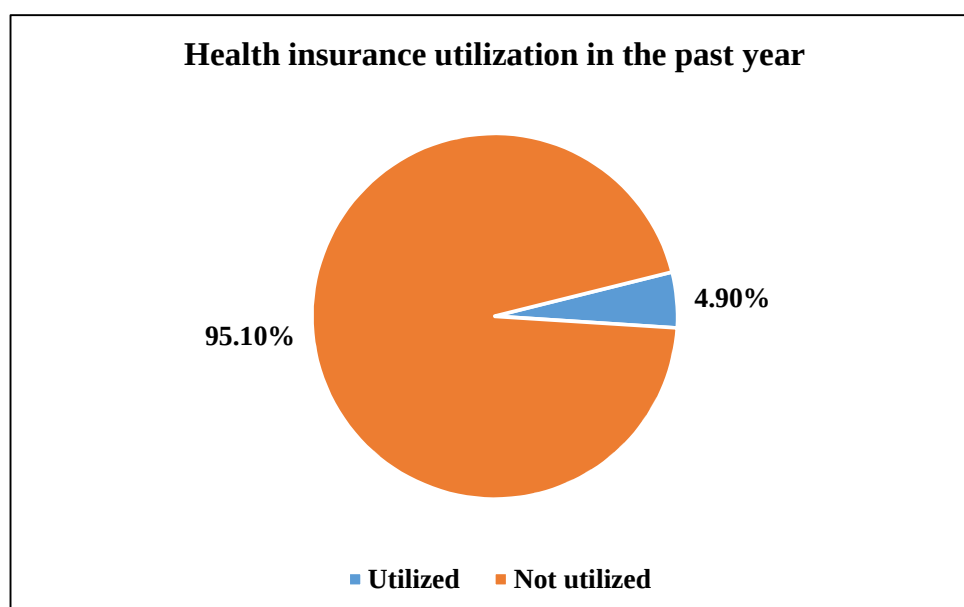


Table 34: Distribution of the study participants according to the health insurance utilization pattern (n=17)

Health Insurance Utilization pattern		Frequency	Percentage
Frequency	Once	15	88.2%
	Twice	0	0%
	thrice	2	11.8%
	> 3 times	0	0%
	Total	17	100.0%
Services	Medications	2	11.8%
	MCH services	2	11.8%
	In-patient admissions	4	23.5%
	Surgeries	9	52.9%
	Total	17	100.0%
Time to avail the claim	< 2 weeks	8	47.1%
	2-4 weeks	2	11.8%
	≥ 1 month	7	41.1%
	Total	17	100.0%

Of the 17 health insurance beneficiaries among the study participants who had utilized their insurances in the past year, 15 (88.2%) had utilized once and only two (11.8%) had utilized thrice in the same year. Among those 17 participants, 9 (52.9%) had utilized for surgeries, 4 (23.5%) for in-patient admissions, 2 (11.8%) for Maternal and Child Health services and two (11.8%) for purchasing medications. Among those 17 participants, 8 (47.1%) participants availed the claim within 2 weeks, 2 (11.8%) within 2-4 weeks and 7 (41.1%) had availed after a month's time.

Table 35: Distribution of the study participants according to the health expenses incurred in the past one year (n=17)

Health related expenses		Frequency	Percentage
Health related expenses claimed	< 1 lakh rupees	13	76.4%
	1-2 lakh rupees	2	11.8%
	2-5 lakh rupees	2	11.8%
	> 5 lakh rupees	0	0%
	Total	17	100.0%
Health expenses covered by the insurance	0%	6	35.3%
	< 25 %	0	0%
	25-50 %	1	6.0%
	50-75 %	5	29.3%
	75-100 %	1	6.0%
	100%	4	23.4%
	Total	17	100.0%
Out-of-pocket expenditure for the remaining expenses	0	4	23.4%
	< 1 lakh rupees	6	35.3%
	1-2 lakh rupees	1	6.0%
	2-5 lakh rupees	6	35.3%
	> 5 lakh rupees	0	0%
	Total	17	100.0%

Of the 17 participants who had claimed the health insurance in the past year, 13 (76.4%) had claimed less than 1 lakh rupees for health-related expenses, 2 (11.8%) had claimed 1-2 lakh rupees and 2 (11.8%) had claimed 2-5 lakh rupees. Of the 17 participants who had claimed the health insurance in the past year, 6 (35.3%) did not avail any reimbursements, 5 (29.3%) received 50-75% of their claim, 4 (23.4%) received 100% of their claim, 1 (6%) received 25-50% of the claim and only one (6%) received more than 75% of the claim. Of the 17 participants who had claimed the health insurance in the past year, 6 (35.3%) incurred 2-5 lakh rupees out-of-pocket expenditure for health expenses, 6 (35.3%) incurred less than 1 lakh OOPE, 4 (23.4%) did not incur any OOPE and 1(6%) incurred 2-5 lakh rupees OOPE.

Table 36: Distribution of the study participants according to the health-related out-of-pocket expenditure in the past one year (n=420)

Health related OOPE		Frequency	Percentage
Catastrophic health related expenditure	Yes	16	3.8%
	No	404	96.2%
	Total	420	100%
Health related Loan	Yes	14	3.3%
	No	406	96.7%
	Total	100	100%
Property mortgaged / sold for health expenses	Yes	5	1.2%
	No	415	98.9%
	Total	420	100%

Of the 420 study participants, 16 (3.8%) had incurred catastrophic health related expenditure in the last one year irrespective of owning health insurance. Among them, 14 (3.3%) had taken loan and 5 (1.2%) had either mortgaged or sold their properties. The remaining 404 (96.2%) had not incurred any catastrophic health related expenditure in the last one year.

Table 37: Distribution of the study participants according to the effect of presence of chronic medical illnesses in their family on their attitude and utilization pattern of health insurance

Chronic medical illness	Have health insurance		Utilized their health insurance		Incurred catastrophic healthcare expenditure	
	Yes	No	Yes	No	Yes	No
In self (30)	25 (83.3%)	5 (16.7%)	3 (10%)	27 (90%)	1 (3.3%)	29 (96.7%)
In family (37)	32 (86.5%)	5 (13.5%)	3 (8%)	34 (92%)	3 (8%)	34 (92%)

Of the 420 study participants, 30 of them had some chronic medical illness. Among them, 25 (83.3%) had some type of health insurance and only 3 (10%) had utilized their health insurance in the preceding one year and only one (3.3%) had incurred catastrophic healthcare expenditure.

Of the 420 study participants, 37 had a family member with some chronic medical illness. Among them, 32 (86.5%) had some type of health insurance and only 3 (8%) had utilized their health insurance in the preceding one year and another 3 (8%) had incurred catastrophic healthcare expenditure.

Table 38: Distribution of the study participants according to the influence of source of their information regarding health insurance on their attitude and utilization pattern of health insurance

Source of information	Prefer health insurance (n=419)	Have health insurance (n=350)	Utilized their health insurance (n=17)
Peers	304 (73%)	294 (84%)	12 (71%)
Mass media	126 (30%)	119 (34%)	6 (35%)
Others	59 (14%)	53 (15%)	5 (29%)
Total*	489 (117%)	466 (133%)	23 (135%)

[* Total percentage is greater than 100% as multiple responses were recorded for this variable]

Of the 419 study participants who were aware about health insurance, 304 (73%) reported peers as their source of their information regarding health insurance, 126 (30%) as mass media and 59 (14%) as other sources.

Of the 350 study participants who had some health insurance, 294 (84%) had heard about health insurance from their peers, 119 (34%) from mass media and 53 (15%) from other sources.

Of the 17 study participants who had utilized their health insurance in the preceding year, 12 (71%) had heard about health insurance from their peers, 6 (35%) from mass media and 5 (29%) from other sources.

Table 39: Distribution of the study participants according to difficulties faced while claiming health insurance (n=17)

Difficulties faced while claiming health insurance	Frequency	Percentage
Delayed reimbursement	2	11.8%
Reduced claim amount	3	17.7%
Rejected claim	4	23.5%
Tedious process	4	23.5%
None	4	23.5%
Total	17	100.0%

Of the 420 study participants, 17 had claimed health insurance in the past one year and among them, 13 faced some difficulties. Of them 4 (23.5%) faced rejection of claim, 4 (23.5%) found the claim process tedious and 2 (11.8%) had delayed reimbursement of the health-related expenses.

Table 40: Distribution of the study participants according to possession of life insurance (n=420)

Life insurance scheme	Frequency	Percentage
Yes	323	76.9%
No	97	23.1%
Total	420	100.0%

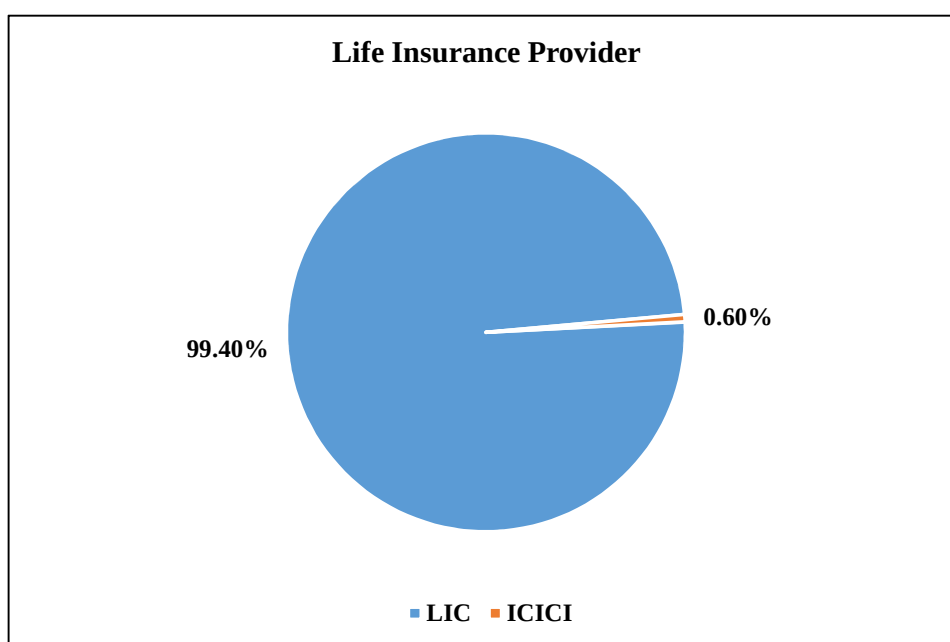
Of the 420 study participants, 323 (76.9%) had life insurance scheme while, remaining 97 (23.1%) did not have any life insurance.

Table 41: Distribution of the study participants according to life insurance provider (n=323)

Life insurance Provider	Frequency	Percentage
LIC (Govt)	321	99.4%
ICICI (Private)	2	0.6%
Total	323	100.0%

Of the 323 study participants who had life insurance, 321 (99.4%) had purchased it from Life Insurance Corporation of India (Govt) and only two (0.6%) from ICICI company (Private).

Graph 31: Distribution of the study participants according to life insurance scheme company (n=323)



Association tables**Table 42.A: Association of the study participant's socio-demographic characteristics and their knowledge regarding health insurance (n=420)**

Socio-demographic profile		Knowledge regarding health insurance (n= 420)				
		Aware	Not aware	Total	χ^2	Fisher's exact test p – value
Age in years	20-30	60 (100%)	0 (0%)	60 (100%)	1.749	0.610
	30-40	164 (100%)	0 (0%)	164 (100%)		
	40-50	152 (99.3%)	1 (0.7%)	153 (100%)		
	50-60	43 (100%)	0 (0%)	43 (100%)		
	Total	419 (99.8%)	1 (0.2%)	420 (100%)		
Gender	Male	14 (93.3%)	1 (6.7%)	15 (100%)	27.064	0.36
	Female	405 (100%)	0 (0%)	405 (100%)		
	Total	419 (99.8%)	1 (0.2%)	420 (100%)		

Table 42.B: Association of the study participant's socio-demographic characteristics and their knowledge regarding health insurance (n=420)

Socio-demographic profile		Knowledge regarding health insurance (n= 420)				
		Aware	Not aware	Total	χ^2	Fisher's exact test p – value
Area of residence	Rural	257 (100%)	0 (0%)	257 (100%)	1.580	0.388
	Urban	162 (99.4%)	1 (0.6%)	163 (100%)		
	Total	419 (99.8%)	1 (0.2%)	420 (100%)		
Socio-economic status (according to the Modified B.G. Prasad's classification)	Class 1	40 (100%)	0 (0%)	40 (100%)	3.429	0.386
	Class 2	123 (100%)	0 (0%)	123 (100%)		
	Class 3	135 (100%)	0 (0%)	135 (100%)		
	Class 4	94 (98.9%)	1 (1.1%)	95 (100%)		
	Class 5	27 (100%)	0 (0%)	27 (100%)		
	Total	419 (99.8%)	1 (0.2%)	420 (100%)		

To assess if there is any association between the socio-demographic factors of the participants and their knowledge regarding health insurance, Fisher's exact test was performed. Though the prevalence of knowledge regarding health insurance was

high among the study participants, the test results for socio-demographic characteristics like age of the participants, their gender, area of residence and socioeconomic status were not statistically significant. But a rising trend in their knowledge was seen with age and higher socioeconomic classes. Knowledge was also high among females (100%) and rural residents (100%).

Table 43.A: Association of the study participant's socio-demographic characteristics and their duration of awareness regarding health insurance (n=419)

Socio-demographic profile		Duration of awareness (n = 419)					
		< 1 year	1-5 years	> 5 years	Total	χ^2	Fisher's exact test p – value
Age in years	21-30	2 (3.3%)	19 (31.7%)	39 (65.0%)	60 (100%)	22.979	0.001*
	30-40	5 (3.0%)	67 (40.9%)	92 (56.1%)	164 (100%)		
	40-50	16 (10.5%)	45 (39.6%)	91 (59.9%)	152 (100%)		
	50-60	8 (18.6%)	7 (16.3%)	28 (65.1%)	43 (100%)		
	Total	31 (7.4%)	138 (32.9%)	250 (59.7%)	419 (100%)		
Gender	Male	0 (0%)	5 (35.7%)	9 (64.3%)	14 (100%)	1.157	0.561
	Female	31 (7.7%)	133 (32.8%)	241 (59.5%)	405 (100%)		
	Total	31 (7.4%)	138 (32.9%)	250 (59.7%)	419 (100%)		

Table 43.B: Association of the study participant's socio-demographic characteristics and their duration of awareness regarding health insurance (n=419)

Socio-demographic profile		Duration of awareness (n = 419)					
		< 1 year	1-5 years	> 5 years	Total	χ^2	Fisher's exact test p – value
Area of residence	Rural	26 (10.1%)	82 (31.9%)	149 (58.0%)	257 (100%)	7.170	0.28
	Urban	5 (3.1%)	56 (34.6%)	101 (62.3%)	162 (100%)		
	Total	31 (7.4%)	138 (32.9%)	250 (59.7%)	419 (100%)		
Duration of service (in years)	1-10	4 (2.6%)	55 (35.9%)	94 (61.4%)	153 (100%)	48.816	<0.0001*
	10-20	6 (3.4%)	66 (37.5%)	104 (59.1%)	176 (100%)		
	20-30	21 (23.9%)	17 (19.3%)	50 (56.8%)	88 (100%)		
	30-40	0 (0%)	0 (0%)	2 (100%)	2 (100%)		
	Total	31 (7.4%)	138 (32.9%)	250 (59.7%)	419 (100%)		

Table 43.C: Association of the study participant's socio-demographic characteristics and their duration of awareness regarding health insurance (n=419)

Socio-demographic profile		Duration of awareness (n = 419)					
		< 1 year	1-5 years	> 5 years	Total	χ^2	Fisher's exact test p – value
Education status	No formal schooling	1 (50%)	1 (50%)	0 (0%)	2 (100%)	18.240	0.019*
	Class 1-5	1 (25%)	3 (75%)	0 (0%)	4 (100%)		
	Class 6-10	20 (6.9%)	104 (36%)	165 (57.1%)	289 (100%)		
	PUC/ Diploma/ ITI	7 (7.3%)	23 (24%)	66 (68.8%)	96 (100%)		
	Graduation/ PG	2 (7.1%)	7 (25%)	19 (67.9%)	28 (100%)		
	Total	31 (7.4%)	138 (32.9%)	250 (59.7%)	419 (100%)		

To assess if there is any association between the socio-demographic factors of the participants and their duration of awareness regarding health insurance, Fisher's exact test was performed. Characteristics like age of the participants (p-value = 0.001), duration of service (p-value < 0.0001) and education status (p-value = 0.019) were found to have statistically significant association with the duration of awareness regarding health insurance.

Table 44.A: Association of the study participant's socio-demographic characteristics and their preference towards opting health insurance (n= 420)

Socio-demographic profile		Preference towards opting health insurance (n = 420)					
		Yes	No	Don't know	Total	χ^2	Fisher's exact test p- value
Area of residence	Rural	235 (91.4%)	2 (0.8%)	20 (7.8%)	257 (100%)	11.068	0.002*
	Urban	131 (80.4%)	2 (1.2%)	30 (18.4%)	163 (100%)		
	Total	366 (87.1%)	4 (1%)	50 (11.9%)	420 (100%)		
Education status	No formal schooling	1 (50%)	0 (0%)	1 (50%)	2 (100%)	13.688	0.022*
	Class 1-5	3 (75%)	0 (0%)	1 (25%)	4 (100%)		
	Class 6-10	246 (84.8%)	2 (0.7%)	42 (14.5%)	290 (100%)		
	PUC/ Diploma/ ITI	88 (91.7%)	2 (2.1%)	6 (6.3%)	96 (100%)		
	Graduation/PG	28 (100%)	0 (0%)	0 (0%)	28 (100%)		
	Total	366 (87.1%)	4 (1%)	50 (11.9%)	420 (100%)		

Table 44.B: Association of the study participant's socio-demographic characteristics and their preference towards opting health insurance (n= 420)

Socio-demographic profile		Preference towards opting health insurance (n = 420)					
		Yes	No	Don't know	Total	χ^2	Fisher's exact test p-value
Occupation	ASHA workers	88 (89.8%)	2 (2%)	8 (8.2%)	98 (100%)	37.873	0.044
	Anganwadi workers	228 (85.7%)	2 (0.8%)	36 (13.5%)	266 (100%)		
	Others	50 (89.3%)	0 (0%)	6 (10.7%)	56 (100%)		
	Total	366 (87.1%)	4 (1%)	50 (11.9%)	420 (100%)		

The Fisher's exact test results showed that participants residing in rural areas and those having higher education status (above class 5) and field workers had higher preference towards opting health insurance. Statistically significant associations were seen for characteristics like area of residence and education status and occupation with p-values 0.002, 0.022 and 0.044 respectively.

Table 45: Association of the study participant's socio-demographic characteristics and influence of COVID-19 towards opting health insurance (n= 420)

Socio-demographic profile		Influence of COVID-19 towards opting health insurance (n= 420)				
		Yes	No	Total	χ^2	Fisher's exact test p – value
Gender	Male	4 (26.7%)	11 (73.3%)	15 (100%)	28.282	<0.0001*
	Female	264 (65.2%)	141 (34.8%)	405 (100%)		
	Total	268 (63.8%)	152 (36.2%)	420 (100%)		
Area of residence	Rural	177 (68.9%)	80 (31.31%)	257 (100%)	7.348	0.007*
	Urban	91 (55.8%)	72 (44.2%)	163 (100%)		
	Total	268 (63.8%)	152 (36.2%)	420 (100%)		
Duration of service (in years)	1-10	98 (63.6%)	56 (36.4%)	154 (100%)	10.071	0.013*
	10-20	101 (57.4%)	75 (42.6%)	176 (100%)		
	20-30	67 (76.1%)	21 (23.9%)	88 (100%)		
	30-40	2 (100%)	0 (0%)	2 (100%)		
	Total	268 (63.8%)	152 (36.2%)	420 (100%)		

The Fisher's exact test results revealed that the participants belonging to female gender, residents of rural areas and having 1-20 years of service had statistically significant association with influence of COVID-19 pandemic in opting for health insurance with the p-values <0.0001 , 0.007 and 0.013 for female gender, rural residents and shorter duration of service respectively.

Table 46.A: Association of the study participant's socio-demographic characteristics and their mode of preference for seeking health insurance (n = 420)

Socio-demographic profile		the mode of preference for seeking health insurance (n = 420)				
		Offline	Online	Total	χ^2	Fisher's exact test p - value
Gender	Male	8 (53.3%)	7 (46.7%)	15 (100%)	6.379	0.012*
	Female	325 (80.2%)	80 (19.8%)	405 (100%)		
	Total	333 (79.3%)	87 (20.7%)	420 (100%)		
Area of residence	Rural	195 (75.9%)	62 (24.1%)	257 (100%)	4.689	0.03*
	Urban	138 (84.7%)	25 (15.3%)	163 (100%)		
	Total	333 (79.3%)	87 (20.7%)	420 (100%)		
Duration of service (in years)	1-10	101 (65.6%)	53 (34.4%)	154 (100%)	28.282	<0.0001*
	10-20	155 (88.1%)	21 (11.9%)	176 (100%)		
	20-30	75 (85.2%)	13 (14.8%)	88 (100%)		
	30-40	2 (100%)	0 (0%)	2 (100%)		
	Total	333 (79.3%)	87 (20.7%)	420 (100%)		

Table 46.B: Association of the study participant's socio-demographic characteristics and their mode of preference for seeking health insurance (n = 420)

Socio-demographic profile		The mode of preference for seeking health insurance (n = 420)				
		Offline	Online	Total	χ^2	Fisher's exact test p - value
Education status	No formal schooling	2 (100%)	0 (0%)	2 (100%)	11.948	0.021*
	Class 1-5	4 (100%)	0 (0%)	4 (100%)		
	Class 6-10	240 (82.8%)	50 (17.2%)	290 (100%)		
	PUC/ Diploma/ ITI	70 (72.9%)	26 (27.1%)	96 (100%)		
	Graduation/PG	17 (60.7%)	11 (39.3%)	28 (100%)		
	Total	333 (79.3)	87 (20.7%)	420 (100%)		

To assess if there is any association between the socio-demographic factors of the participants and their mode of preference for seeking health insurance, Fisher's exact test was performed. Characteristics like gender (p-value = 0.012), area of residence (p-value = 0.03), duration of service (p-value < 0.0001) and education status (p-value = 0.021) were found to have statistically significant association with

the mode of preference for seeking health insurance. High levels of offline mode of preference for seeking health insurance was seen in females (80.2%), urban residents (84.7%), participants with more than 10 years of service (85.2% - 100%) and Education status till class 10 (82.8% - 100%). On the contrary, online mode of seeking health insurance was seen with males (46.7%), rural residents (24.1%), participants with less than 10 years of service duration (34.4%) and in participants with higher Education status (27.1%- 39.3%).

Table 47.A: Association of the study participant's socio-demographic characteristics and their health insurance ownership (n = 420)

Socio-demographic profile		Own health insurance (n = 420)				
		Yes	No	Total	χ^2	Fisher's exact test p - value
Gender	Male	7 (46.7%)	8 (53.3%)	15 (100%)	15.058	<0.0001*
	Female	343 (84.7%)	62 (15.3%)	405 (100%)		
	Total	350 (83.3%)	70 (16.7%)	420 (100%)		
Area of residence	Rural	232 (90.3%)	25 (9.7%)	257 (100%)	22.958	<0.0001*
	Urban	118 (72.4%)	45 (27.6%)	163 (100%)		
	Total	350 (83.3%)	70 (16.7%)	420 (100%)		
Education status	No formal schooling	0 (0%)	2 (100%)	2 (100%)	56.802	<0.0001*
	Class 1-5	1 (25%)	3 (75%)	4 (100%)		
	Class 6-10	260 (89.7%)	30 (10.3%)	290 (100%)		
	PUC/ Diploma/ ITI	76 (79.2%)	20 (20.8%)	96 (100%)		
	Graduation/PG	13 (46.4%)	15 (53.6%)	58 (100%)		
	Total	350 (83.3%)	70 (16.7%)	420 (100%)		

Table 47.B: Association of the study participant's socio-demographic characteristics and their health insurance ownership (n = 420)

Socio-demographic profile		Own health insurance (n = 420)				
		Yes	No	Total	χ^2	Fisher's exact test p - value
Occupation	ASHA workers	87 (88.8%)	11 (11.2%)	98 (100%)	59.792	<0.0001*
	Anganwadi workers	233 (87.6%)	33 (12.4%)	266 (100%)		
	Others	30 (53.6%)	26 (46.4%)	56 (100%)		
	Total	350 ((83.3%))	70 (16.7%)	420 (100%)		
Duration of service (in years)	1-10	124 (80.5%)	30 (19.5%)	154 (100%)	5.205	0.139
	10-20	144 (81.8%)	32 (18.2%)	176 (100%)		
	20-30	80 (90.9%)	8 (9.1%)	88 (100%)		
	30-40	2 (100%)	0 (0%)	2 (100%)		
	Total	350 ((83.3%))	70 (16.7%)	420 (100%)		

Table 47.C: Association of the study participant's socio-demographic characteristics and their health insurance ownership (n = 420)

Socio-demographic profile		Own health insurance (n = 420)				
		Yes	No	Total	χ^2	Fisher's exact test p - value
Socio-economic status (according to the Modified B.G. Prasad's classification)	Class 1	28 (70%)	12 (30%)	40 (100%)	12.228	0.016*
	Class 2	110 (89.4%)	13 (10.6%)	123 (100%)		
	Class 3	115 (85.2%)	20 (14.8%)	135 (100%)		
	Class 4	73 (76.8%)	22 (23.2%)	95 (100%)		
	Class 5	24 (88.9%)	3 (11.1%)	27 (100%)		
	Total	350 ((83.3%))	70 (16.7%)	420 (100%)		

To assess if there is any association between the socio-demographic factors of the participants and ownership of health insurance, Fisher's exact test was performed. Characteristics like gender (p-value < 0.0001), area of residence (p-value < 0.0001), education status (p-value < 0.0001), occupation (p-value < 0.0001) and socio-economic status (p-value = 0.016) were found to have statistically significant association with the ownership of health insurance. High levels of insurance ownership was seen among females (84.7%), rural residents (90.3%), ASHA workers (88.8%) and Anganwadi workers (87.6%). Increase in prevalence of ownership was seen in participants with higher educational status, higher years of service and with lower socio-economic class.

Table 48.A: Association of the study participant's socio-demographic characteristics and their preferred health insurance provider (n = 350)

Socio-demographic profile		Preferred Health insurance provider (n = 350)					
		Government	Private	Employer	Total	χ^2	Fisher's exact test p - value
Gender	Male	2 (28.6%)	3 (42.9%)	2 (28.6%)	7 (100%)	49.211	<0.0001*
	Female	325 (94.8%)	10 (2.9%)	8 (2.3%)	343 (100%)		
	Total	327 (93.4%)	13 (3.7%)	10 (2.9%)	350 (100%)		
Education status	Class 1-5	1 (100%)	0 (0%)	0 (0%)	1 (100%)	27.117	0.001*
	Class 6-10	250 (96.2%)	5 (1.9%)	5 (1.9%)	260 (100%)		
	PUC / Diploma / ITI	68 (61.5%)	5 (6.6%)	3 (3.9%)	76 (100%)		
	Graduation / PG	8 (61.5%)	3 (23.1%)	2 (15.4%)	13 (100%)		
	Total	327 (93.4%)	13 (23.1%)	10 (2.9%)	350 (100%)		

Table 48.B: Association of the study participant's socio-demographic characteristics and their preferred health insurance provider (n = 350)

Socio-demographic profile		Preferred Health insurance provider (n = 350)					
		Government	Private	Employer	Total	χ^2	Fisher's exact test p - value
Occupation	ASHA workers	84 (96.6%)	3 (3.4%)	0 (0%)	87 (100%)	188.335	<0.0001*
	AWW	227 (97.4%)	2 (0.9%)	4 (1.7%)	233 (100%)		
	Others	16 (53.3%)	8 (26.7%)	6 (20%)	30 (100%)		
	Total	327 (93.4%)	13 (3.7%)	10 (2.9%)	350 (100%)		
Socio-economic status (according to the Modified B.G. Prasad's classification)	Class 1	20 (71.4%)	6 (21.4%)	2 (7.1%)	28 (100%)	35.992	<0.0001*
	Class 2	100 (90.9%)	6 (5.5%)	4 (3.6%)	110 (100%)		
	Class 3	113 (98.3%)	0 (0%)	2 (1.7%)	115 (100%)		
	Class 4	70 (95.9%)	1 (1.4%)	2 (2.7%)	73 (100%)		
	Class 5	24 (100%)	0 (0%)	0 (0%)	24 (100%)		
	Total	327 (93.4%)	13 (3.7%)	10 (2.9%)	350 (100%)		

Fisher's exact test was performed to assess if there is any association between the socio-demographic factors of the participants and their preferred health insurance provider. Characteristics like gender (p-value < 0.0001), education status (p-value = 0.001), occupation (p-value < 0.0001) and socio-economic status (p-value < 0.0001) were found to have statistically significant association with the health insurance provider. Females (84.7%), rural residents (90.3%), ASHA workers (88.8%) and Anganwadi workers (87.6%) preferred government health insurances. High preference for government health insurances was seen in participants with higher educational status, higher years of service and with lower socio-economic class.

Table 49.A: Association of the study participant's socio-demographic characteristics and utilization of health insurance in the past one year (n = 350)

Socio-demographic profile		Health insurance utilization in the past one year (n = 350)				
		Yes	No	Total	χ^2	Fisher's exact test p - value
Gender	Male	3 (42.9%)	4 (57.1%)	7 (100%)	22.319	<0.0001*
	Female	14 (4.1%)	329 (95.9%)	343 (100%)		
	Total	17 (4.9%)	333 (95.1%)	350 (100%)		
Education status	No formal schooling	0 (0%)	0 (0%)	0 (0%)	8.069	0.033*
	Class 1-5	0 (0%)	1 (100%)	1 (100%)		
	Class 6-10	8 (3.1%)	252 (96.9%)	260 (100%)		
	PUC/ Diploma/ ITI	7 (9.2%)	69 (90.8%)	76 (100%)		
	Graduation /PG	2 (15.4%)	11 (84.6%)	13 (100%)		
	Total	17 (4.9%)	333 (95.1%)	350 (100%)		

Table 49.B: Association of the study participant's socio-demographic characteristics and utilization of health insurance in the past one year (n = 350)

Socio-demographic profile		Health insurance utilization in the past one year (n = 350)				
		Yes	No	Total	χ^2	Fisher's exact test p - value
Occupation	ASHA workers	3 (3.4%)	84 (96.6%)	87 (100%)	27.508	0.008*
	Anganwadi workers	9 (3.9%)	224 (96.1%)	233 (100%)		
	Others	5 (16.7%)	25 (83.3%)	30 (100%)		
	Total	17 (4.9%)	333 (95.1%)	350 (100%)		
Duration of service (in years)	1-10	5 (4%)	119 (96%)	124 (100%)	9.757	0.028*
	10-20	3 (2.1%)	141 (97.9%)	144 (100%)		
	20-30	9 (11.3%)	71 (88.8%)	80 (100%)		
	30-40	0 (0%)	2 (100%)	2 (100%)		
	Total	17 (4.9%)	333 (95.1%)	350 (100%)		

Table 49.C: Association of the study participant's socio-demographic characteristics and utilization of health insurance in the past one year (n = 350)

Socio-demographic profile		Health insurance utilization in the past one year (n = 350)				
		Yes	No	Total	χ^2	Fisher's exact test p - value
Socio-economic status (according to the Modified B.G. Prasad's classification)	Class 1	1 (3.6%)	27 (96.4%)	28 (100%)	2.102	0.827
	Class 2	6 (5.5%)	104 (94.5%)	110 (100%)		
	Class 3	5 (4.3%)	110 (95.7%)	115 (100%)		
	Class 4	5 (6.8%)	68 (93.2%)	73 (100%)		
	Class 5	0 (0%)	24 (100%)	24 (100%)		
	Total	17 (4.9%)	333 (95.1%)	350 (100%)		

To assess if there is any association between the socio-demographic characteristics of the participants and their utilization of health insurance in the past one year, Fisher's exact test was performed. Characteristics like gender (p-value < 0.0001), education status (p-value = 0.033), occupation (p-value = 0.008) and participant's duration of service (p-value = 0.028) were found to have statistically significant association with the utilization of health insurance. High

levels of insurance utilization was seen among males (42.9%) as compared to females (4.1%), higher levels of utilization of health insurance was seen with higher Education status and longer service duration. Health insurance utilization was higher in the community health providers other than ASHA workers and Anganwadi workers.

Table 50: Association between ownership of health insurance by the study participants and catastrophic health-related expenditure incurred (n=16)

Has health insurance	Catastrophic health-related expenditure incurred (n = 16)				Fisher's exact test p - value
	Yes	No	Total	χ^2	
Yes	14 (4%)	336 (96%)	350 (100%)	0.208	1.00
No	2 (2.9%)	68 (97.1%)	70 (100%)		
Total	16 (3.8%)	404 (96.2%)	420 (100%)		

Fisher's exact test was performed to assess the association between ownership of health insurance by the study participants and catastrophic health-related expenditure incurred by them. There was no statistically significant association between ownership of health insurance and catastrophic health-related expenditure incurred by the participants. Higher levels of catastrophic health-related expenditure was seen with study participants that owned some health insurance than those who did not own any health insurance.

Table 51: Association between health insurance utilization pattern by the study participants and catastrophic health related expenditure incurred (n=16)

Utilization in the past one year	Catastrophic Expenditure incurred (n = 16)				
	Yes	No	Total	χ^2	Fisher's exact test p - value
Yes	7 (41.2%)	10 (58.8%)	17 (100%)	64.310	<0.0001*
No	7 (2.1%)	326 (97.9%)	333 (100%)		
Total	14 (4%)	336 (96%)	350 (100%)		

Fisher's exact test was performed to assess the association between health insurance utilization pattern by the study participants and catastrophic health-related expenditure incurred by them. Statistically significant association was seen between health insurance utilization pattern by the study participants and catastrophic health-related expenditure incurred by them (p-value < 0.0001).

Table 52.A: Association between the place of employment of the study participants and their awareness, attitude and utilization pattern of health insurance

Health insurance related details		Place of employment				
		Rural PHC	Urban UHC	Total	χ^2	Fisher's exact test p - value
Duration of awareness	< 1 year ago	30 (96.7%)	1 (3.3%)	31 (100%)	22.724	<0.0001*
	1-5 years ago	82 (59.4%)	56 (40.6%)	138 (100%)		
	> 5 years ago	148 (59.2%)	102 (40.8%)	250 (100%)		
	Total	260 (62%)	159 (38%)	419 (100%)		
Preference towards opting health insurance	Yes	239 (65.3%)	127 (34.7%)	366 (100%)	13.850	<0.0001*
	No	2 (50%)	2 (50%)	4 (100%)		
	Don't know	19 (38%)	31 (62%)	50 (100%)		
	Total	260 (61.9%)	160 (38.1%)	420 (100%)		

Table 52.B: Association between the place of employment of the study participants and their awareness, attitude and utilization pattern of health insurance

Health insurance related details		Place of employment				
		Rural PHC	Urban UHC	Total	χ^2	Fisher's exact test p - value
Have health insurance	Yes	236 (94.4%)	14 (5.6%)	350 (100%)	27.171	<0.0001*
	No	24 (34.3%)	46 (65.7%)	70 (100%)		
	Total	260 (61.9%)	160 (38.1%)	420 (100%)		
Utilized health insurance in preceding one year	Yes	9 (53%)	8 (47%)	17 (100%)	26.673	<0.0001*
	No	251 (62.3%)	152 (37.7%)	403 (100%)		
	Total	260 (61.9%)	160 (38.1%)	420 (100%)		
Catastrophic health care expenditure	Yes	15 (93.75%)	1 (6.25%)	16 (100%)	7.153	<0.007*
	No	245 (60.7%)	159 (39.3%)	404 (100%)		
	Total	260 (61.9%)	160 (38.1%)	420 (100%)		

Fisher's exact test was used to assess the association between the place of employment of the study participants and their awareness, attitude and utilization pattern of health insurance. Statistically significant association was seen between place of employment and health insurance related variables like duration of awareness (p-value < 0.0001), preference for health insurance (p-value < 0.0001), possession (p-value < 0.0001) and utilization of health insurance (p-value < 0.0001) and catastrophic health-related expenditure incurred by them (p-value < 0.007). Rural PHC workers had a higher prevalence of all the above mentioned variables as compared to urban UHC workers.

DISCUSSION

The present study was conducted to assess the knowledge and attitude towards various health insurance schemes as well as their utilization pattern among community health care providers in selected health centres of Belagavi taluka. The 420 participants were interviewed by the investigator about their perceptions and attitude towards health insurance. This study also attempted to find out about the utilization pattern of the various health insurance schemes among the community health care providers in terms of enrolment, usage, difficulties faced and renewal practices.

This study was undertaken in the field practice areas of five primary health centres, namely UHC Ashoknagar, UHC Rukmininagar, PHC Vantamuri (rural) and PHC Kinaye, which are under the administrative control of Department of Community Medicine, J.N. Medical College, KAHER, Belagavi and UHC Ramnagar in the city of Belagavi Taluka, Karnataka state, India. This study was conducted over a period of one year from 1st January 2021 to 31st December 2021 (12 months).

I.A: Socio-demographic profile of the study participants**Tables 1-2: Distribution of the study participants according to age and gender**

In this study, majority (39.05%) of the study participants were aged between 30-40 years, followed by the age groups of 40-50 years (36.42%), 18-30 years (14.29%) and 50-60 years (10.24%). The mean age of the participants was 40 ± 8.2 years (Ranging between 21-60 years). A study conducted in Madhya Pradesh and Gujarat in 2019 among 200 PMJAY beneficiaries had participants with a mean age of 42.2 and 49.1 years respectively.⁽³²⁾

Among the study participants, 96.7% were females and the remaining 3.3% were males. A study conducted in Chennai in 2020 among 300 households had 67% female participants.⁽⁴⁰⁾ The disparity between the distribution of gender in this study can be explained by the fact that most of the community health workers / providers that are hired by the government are females.⁽⁴⁴⁾

Table 3: Distribution of the study participants according to area of residence

In the current study, majority of the participants (61.2%) resided in rural areas and rest in urban areas. A study conducted in Chhattisgarh in 2017 among 2,026 households had 81.9% of participants residing in rural areas.⁽³⁹⁾

Tables 4-6: Distribution of the study participants according to occupation in PHC

The community health care providers in India largely consist of field workers and a small number of headquarters staff.⁽⁴⁴⁾

In the current study, major bulk of the participants were Anganwadi workers (63.3%) and ASHA workers (23.3%). PHC Kinaye had the highest number of employees (39.04%) as it covers a large geographic part of Belagavi Taluka. It was followed by PHC Vantamuri (rural) (22.85%), UHC Rukmininagar (20.23%), UHC Ramnagar (9.28%) and UHC Ashoknagar (8.5%).

Table 7: Distribution of the study participants according to duration of service

In this study, the mean duration of service of the community health providers was 13.80 ± 7.73 years. A big proportion of them (42%) had worked for 10-20 years.

Tables 8-9: Distribution of the study participants according to religion and category

Majority of the participants in this study were Hindus (90.5%). 6% of the participants were Muslims, 2.6% were Jains and only 0.9% were Christians. A study conducted in Gujarat and Madhya Pradesh in 2019 among 200 participants had similar distribution of participants with Hindus (89%) dominating the study.⁽³²⁾ Another study from Delhi that was conducted among 2,998 households had similar distribution of participants with 86.2% Hindus and 12.2% Muslims.⁽⁴⁵⁾

48.1% of participants in this study belonged to OBC category, 31.0% to others/General category, 12.6% to ST category and 8.3% to SC category. Similar picture was seen in a study conducted in Chhattisgarh in 2017 among 2,026 households, where 45.8% participants belonged to OBC category.⁽³⁹⁾

Table 10: Distribution of the study participants according to educational status

Majority (69%) of the study participants had studied till 10th class. 22.9% of the participants had study up to PUC/Diploma/ITI, followed by 6.7% who had finished their master's degree and 0.9% had attended primary school till 5th class. Only 0.4% of them had not received any formal schooling.

A study conducted in 2020 in Chhattisgarh involving 3,000 households had a different picture where 41% of the participants were illiterates, 47.3% had studied till 5th class, 10% till class 10th and only 1.36% had got their diploma.⁽³¹⁾

Another study from Delhi conducted among 2,998 urban poor households had 39.6% participants who had studied till 10th, 14.3% who had completed primary education, 14.1% who had studied after 10th class and had 32% of participants who had not received any form of formal education.⁽⁴⁵⁾

Tables 11-12: Distribution of the study participants according to marital status and type of family

In this study, most of the participants (87.1%) were married, 8.5% were either widowed or divorced. Unmarried participants were few in number (4.4%). Contrasting picture was observed in a study conducted in Chhattisgarh in 2020 among 3000 households, where the majority of the study population were unmarried (51%) and only 44% were married and 5% were either widowed /separated/ divorced.⁽³¹⁾

Around 2/3rd (64.8%) of the participants belonged to nuclear families and 1/3rd (35.2%) to joint families. Similarly, a study from Udupi conducted among 1639 households, had 3/4th of its participants belonging to nuclear families. India is slowly

moving towards the nuclear family system post-Independence era. This may be attributed to urbanization, industrialization and evolving mindsets of the people.⁽³⁷⁾

Table 13: Distribution of the study participants according to Socio-economic status

In this study, nearly 39% participants belonged to upper class, followed by 32% from middle class and 29% from lower class. A study conducted in Udupi conducted among 1639 households, had half of its participants from lower class. This variation may be explained as all the participants in the current study have at least one earning member in the family from organized sector (government/ KLE), but the one in Udupi was conducted among general population who mostly comprised of fishermen and other unorganized sectoral workers.⁽³⁷⁾

Table 14: Distribution of the study participants according to possession of BPL ration card

Though 71% of the study population belonged to middle or upper class, 86.2% reported having a BPL ration card.

In a study from Delhi conducted among 2,998 households, 63.7% participants had ration cards.⁽⁴⁵⁾

I.B: Personal and Family History of the study participants

Table 15: Distribution of the study participants according to habits

Alcohol consumption was stated by only two participants. None had smoking/ tobacco consumption / illicit drug usage habits.

Tables 16-17: Distribution of the study participants according to chronic medical illness in the family

Less than 10% of the study participants reported chronic medical illnesses in the family. Diabetes and hypertension were the major co-morbidities in the families. The present study had lower prevalence of these chronic medical illnesses as compared to the NFHS-5 (2018-19) data where, diabetes and hypertension affected 15-25% of the country's population.⁽⁴⁶⁾

In a study from Ethiopia conducted in 2020 among 398 households, 8% of the participants reported chronic illness in the house.⁽⁴⁷⁾

II.A: Knowledge regarding Health Insurance

Tables 18-22: Distribution of the study participants according to knowledge regarding health insurance

In the present study, 99.8% of the participants were aware about health insurance. Of them, around 60% of them had known for more than 5 years, remaining had come to know in the last 5 years. The participants were aware of various schemes available in the market, around 50% of had come across information on 3-4 health insurance schemes in their lives. More than half of the participants (50.8%) stated that fellow health care workers and their supervisors were the main source of information regarding the existence and availability of various health insurance schemes. Other important sources included family and friends (48.7%), mass media like television (29.4%), newspapers (6.9%) and radio announcements (5.4%). Some were approached by insurance agents (11.7%) for the purpose of selling private insurance policies. Government circulars (4.5%) on various government subsidized schemes that were launched to educate the public were also important source for the participants.

The most common types of health insurance coverage known to the participants in this study were full family coverage (88.8%), followed by government subsidized schemes (64.4%) for eligible population, employer provided (63.2%) ones like ESI scheme, employees under private companies' insurance coverage and insurance coverage for dependents (33.2%). Around 20% of them were aware of individual insurance coverage. Very few were aware of disease specific insurance coverage (12.9%) like Covid related insurance for health care and frontline workers despite the wide publicization of such said schemes.

This shows that health insurance literacy was generally high among the study participants.

In a study conducted in Maharashtra in 2011-12 among 6,000 households across 22 districts, it was found that only 29.7% of them were aware of RSBY scheme.⁽²⁰⁾ The results of the Max New York Life-NCAER Survey on India Financial Protection (2008) revealed that 78% of urban households and 73% of rural households were aware of some form of insurance.⁽⁵²⁾

In a study conducted among 328 health care providers in Nigeria in 2011, 98.2% of the participants were aware about health insurance. Of them, 60.9% had known in the last 5 years and 37.9% had known about health insurance for more than 10 years. Mass media like radio and television (37.3%) were the main sources of information to the study participants, followed by, colleagues (36.3%), seminars (28.9%), newspapers (14%) and internet (3.7%). 76.1% of the participants were aware of different types of coverages like family, dependent and spouse.⁽¹⁶⁾

None of the study participants in the current study were aware of 'free cancellation period' of health insurance policy.

III: Attitude towards Health Insurance

Tables 23-27: Distribution of the study participants according to their attitude towards health insurance

In the present study, 87.1% participants showed a positive attitude towards opting health insurance, supporting its relevance and beneficial role in reducing and even protecting from catastrophic health-related expenditure. 12% of them were not sure, stating that the probability of claiming health insurance in their lifetime was low and hence they could not make a stringent decision on opting health insurance.

Only four participants in this study strongly opposed the idea of health insurance stating reasons like dilapidation, sense of wasting money and resources as well as fear of deceit.

In a study conducted in Jammu in 2019 among 380 families, 92% of the participants preferred to opt health insurance as they believed that it would add to their savings by reducing OOPE.⁽⁴⁸⁾

When asked regarding the value they attached to the different services covered by the health insurance schemes, majority of them opted in-patient admission coverage (82.9%), surgical and medical procedures (71.6%), diagnostics (66.4%) and medications (49%). Some even prioritized the health insurance schemes that provided additional benefits like coverage of transit (35.2%). This reflects the perception, attitude and judging capabilities of the participants while making a decision on opting any health insurance scheme. Also, this further strengthens their health insurance literacy.^(36,49)

When given a choice on what factors they considered before opting a health insurance policy, the study participants prioritized premium (57.1%), coverage (36.2%) and ease of reimbursement (10.4%). This shows their attitude towards risk v/s benefit as well as convenience.

This study also evaluated the influence of covid-19 pandemic on the health insurance seeking behaviour among the participants. It was revealed that 63.8% of the participants were influenced by the pandemic in preferring health insurance. Of them, some stated that their insurance preference was further reinforced while some were motivated afresh.

Around 2/3rd of the study participants perceived health insurance beneficial as they valued its role in reducing out-of-pocket health expenses and easing access to health care. They also perceived that health insurance increased health seeking behaviour among its beneficiaries (64%) as well as its role in alleviating poverty (69.8%). Some also believed that with insurance, many health care services maybe subsidized (55.2%) and may even include free health services like health check-ups (58.8%).

As most of the participants were not accustomed with the digital interfaces, many preferred seeking health insurances traditionally, that is offline mode, stating that this helped with better understanding, cleared their doubts and further strengthened their trust in the insurance schemes, as they prioritized human over digital experience. Only 1/5th of the participants, who were well versed with the digital/ online mode preferred it, stating its advantages like ease of access and scrutiny.

IV: Utilization Pattern of Health Insurance

Tables 28-32: Distribution of the study participants according to possession of health insurance

Among the study participants, 83.3% of them had some health insurance while, 16.7% of them did not have any health insurance. Of those having health insurance, most (95.1%) of the participants had purchased/ enrolled their health insurances in the last 5 years. 2.3% of them had purchased more than 5 years ago and 2.6% had purchased their health insurance in the last one year. This high number in the last 5 years may be credited to rolling out of the ‘Ayushman Bharat Pradhan Mantri Jan Arogya Yojana’ (AB-PMJAY) in the year 2018, which is an initiative by Government of India to provide financial protection to socio-economically marginalized sections of the population.⁽¹⁴⁾ In Karnataka, an integrated version of this AB-PMJAY, called ‘Ayushman Bharat- Arogya Karnataka Yojana’ (AB-ArK) covers most of the informal as well as formal sectoral workers.⁽¹⁵⁾ Eligible community health providers like ASHA workers and Anganwadi workers are also enrolled under this scheme.

National Family Health Survey round 5, conducted in 2019-21 in India reported that 41% of the Indian households had at least one member covered under a health insurance/financial scheme.⁽⁴⁶⁾

A study conducted in Nigeria in 2011 among 328 health care providers, had 63.4% registered health insurance beneficiaries, of whom, 60.8% had registered between 1-5 years prior to the study, 29.4% had registered 10 years prior and only 9.8% had registered under the scheme less than 1 year to the study.⁽¹⁶⁾

In the present study, it is seen that out of the 350 study participants having health insurance, 90.6% of them were enrolled under AB-ARK / AB-PMJAY scheme. Followed by PMSBY (2.6%), ESI scheme (2.6%), KLE Arogya Card insurance (1.7%), Bajaj Allianz insurance (0.8%), Kotak insurance (0.3%) and others. 93.4% had enrolled to government health insurance schemes like AB-PMJAY, PMSBY and Vajyapee health insurance. 3.7% had taken health insurance from private companies like Bajaj Allianz and Kotak. 2.9% had been covered by employer-provided insurance like ESI scheme and Postal health insurance.

In a study conducted in Bengaluru, Karnataka in 2015 among 399 respondents, 92.5% of the participants had procured government health insurance schemes while, 7.5% of them had private insurance.⁽²⁴⁾ Another study conducted in Chennai, Tamil Nadu in 2020 among 300 households, it was found that 42.33% households were enrolled under AB-PMJAY.⁽⁴⁰⁾

The financial risk coverage varied across the various insurances enrolled by the study participants. Majority (92%) had a coverage of 5 lakh rupees, while 7% of them had a lower insurance coverage (< 5 lakh rupees). Only 1% had opted insurance coverage over 10 lakh rupees.

Most (93.2%) of the study participants had availed insurance schemes that provided complete health coverage of the family, while some had opted insurance coverage only for themselves (1.1%) or spouses (0.8%) or their dependent children (2%). 2.9% participants with their families had been covered by their employers.

Tables 33-34: Distribution of the study participants according to utilization of health insurance

Out of the 350 insured participants, only 17 had utilized their health insurance in the last one year. Out of them, 15 participants had utilized their respective insurances once, 2 had utilized their insurance twice in the last one year. 9 out of 17 had claimed insurance for surgical interventions, while rest had claimed for in-patient admissions, MCH services and for purchasing medications.

The participants who had claimed the insurance reported various time intervals for availing their claim. Some insurance companies took only few days to process the claims while some took 2-4 weeks and some even processed the claims after months' time.

The enrolment and utilization of health insurance varies greatly across the country. Results from NSSO conducted in 2019 in Chhattisgarh revealed that the mean utilization of insurance was 6%.⁽²⁶⁾ In a study from Kerala conducted among 296 participants in 2011, 44.3% of the insured participants had utilized their health insurance one year prior to the study for in-patient admissions.⁽²⁹⁾ Among 200 PMJAY beneficiaries from a study in Gujarat and Madhya Pradesh conducted in the year 2019, 39% utilized the insurance for surgical treatment, while 37% for medical interventions and rest for day-care procedures.⁽³²⁾ A study from Maharashtra conducted in 2011 conducted among 7261 households reported that 48.9% households had utilized the insurance 1-3 times and 6.89% of the households had utilized more than 4 times.⁽³⁸⁾

Tables 35-36: Distribution of the study participants according to the health expenses incurred in the past one year

Of the 17 insurance claims made, 13 were less than one lakh rupees, 4 claims were made for 2-5 lakh rupees. Of the claims made, 25% were completely covered by the respective insurance companies while, 35.4% were partially covered to various degrees and 6 claims were rejected and hence the participants had to cover the health care cost out of their pockets. Out-of-pocket expenditure borne by the insured participants who had utilized their health insurance in the last year, ranged between 50,000 and 5 lakh rupees.

Additionally, 3.8% of the study participants reported incurring some form of catastrophic health-related expenditure in the past one year. Some had taken a loan to cover the health expenditure, while others had either mortgaged or sold their properties for the same.

The mean healthcare expenses among the study participants was 84,353 INR (1,141 USD), with a median expense of 50,000 INR (677 USD). The mean expenses covered by health insurances was 40,818 INR (552 USD) and median coverage was 45,000 INR (609 USD). The mean out-of-pocket expenditure for healthcare expenses among the study participants was 75,769 INR (1,025 USD) and median OOPE was 22,000 INR (298 USD).

In a study from Chhattisgarh conducted among 2,026 households in 2017, 34% of the insured availed cashless benefit with zero OOPE. Median OOPE among insured availing services from private sector was eight times that of the median OOPE in public sector. In uninsured, private services cost 12 times higher than

public sector.⁽³⁹⁾ In a study from Maharashtra conducted in 2011 among 7,261 households, catastrophic health expenditure was seen in 12.3% among the uninsured as compared to 8% in insured. 9.13% had to sell or mortgage their assets to cover hospital related expenditure.⁽³⁸⁾ Results from 3 NSSO conducted in 2004, 2014 and 2019 in Chhattisgarh revealed that the median OOPE incurred by the those enrolled under PFHI in 2019 was 416 INR and 10,373 INR in public and private health sectors respectively and in those without insurance, it was 417 INR and 8,759 INR in public and private health sectors respectively.⁽²⁶⁾

In a study conducted in Chandigarh in 2020 (results from NSSO) revealed that PMJAY was not effective in reducing OOPE or CHE in the pandemic. Overall mean OOPE increased by 19.5% from 2019 to 2020 leading to increase in CHE by 19-30%, especially in private sector.⁽³¹⁾

Table 37: Distribution of the study participants according to the effect of presence of chronic medical illnesses in their family on their attitude and utilization pattern of health insurance

Out of the 30 study participants with some chronic medical illness, 25 (83.3%) had enrolled for some health insurance and among them, three (10%) had utilized their insurance in the preceding one year and one had incurred catastrophic healthcare expenditure. Of the 37 study participants having a family member with some chronic medical illness, 32 (86.5%) had enrolled for some health insurance. Among them, three (8%) had utilized their insurance in the preceding one year and three had incurred catastrophic healthcare expenditure.

Table 38: Distribution of the study participants according to the influence of source of their information regarding health insurance on their attitude and utilization pattern of health insurance

Of the 419 study participants who were aware about health insurance, 304 (73%) reported peers as their source of their information regarding health insurance, 126 (30%) as mass media and 59 (14%) as other sources.

Of the 350 study participants who had some health insurance, 294 (84%) had heard about health insurance from their peers, 119 (34%) from mass media and 53 (15%) from other sources.

Of the 17 study participants who had utilized their health insurance in the preceding year, 12 (71%) had heard about health insurance from their peers, 6 (35%) from mass media and 5 (29%) from other sources.

In a survey conducted by IRDAI among 30,200 respondents in 2011, mass media (57%) was identified as a major source of information, followed by peers (40%) and other sources accounted for 3%.⁽⁵²⁾

Table 39: Distribution of the study participants according to difficulties faced while claiming health insurance

Of the study participants, who had claimed health insurance in the last one year, around most (13) of them faced difficulties while claiming their insurances. 4 claims were rejected by the insuring agencies which resulted in complete payment of the hospital bill from the beneficiaries' pockets. 4 participants found the insurance claim process tedious. The difficulties reported include those encountered during paperwork, unavailability of cashless benefits and unprofessional attitude of the

insurance company workers. 2 reported delayed reimbursement of the hospital bill by the insurance companies and 3 reported having received reduced claim amount.

When enquired regarding health insurance renewal practices, of the 350 insured participants, 2 revealed that they had discontinued their previous insurances in the last one year due to faulty record maintenance leading to rejection of their claims which resulted in them sustaining catastrophic health-related expenditure. They revealed that they were now covered under AB-PMJAY. The rest 348 insured participants had either continued or renewed their health insurances.

In a study conducted among 106 participants in 2018 in Kenya and Ghana, participants faced the problem of excess levying of hospital bills coupled with reduced claim amount.⁽⁵⁰⁾ Another study conducted in Ethiopia in 2021 among 537 participants reported insurance renewal rate of 82.68%. The main reasons for non-renewal included poor quality of service, high and unaffordable premium and lack of trust in the health insurance companies.⁽⁵¹⁾

Tables 40-41: Distribution of the study participants according to of life insurance

Of the 420 study participants, 76.9% had life insurances, while 23.1% did not have any life insurance. Of the insured, 99.4% had purchased it from Life Insurance Corporation of India (government) and the rest from ICICI company (private).

Tables 42-43: Association of the sociodemographic factors of the study participants and their knowledge regarding health insurance

In the present study, though the prevalence of knowledge regarding health insurance was high among the study participants, socio-demographic factors of the

participants like age, gender, area of residence and socio-economic status were not significantly associated with their knowledge regarding health insurance. But a rising trend in their knowledge was seen with age and higher socioeconomic classes. Knowledge was also high among females (100%) and rural residents (100%).

When assessed for socio-demographic factors having association with duration of awareness regarding health insurance, it was found that, factors like age, duration of service and educational status of the participant had statistically significant association with duration of awareness. Other socio-demographic factors like gender and area of residence had no association with the duration of awareness.

Tables 44-46: Association of the study participant's socio-demographic characteristics and attitude towards health insurance

In this study, socio-demographic factors like area of residence, educational status and occupation were significantly associated with the participant's preference for health insurance. The participants residing in rural areas, those having higher education status (studied above 5th standard) and field workers like ASHA workers and Anganwadi workers had high preference for health insurance.

Gender, area of residence and duration of service were significantly associated with influence of covid-19 on opting health insurance. Female participants, residents of rural areas and those having 1-20 years of service were positively influenced by Covid-19 in their preference for health insurance.

Socio-demographic factors like gender, area of residence, duration of service and educational status were found to be significantly associated with the mode of preference for seeking health insurance. High levels of offline mode of preference for

seeking health insurance was seen among females (80.2%), urban residents (84.7%), participants with more than 10 years of service (85.2% - 100%) and educational status till class 10 (82.8% - 100%). On the contrary, online mode of seeking health insurance was seen more with males (46.7%), rural residents (24.1%), participants with less than 10 years of service duration (34.4%) and in participants with higher educational status (27.1%- 39.3%).

Gender and area of residence were found to be significantly associated with the participant's preference for health insurance in a study done in Ethiopia in 2020 among 398 households. This study had results similar to the present study.⁽⁴⁷⁾ In another study from Udupi in 2018 was conducted among 1638 participants, socio-demographic factors like religion and type of family were significantly associated with the participant's preference for health insurance.⁽³⁷⁾

Tables 47-48: Association of the study participant's socio-demographic characteristics and health insurance ownership

In the present study, socio-demographic characteristics of the participants like gender, area of residence, educational status, occupation and socio-economic status were found to be significantly associated with having health insurance. High levels of health insurance ownership was seen among females (84.7%), rural residents (90.3%), ASHA workers (88.8%) and Anganwadi workers (87.6%). Increase in prevalence of ownership of health insurance was seen with higher educational status, longer duration of service and with lower socio-economic class.

In the present study, socio-demographic characteristics of the participants like gender, educational status, occupation and socio-economic status were found to be significantly associated with the health insurance provider. Females (84.7%), participants residing in rural areas (90.3%), field staff like ASHA workers (88.8%) and Anganwadi workers (87.6%) preferred government health insurances over private insurance providers. High preference for government health insurances was seen in participants with higher educational status, higher years of service and with lower socio-economic class.

A similar study done in 2011 in Kerala among 296 participants had similar association of socio-demographic factors like age, educational status, occupation and socio-economic status with having health insurance. Higher levels of insured were seen among more educated and lower socio-economic class. ⁽²⁹⁾

Table 49: Association of the study participant's socio-demographic characteristics and utilization of health insurance in the past one year

The socio-demographic characteristics of the participants like gender, educational status, occupation and participant's service duration were found to be significantly associated with the utilization of health insurance. High levels of insurance utilization was seen among males (42.9%) as compared to females (4.1%), higher levels of utilization of health insurance was seen with higher educational status and longer service duration. Health insurance utilization was higher in the community health providers other than ASHA workers and Anganwadi workers.

Tables 50-51: Association between ownership of health insurance by the study participants and catastrophic health-related expenditure incurred (n=16)

In the present study, there was no statistically significant association between ownership of health insurance and catastrophic health-related expenditure incurred by the participants. Higher levels of catastrophic health-related expenditure was seen with study participants that owned some health insurance than those who did not own any health insurance. This may be due to incorrect and incomplete knowledge regarding the health insurance.

Statistically significant association was seen between health insurance utilization pattern and catastrophic health-related expenditure incurred by the participants. This shows that owning health insurance has no consequence on reducing health-related expenditure but the utilization of it is what matters. As with utilization of the insurance, there was a reduction in out-of-pocket health-related expenditure, consequently, there was a reduction in catastrophic health-related expenditure incurred by the participants.

Table 52: Association between the place of employment of the study participants and their awareness, attitude and utilization pattern of health insurance

In the current study, statistically significant associations were seen between place of employment of the study participants and health insurance related variables like duration of awareness, preference for health insurance, possession and utilization of health insurance and catastrophic health-related expenditure incurred by them. Rural PHCs had a higher prevalence of all the above mentioned variables as compared to urban UHCs. This may be attributed to the role of the Medical Officers

of the rural PHCs in Belagavi Taluka in raising awareness regarding available governmental health insurance schemes among their employees.

In a study conducted in Chhattisgarh in 2017 among 6026 participants, 80% of the participants who had insurance were residents of rural areas. Among those who utilized the insurance, over 2/3rd were rural residents and half of them incurred OOPe. ⁽³⁹⁾

V: Feedback

Most of the study participants in the current study believed that there has been a significant improvement in the availability and delivery of quality health services due to the system of health insurance. Of the 17 participants who had utilized their health insurance in the preceding one year, half of them were happy with the coverage and time of reimbursement off claims. Around 40% of the claims were either rejected or reduced which reduced the trust among those participants on health insurance.

About 1/3rd of the participants appreciated the customer service and support for redressal. Only about half the participants were satisfied with the overall experience.

Some of the important suggestions for improvement of health insurance schemes included provision of cashless benefits across all insurance policies, inclusion of OPD charges, medications and transit charges, provision of free annual health check-ups and consultations for the beneficiaries, reduction in insurance premiums, coverage of all co-morbidities, digitalization and one-step enrolment / claiming process.

Similar suggestions were found in the countrywide survey conducted by IRDAI annually with special weightage given to improving ease of access and insurance claim process.^(52,53)

Health education was given to UHC/PHC staff regarding the importance of health insurance in financial risk protection by the investigator in the form of health talks. Various available insurance schemes were discussed with the participants and they were motivated to acquire further knowledge on the same.

CONCLUSION

The present study was done to assess the awareness and attitude towards various health insurance schemes as well as their utilization pattern among community health care providers or health care workers. This study shows that the study participants had a high level of awareness regarding health insurance schemes. The major sources of this information were the participants' colleagues, family and friends and mass media like television, radio and newspapers. Their positive attitude towards health insurance was greatly influenced by the covid-19 pandemic. Many had incurred out-of-pocket health-related expenditure during pandemic which even resulted in catastrophic healthcare expenditure to the family. Some incurred OOOPE and CHE despite having health insurance due to the gap in the service delivery.

A visible difference was seen between knowledge, enrolment and utilization of health insurance schemes by the participants. Even with high levels of awareness, enrolment and utilization rates were found to be low. This may be due to lack of complete, correct and crucial information on availability and benefits of various health insurance schemes. The gap identified between the knowledge and practices regarding health insurance schemes among the community health providers, who are themselves responsible for bridging the community with the government initiatives, was high and hence translates to ineffective communication between the central level and its own grass-root level workers.

There is a need for periodical reinforcement of available governmental financial risk reduction initiatives among the healthcare workers and general public

as well as securing the financial vulnerabilities, with the goal of universal health care.

If all the healthcare workers are protected against catastrophic healthcare expenditure, they will be in a better position to convince the public to enroll for all government schemes. This will move the country towards the goal of 'health for all', thus towards achieving 'Universal Health Coverage'.

RECOMMENDATIONS

At the individual level:

- Enrolment into eligible government health insurance schemes should be increased.
- Improvement of health and financial literacy could be made with Information, education and communication activities.

At the Health Care workers' Family level:

- Enrolment of eligible family members into insurance schemes should be done.
- Awareness on benefits of health insurance should be created.
- Awareness on ABHA card registration should be raised.

At the Community level:

- Awareness should be generated regarding community risk pooling.
- Empowerment of women by educating females in the households on financial and risk management can reduce the CHE.

At the District level:

- Further studies can be conducted to assess health literacy of Indians in detail across various regions.
- Strengthening of activities on importance of health insurance and reinforcing them periodically.

At the State/ National level:

- ABHA card registration through NDHM to cover all the citizens of the country should be done promptly.
- Expansion of AB-PMJAY to cover all APL families.
- Policy level changes can be made like increasing empanelment of private hospitals under Ayushman Bharat.
- NGOs should be involved in improving health insurance enrolment, coverage and improvement.

At the IRDAI / Insurance agencies level:

- Inclusion of OPD medications, procedures and transit coverage under insurance coverage can be brought about in the near future to reduce the health expenses on the common man.
- Scope for making health insurance schemes affordable and easily accessible.
- Tailoring the insurance schemes to suit different strata of the population by Socio-economic security and health needs.
- Client satisfaction surveys of existing schemes should be conducted regularly.

At the International/ WHO level:

- Further operational research should be conducted to find causes for non-enrolment of health insurance, especially by qualitative methods like in-depth interviews and focus group discussions.
- Push for allocation of global funds or financial aids for health protection schemes especially in LMIC to achieve Universal Health Coverage.

STRENGTHS OF THE STUDY

- This study was done to study knowledge, attitude and utilization of health insurance among community health providers or health care workers in India.
- Study of enrolment in Ayushman Bharath Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) and (Ayushman Bharath Arogya Karnataka) AB-Ark and utilization pattern by the community health providers or health care workers in India.
- Life insurance enrolment pattern was assessed along with health insurance.
- Assessed catastrophic healthcare expenditure in detail (for the preceding year).
- Assessed the effect of covid-19 pandemic on insurance uptake by health care workers.

LIMITATIONS OF THE STUDY

- Could not verify the authenticity of self-reported habits as no direct observation done by the investigator.
- The study findings may not be generalizable to general public, as it covered only health care workers.
- Qualitative study could not be done to assess various socio-cultural factors related to enrolment of health insurance schemes.

SUMMARY

The present study was conducted among 420 community health care providers in selected health centres of Belagavi taluka, and district in Karnataka over a period of one year from 1st January 2021 to 31st December 2021 (12 months) to assess the knowledge and attitude towards various health insurance schemes as well as their utilization pattern of the same.

In this study, most of the participants were females (96.7%) and majority (39.05%) of the study participants were aged between 31-40 years, followed by the age groups of 41-50 years (36.42%), 21-30 years (14.29%) and 51-60 years (10.24%). The mean age of the participants was 40 ± 8.2 years (ranging between 21-60 years). Most of the participants (61.2%) were residents of rural areas and rest from urban areas.

Most participants were Anganwadi workers (63.3%) and ASHA workers (23.3%). PHC Kinaye had the highest number of employees (39.04%) followed by, PHC Vantamuri (rural) (22.85%), UHC Rukmininagar (20.23%), UHC Ramnagar (9.28%) and UHC Ashoknagar (8.5%). The mean duration of service of the community health providers was 13.80 ± 7.73 years. 42% of them had worked for 11-20 years.

Most (69%) of the study participants had studied till 10th class. 22.9% of the participants had studied up to PUC/Diploma/ITI, followed by 6.7% who had finished their master's degree and 0.9% had attended primary school till 5th standard; Only 0.4% of them had not received any formal schooling.

More than 90% of the participants in this study were Hindus. 6% of the participants were Muslims, 2.6% were Jains and only 0.9% were Christians. 48.1% of participants in this study belonged to OBC category, 31.0% to others/General category, 12.6% to ST category and 8.3% to SC category. In this study, most of the participants (87.1%) were married, only 8.5% were either widowed or divorced. Around 2/3rd (64.8%) of the participants belonged to nuclear families and 1/3rd (35.2%) to joint families. In this study, nearly 39% participants belonged to upper class, followed by 32% from middle class and 29% from lower class. 86.2% participants were BPL card holders.

Alcohol consumption was stated by only two participants. None had smoking / tobacco consumption/ illicit drug usage habits. Less than 10% of the study participants reported chronic medical illnesses in the family. Diabetes and hypertension were the major co-morbidities in the families.

Prevalence of knowledge among the participants regarding health insurance schemes was found to be 99.8%. Of that, around 60% of the participants had known for more than 5 years, remaining had come to know in the last 5 years. They were aware of various schemes available in the market, around 50% of had come across information on 3-4 health insurance schemes in their lives. The important sources of this information were the participants' colleagues (50.8%), family and friends (48.7%) mass media (41.7%) and government circulars (4.5%). The common types of health insurance coverage known to the participants were full family coverage (88.8%), government provided (64.4%), and employer provided (63.2%), dependents coverage (33.2%) and individual coverage (20%). Very few were aware of disease specific insurance coverage (12.9%) like Covid-19 related insurance coverage.

Most of the participants (87.1%) preferred health insurance, while 12% of them were not sure and 0.9% did not prefer any health insurance. When asked regarding what attributes were most valued when opting a health insurance scheme, majority of them opted in-patient admission coverage (82.9%), coverage of all surgical and medical procedures (71.6%), diagnostics coverage (66.4%) and medications (49%). Some even prioritized the health insurance schemes that provided additional benefits like coverage of transit (35.2%). When given a choice on what factors they considered before purchasing a health insurance policy, the study participants prioritized premium (57.1%), coverage (36.2%) and ease of reimbursement (10.4%).

Most (63.8%) of the participants were positively influenced by the Covid-19 pandemic towards the health insurance. Around 3/5th of the participants preferred offline mode over online mode of seeking health insurance.

The prevalence of enrolment of any health insurance was 83.3% among the study participants. Among them, 95% had enrolled their insurance before 5 years. AB-ARK / AB-PMJAY scheme was the most (90%) enrolled scheme, followed by PMSBY (2.6%), ESI scheme (2.6%), KLE Arogya Card insurance (1.7%), Bajaj Allianz insurance (0.8%), Kotak insurance (0.3%) and others. 93.4% participants had enrolled to government schemes, while only 3.7% had enrolled to private agency schemes and 2.9% had been covered by their employers.

Majority (92%) had a coverage of 5 lakh rupees, while 7% of them had a lower insurance coverage (< 5 lakh rupees). Only 1% had opted insurance coverage over 10 lakh rupees. Most (93.2%) of the study participants had chosen for full family coverage, some for themselves (1.1%) or spouses (0.8%) or their dependent

children (2%). 2.9% participants with their families had been covered by their employers.

Among 350 insured participants, only 17 (4.9%) had utilized their health insurance in the last one year. Out of them, 15 participants had utilized the scheme once and 2 had utilized twice in the last year. 50% claims were for surgical interventions, while the rest were for in-patient admissions, MCH services and for purchasing medications. Of the 17 insurance claims made, 13 were less than 1 lakh rupees, 4 claims were made for 2-5 lakh rupees. Of the claims made, 25% were completely covered by the respective insurance companies while, 35.4% were partially covered to various degrees and 6 claims were rejected by companies and hence the participants had to cover the health care cost out of their own pockets.

The median out-of-pocket expenditure borne by the insured participants who had utilized their health insurance in the last year was 22,000 INR (298 USD) and ranged between 50 thousand and 5 lakh rupees. Additionally, 3.8% of the study participants reported incurring some form of catastrophic health-related expenditure in the past one year. Some had taken a loan to cover the health expenditure, while others had either mortgaged or sold their properties for the same. Difficulties faced during the insurance claim included rejection, reduced claim amount and tedious process and delayed reimbursement. Renewal practice was high with only two discontinuations in the previous year.

High insurance enrolment was seen among study participants with history of chronic medical illness in the family (83%) and those who had heard about health insurance from their peers (84%). Similarly, utilization of insurance was also high among them.

1/3rd of the participants had life insurances, of which 99.4% were purchased from Life Insurance Corporation of India (government company) and the rest from ICICI (private company).

There was no significant association between participant's socio-demographic factors like age, gender, area of residence and socio-economic status with knowledge regarding health insurance. There was a significant association between participant's socio-demographic factors like age, duration of service and educational status and duration of awareness.

A significant association was seen between participant's preference for health insurance and socio-demographic factors like area of residence, educational status and occupation.

A significant association was seen between influence of covid-19 on opting for health insurance and gender, area of residence and duration of service. Similar association was seen with offline mode of seeking insurance.

A significant association was seen between owning health insurance and participant's gender, area of residence, educational status, occupation and socio-economic status. health insurance provider and participant's gender, educational status, occupation and socio-economic status were found to be significantly associated.

The participant's gender, educational status, occupation and participant's service duration were found be significantly associated with the utilization of health insurance. there was no significant association between ownership of health insurance and catastrophic health-related expenditure incurred by the participants,

but there was a significant association between health insurance utilization pattern by the study participants and catastrophic healthcare related expenditure incurred by them.

The employees of rural PHCs had known about health insurance for longer time as compared to their urban counterparts. They also had higher rates of preference, enrolment, utilization of insurances. Contrastingly, OOPE was also high among the employees of rural PHCs as compared to urban UHCs.

Most of the study participants in the current study believed that there has been a significant improvement in the availability and delivery of quality health services due to the system of health insurance. About 1/3rd of the participants appreciated the customer service and support for redressal. Only about half the participants were satisfied with the overall experience.

Important suggestions for improvement of health insurance schemes included increasing coverage, provision of cashless benefits and easing the claim process.

Health education was given to UHC/PHC staff regarding the importance of health insurance in financial risk protection by the investigator in the form of health talks.

BIBLIOGRAPHY

- (1) World Health Organization. Health for All [Internet]. 1978. Sr.No.1:p.01. Available from: <https://apps.who.int/iris/bitstream/handle/10665/39228/9241800011.pdf?sequence=1&isAllowed=y>. [accessed on 10-09-2022]
- (2) World Health Organization. Universal Health Coverage (UHC). Available from: [https://www.who.int/news-room/fact-sheets/detail/universal-health-coverage-\(uhc\)](https://www.who.int/news-room/fact-sheets/detail/universal-health-coverage-(uhc)). [accessed on 15-09-2020]
- (3) World Health Organization, International Bank for Reconstruction and Development / The World Bank. Tracking Universal Health Coverage: 2017 Global Monitoring Report. 2017. Available from: https://www.who.int/healthinfo/universal_health_coverage/report/2017/en/ [accessed on 15-09-2020]
- (4) Obadha M, Chuma J, Kazungu J and Barasa E. Health care purchasing in Kenya: Experiences of health care providers with capitation and free-for-service provider payment mechanisms. *Int J Health Plann Manage*. 2019 Jan;34(1):917-33. Available from DOI: 10.1002/hpm.2707. [accessed on 15-09-2020]
- (5) Kawabata K, Xu K and Carrin G. Preventing impoverishment through protection against catastrophic health expenditure. *Bull World Health Organ*. 2002;80(8):612. Available from: <https://apps.who.int/iris/handle/10665/71556>. [accessed on 18-01-2021]
- (6) Devadasan N, Criel B, Damme W, Ranson K and Van der Stuyft P. Indian community health insurance schemes provide partial protection against catastrophic health expenditure. *BMC Health Serv Res*. 2007 Mar 15;7:43.

Available from: <https://doi.org/10.1186/1472-6963-7-43>.

[accessed on 18-09-2021]

- (7) Kumar A and Sarwal R. Executive Summary. Health Insurance for India's Missing Middle. [Internet] NITI Aayog; 2021.p.01. Available from DOI: 10.31219/osf.io/s2x8r. [accessed on 18-09-2020]
- (8) Ministry of Health and Family Welfare. National Health Estimates (2018-19). Available from: <https://pib.gov.in/PressReleasePage.aspx?PRID=1858770>. [accessed on 14-10-2020]
- (9) Park K. Right to health. Concept of Health and Disease. Park's Textbook of Preventive and Social Medicine. 25th ed, Jabalpur: Banarsidas Bhanot; 2019.p.21. [accessed on 14-09-2022]
- (10) India - Household Social Consumption: Health, NSS 75th Round Schedule-25.0: July 2017-June 2018. Available from: <http://microdata.gov.in/nada43/index.php/catalog/152>. [accessed on 20-08-2022]
- (11) Government of India. Ministry of Health and Family Welfare. ASHA workers and Anganwadi workers engaged under National Health Mission (NHM). Available from: <https://pib.gov.in/Pressreleaseshare.aspx?PRID=1606212>. [accessed on 11-11-2021]
- (12) History of insurance in India. Insurance Regulatory and Development Authority of India (IRDAI). Available from: <https://www.irdai.gov.in/ADMINCMS/cms/ii/mobile/html5forwebkit.html>. [accessed on 09-11-2022]
- (13) Kishore J. Health Insurance. National Health Programs of India. 13th ed. New Delhi: Century Publishers; 2019.p.37 [accessed on 12-11-2021]

- (14) National Health Authority. Ayushman Bharat - Pradhan Mantri Jan Arogya Yojana (PM-JAY). Available from: <https://nha.gov.in/PM-JAY>.
[accessed on 19-11-2022]
- (15) Government of Karnataka. Ayushman Bharat-Arogya Karnataka Yojana (AB-ArK). Available from: <https://arogya.karnataka.gov.in/>
[accessed on 19-11-2022]
- (16) Celestine EE, Achama NE, Isaac CO and Somtochukwu BO. Knowledge, Attitudes to and Utilization of the National Health Insurance Scheme (NHIS) among health workers in the University of Nigeria Teaching Hospital(UNTH), Ituku-Ozalla, Enugu State, Nigeria. International Journal of Research -Granthaalayah. 2018 Jan 31;6(1):1-22. Available from DOI: 10.5281/zenodo.1162015. [accessed on 15-09-2020]
- (17) Alhassan RK, Nketiah-Amponsah E, Spieker N, Arhinful DK and Rinke De Wit TF. Perspectives of frontline health workers on Ghana's National Health Insurance Scheme before and after community engagement interventions. BMC Health Serv Res. 2016 May 28;16:192. Available from DOI: 10.1186/s12913-016-1438-y. [accessed on 15-09-2020]
- (18) Hone T, Habicht J, Domente S and Atun R. Expansion of health insurance in Moldova and associated improvements in access and reductions in direct payments. J Glob Health. 2016 Dec;6(2). Available from DOI: 10.7189/jogh.06.020702. [accessed on 17-09-2020]
- (19) Bodhisane S and Pongpanich S. Factors affecting the willingness to join community-based health insurance (CBHI) scheme: A case study survey from Savannakhet Province, Lao P.D.R. Int J Health Plann Manage. 2019

Apr;34(2):604–18. Available from DOI: 10.1002/hpm.272.

[accessed on 19-09-2020]

- (20) Thakur H. Study of Awareness, Enrolment and Utilization of Rashtriya Swasthya Bima Yojana (National Health Insurance Scheme) in Maharashtra, India. *Front Public Health*. 2016 Jan 7;3:282. Available from DOI: 10.3389/fpubh.2015.00282. [accessed on 15-09-2020]
- (21) Savitha S and Kiran K. Health seeking behaviour in Karnataka: does micro-health insurance matter? *Ind J Comm Med*. 2013 Oct;38(4):217-22. Available from DOI: 10.4103/0970-0218.120156. [accessed on 15-09-2020]
- (22) M'bouaffou F, Buch E, Olorunju S and Thsehla E. Perceived knowledge of scheme members and their satisfaction with their medical schemes: a cross-sectional study in South Africa. *BMC Public Health*. 2022 Sep 8;22(1). Available from <https://doi.org/10.1186/s12889-022-14106-8>. [accessed on 10-06-2022]
- (23) Devadasan N, Seshadri T, Trivedi M and Criel B. Promoting universal financial protection: evidence from the Rashtriya Swasthya Bima Yojana (RSBY) in Gujarat, India. *Health Res Policy Syst*. 2013 Aug 20;11:29. Available from <https://doi.org/10.1186/1478-4505-11-29>. [accessed on 10-06-2022]
- (24) Indumathi K, Hajira SI, Gopi A and Subramanian M. Awareness of health insurance in a rural population of Bangalore, India. *Int J Med Sci Public Health*. 2016 Jan;5(10):2162-7. Available from: DOI: 10.5455/ijmsph.2016.15042016476. [accessed on 10-06-2022]
- (25) Garg S, Chowdhury S and Sundararaman T. Utilisation and financial protection for hospital care under publicly funded health insurance in three

states in Southern India. BMC Health Serv Res. 2019 Dec 27;19(1):1004.

Available from: <https://doi.org/10.1186/s12913-019-4849-8>.

[accessed on 11-07-2022]

- (26) Garg S, Bebarti KK and Tripathi N. Performance of India's national publicly funded health insurance scheme, Pradhan Mantri Jan Arogya Yojana (PMJAY), in improving access and financial protection for hospital care: findings from household surveys in Chhattisgarh state. BMC Public Health. 2020 Jun 16;20(1):949. Available from: <https://doi.org/10.1186/s12889-020-09107-4>. [accessed on 11-07-2022]
- (27) Suchman L. Accrediting private providers with National Health Insurance to better serve low-income populations in Kenya and Ghana: a qualitative study. Int J Equity Health. 2018 Dec 5;17(1):179. Available from: <https://doi.org/10.1186/s12939-018-0893-y>. [accessed on 11-07-2022]
- (28) RamPrakash R and Lingam L. Why is women's utilization of a publicly funded health insurance low?: a qualitative study in Tamil Nadu, India. BMC Public Health. 2021 Feb 12;21(1):350. Available from: <https://doi.org/10.1186/s12889-021-10352-4>. [accessed on 11-07-2022]
- (29) Philip NE, Kannan S and Sarma SP. Utilization of Comprehensive Health Insurance Scheme, Kerala. Asia Pac J Public Health. 2016 Jan 1;28(1 Suppl):77S-85S. Available from: <https://doi.org/10.1186/1753-6561-6-S5-P10>. [accessed on 11-07-2022]
- (30) Sriram S and Khan MM. Effect of health insurance program for the poor on out-of-pocket inpatient care cost in India: Evidence from a nationally representative cross-sectional survey. BMC Health Serv Res. 2020 Sep

- 7;20(1):839. Available from: <https://doi.org/10.1186/s12913-020-05692-7>.
[accessed on 16-08-2022]
- (31) Garg S, Bebarta KK and Tripathi N. Household expenditure on non-Covid hospitalisation care during the Covid-19 pandemic and the role of financial protection policies in India. *Arch Public Health*. 2022 Apr 2;80(1):108. Available from: <https://doi.org/10.1186/s13690-022-00857-8>.
[accessed on 16-08-2022]
- (32) Trivedi M, Saxena A, Shroff Z and Sharma M. Experiences and challenges in accessing hospitalization in a government-funded health insurance scheme: Evidence from early implementation of Pradhan Mantri Jan Aarogya Yojana (PM-JAY) in India. *PLoS One*. 2022 May 12;17(5):e0266798.[Internet] Available from: <https://doi.org/10.1371/journal.pone.0266798>.
[accessed on 18-10-2022]
- (33) Reshmi B, Unnikrishnan B, Rajwar E, Parsekar SS, Vijayamma R and Venkatesh BT. Impact of public-funded health insurances in India on health care utilisation and financial risk protection: A systematic review. *BMJ Open*. 2021 Dec 22;11(12):e050077. [Internet] Available from DOI: 10.1136/bmjopen-2021-050077. [accessed on 18-10-2022]
- (34) Prinja S, Chauhan AS, Karan A, Kaur G and Kumar R. Impact of Publicly Financed Health Insurance Schemes on Healthcare Utilization and Financial Risk Protection in India: A Systematic Review. *PLoS ONE*. 2017 Feb 2;12(2):e0170996. [Internet] Available from DOI: 10.1371/journal.pone.0170996. [accessed on 22-10-2022]
- (35) Dror DM, Hossain SA, Majumdar A, Pérez Koehlmoos TL, John D and Panda PK. What Factors Affect Voluntary Uptake of Community-Based

- Health Insurance Schemes in Low- and Middle-Income Countries? A Systematic Review and Meta Analysis. *PLoS One*. 2016 Aug 31;11(8):e0160479. [Internet] Available from DOI: 10.1371/ journal.pone.0160479. [accessed on 22-10-2022]
- (36) Holst L, Rademakers JDDJM, Brabers AEM and de Jong JD. The Importance of Choosing a Health Insurance Policy and the Ability to Comprehend that Choice for Citizens in the Netherlands. *Health Lit Res Pract*. 2021 Oct;5(4):e288–94. Available from DOI: 10.3928/24748307-20211010-01. [accessed on 29-10-2022]
- (37) Reshmi B, Unnikrishnan B, Nair NS and Guddattu V. Factors determining the enrolment in community-based health insurance schemes: A cross-sectional study from coastal South India. *Indian J Comm. Med*. 2018 Oct-Dec;43 (4):312–5. Available from DOI: 10.4103/ijcm. IJCM_118_18. [accessed on 29-10-2022]
- (38) Joshi R, Pakhare A, Yelwatkar S, Bhan A, Kalantri SP and Jajoo UN. Impact of community-based health insurance and economic status on utilization of healthcare services: A household-level cross-sectional survey from rural central India. *Natl Med J India*. 2020 Mar-Apr;33(2):74-82. Available from DOI: 10.4103/0970-258X.310921. [accessed on 29-10-2022]
- (39) Nandi S, Schneider H and Dixit P. Hospital utilization and out of pocket expenditure in public and private sectors under the universal government health insurance scheme in Chhattisgarh State, India: Lessons for universal health coverage. *PLoS One*. 2017 Nov 17;12(11):e0187904. Available from: <https://doi.org/10.1371/journal.pone.0187904>. [accessed on 08-11-2022]

- (40) Sree GV VP and Maiya GR. Coverage, utilization and impact of Ayushman Bharat scheme among the rural field practice areas of Saveetha Medical College and Hospital, Chennai. *J Family Med Prim Care*. 2021 Mar;10(3):1171-6. Available from DOI: 10.4103/jfmpc.jfmpc_1789_20. [accessed on 08-11-2022]
- (41) Shrisharath K, Hiremath S, Nanjesh Kumar S, Rai P, Erappa S and Holla A. A study on the utilisation of Ayushman Bharat Arogya Karnataka (ABArK) among Covid patients admitted in a Tertiary Care Hospital. *Clin Epidemiol Glob Health*. 2022 May-Jun;15:101015. Available from DOI: 10.1016/j.cegh.2022.101015. [accessed on 08-11-2022]
- (42) Prasad BG. Social Classification of Indian families. *J Indian Med Assoc* 1961; 37:250-1. [accessed on: 22-11-2022]
- (43) Majhi MM and Bhatnagar N. Updated B.G Prasad's classification for the year 2021: consideration for new base year 2016. *J Family Med Prim Care*. 2021 Nov;10(11):4318-9. Available from DOI: 10.4103/jfmpc.jfmpc_987_21. [accessed on: 22-11-2022]
- (44) Ministry of Health and Family Welfare. Rural Health Statistics 2020-21. Available from: https://main.mohfw.gov.in/sites/default/files/rhs20-21_1.pdf. [accessed on 17-11-2022]
- (45) Kusuma YS, Pal M and Babu BV. Health Insurance: Awareness, Utilization, and its Determinants among the Urban Poor in Delhi, India. *J Epidemiol Glob Health*. 2018 Dec;8(1-2):69-76. Available from DOI: 10.2991/j.jegh.2018.09.004. [accessed on 17-10-2022]

- (46) National Family Health Survey - 5 (2019-20) Factsheet. Available from: https://main.mohfw.gov.in/sites/default/files/NFHS-5_Phase-I.pdf.
[accessed on 15-10-2022]
- (47) Wagaw GB, Tadesse AW and Ambaye GY. Willingness to join community-based health insurance among households in South Wollo, Northeast Ethiopia: A community-based cross-sectional study. *PLoS ONE*. 2022;17(2): e0261642. Available from: <https://doi.org/10.1371/journal.pone.0261642>.
[accessed on 18-10-2022]
- (48) Langer B, Kumari R, Akhtar N, Gupta RK, Mir MH, Majeed M, et al. Is there a need to cover all households under health insurance schemes: A cross-sectional study in a rural area of Jammu. *J Family Med Prim Care* 2020;9:6228-33. Available from DOI: 10.4103/jfmpc.jfmpc_958_20.
[accessed on 18-10-2022]
- (49) Yagi BF, Luster JE, Scherer AM, Farron MR, Smith JE and Tipirneni R. Association of Health Insurance Literacy with Health Care Utilization: A Systematic Review. *J Gen Intern Med*. 2022 Feb;37(2):375-389. Available from DOI: 10.1007/s11606-021-06819-0. [accessed on 28-10-2022]
- (50) Suchman L, Hashim CV, Adu J and Mwachandi R. Seeking care in the context of social health insurance in Kenya and Ghana. *BMC Public Health*. 2020 May 4;20(1):614 Available from DOI: 10.1186/s12889-020-08742-1.
[accessed on 31-10-2022]
- (51) Kaso AW, Yohanis Y, Debela BG and Hareru HE. Community-Based Health Insurance Membership Renewal Rate and Associated Factors among Households in Gedeo Zone, Southern Ethiopia. *J Environ Public Health*. 2022

Oct 3;2022:8479834. Available from DOI: 10.1155/2022/8479834.

[accessed on 03-11-2022]

- (52) National Council for Applied Economic Research (NCAER). Pre-launch Survey report of insurance awareness campaign. Available from: https://policyholder.irdai.gov.in/insurance-awareness-survey/-/document_library/wH6oeGkvrIKy/view_file/335460?_com_liferay_document_library_web_portlet_DLPortlet_INSTANCE_wH6oeGkvrIKy_redirect=https%3A%2F%2Fpolicyholder.irdai.gov.in%2Finsurance-awareness-survey%3Fp_p_id%3Dcom_liferay_document_library_web_portlet_DLPortlet_INSTANCE_wH6oeGkvrIKy%26p_p_lifecycle%3D0%26p_p_state%3Dnormal%26p_p_mode%3Dview. [accessed on 20-12-2022]
- (53) Insurance Regulatory and Development Authority of India (IRDAI). Feedback of insurance policy holders. Available from: <https://policyholder.irdai.gov.in/feedback>. [accessed on 20-12-2022]

ANNEXURE – I

INFORMED CONSENT

KAHER, J. N. MEDICAL COLLEGE, BELAGAVI

DEPARTMENT OF COMMUNITY MEDICINE

Title: “Assessment of Knowledge and Attitude towards Health Insurance and Utilization pattern of Community health care providers – A facility based cross-sectional study”

PG Guide: _____

Professor of Department of Community Medicine

Investigator: _____

Postgraduate student (Reg. No.- BD0120010)

INTRODUCTION:

The community health care providers, especially the ones in peripheries are the backbones of health care delivery system of India. They act as both providers and consumers of the same services. Hence, by conducting this study, we aim to understand the current status of the accessibility of the quality health care services among the community health care providers by assessing their knowledge and attitudes regarding various health insurance schemes and their utilization patterns.

EXPLANATION OF PROCEDURES:

In this study, once the consent has been obtained from the participant, he / she will be interviewed using a pre-designed and pre-tested questionnaire. Relevant information regarding socio-demographic details, knowledge regarding the various health insurance schemes will be obtained. The participants’ attitude towards various health insurance schemes will be evaluated and their utilization patterns of health

insurance schemes will be studied. At any moment, you can withdraw from the study without giving any reason.

POSSIBLE BENEFITS:

The investigator does not promise or guarantee that you will receive direct benefit by being in this study. It will benefit the whole community because by this study, we will be able to determine the awareness, accessibility, utilization patterns and shortfalls of the available health insurance schemes and bridge the gap between the requirements and delivery of the services.

POSSIBLE RISKS:

There is no risk associated with participation in this study.

CONFIDENTIALITY:

Your identity will not be revealed. All information will be collected, coded and anonymized so that no one will know your personal identity.

WITHDRAWAL:

Participation in this study is voluntary. If you do not wish to participate in this study, you will not lose any benefits to which you are entitled at UHC / PHC / KLE Dr. Prabhakar Kore Hospital and Medical Research Centre, Belagavi.

COSTS OF PARTICIPATION:

The cost of the study will be borne by the investigator. There will be no additional cost to you for participating in this study.

PAYMENT OF PARTICIPATION:

There will be no incentives to you for participating in this study.

AUTHORIZATION TO PUBLISH/ PRESENT RESULTS:

The investigators may use the information gathered from this study for presentations in scientific meets and publications in scientific journals. However, your personal identity will not be disclosed in such presentation or publication.

LEGAL RIGHTS:

By signing this consent form, you are not waiving off any of your legal rights.

QUESTIONS:

If you have any questions about your rights as a study participant, you may contact **Dr. Harsha Hegde**, Chairperson, JNMC Institutional Ethics Committee on Human Subjects' Research at 0831-2741701 / 9480422500 or **Dr. (Mrs.) N.S. Mahantashetti**, Principal, J.N. Medical College, Belagavi at 0831-2471350.

CONSENT STATEMENT:

“I have been explained all the contents of this consent form in my local language and have understood and clarifies all my queries about the study to the best of my knowledge. Furthermore, I recognize that I have the complete right to withdraw the consent at any point during the study. I understand that the information given by me will be confidential and will be used for research purpose only. Further, I am aware that the result of this research will be presented/ published without disclosing any personal identification of the participants.

I hereby give my voluntary consent for participation in this study. I do sign the informed consent form in front of an eyewitness whom I recognize.”



Name of the participant: _____ Signature/ left thumb impression



Name of the eyewitness: _____ Signature/ left thumb impression



Name of the investigator: _____ Signature



Date:

--	--	--

DD MM YYYY

Signature of the PG guide

ANNEXURE – II

RESEARCH QUESTIONNAIRE

KAHER

J. N. MEDICAL COLLEGE, BELAGAVI

DEPARTMENT OF COMMUNITY MEDICINE

Title: “Assessment of Knowledge and Attitude towards Health Insurance and Utilization pattern of Community health care providers – A facility based cross-sectional study”

PG Guide: Dr. Shivaswamy. M.S MD
Professor of Department of Community Medicine

Investigator: Dr. Varsha. G MBBS
Postgraduate student (Reg. No.- BD0120010)

(Note: The personal data provided by you will be kept confidential. Only aggregated results will be presented/ published without revealing your personal identity).

Sl. No. _____ Date of interview: ____/____/____

I.A Socio-demographic details:

1. Name: _____ Contact Mobile No: _____
2. Age: _____ years
3. Sex: 1) Male 2) Female
4. Area of residence: 1) Rural / 2) Urban
5. Which PHC/UHC do you work under?
 - 1) PHC Kinaye 2) PHC Vantamuri (rural) 3) UHC Ashoknagar
 - 4) UHC Rukmininagar 5) UHC Ramnagar
6. Occupation (Health care workers) and mention the duration of employment
 - 1) ASHA 2) AWW 3) ANM 4) Lady Health Visitor (LHV)
 - 5) Nurse 6) Pharmacist 7) Clerk 8) Lab technician 9) Class IV
 - 10) Male health worker 11) Driver 12) Others, specify _____

Duration of service in health care : _____ years

7. Religion: 1) Hindu 2) Muslim 3) Christian 4) Others, specify _____

8. Category: 1) SC 2) ST 3) OBC 4) Others
9. Education status (maximum schooling):
 1) No formal schooling 2) Class 1-5 3) Class 6-10 4) PUC/ Diploma 5) Graduate /PG
10. Marital status: 1) Married 2) Unmarried 3) Widow /Widower 4) Divorcee / Separated
11. Total income of family per month: Rs. _____
12. Total number of family members: _____ Adults: _____ Children: _____
13. Per capita income / month: Rs. _____
14. Type of family: 1) Nuclear 2) Joint
15. Socio economic status (Modified B G Prasad's classification):
 1) Class I 2) Class II 3) Class III 4) Class IV 5) Class V
16. Do you have a BPL Ration Card? 1. Yes / 2. No

I.B Personal and family medical history

17. Do you have any of the following habits? If yes, mention duration.
- | | | |
|------------------------|----------------|-----------------|
| 1) Smoking | 1. Yes / 2. No | Duration- _____ |
| 2) Alcohol consumption | 1. Yes / 2. No | Duration- _____ |
| 3) Tobacco consumption | 1. Yes / 2. No | Duration- _____ |
| 4) Illicit drug abuse | 1. Yes / 2. No | Duration- _____ |
18. Mention if you have any chronic medical illness (self-reported - with duration)
- 1) Diabetes 2) Hypertension 3) Cardio-vascular disease 4) Rheumatoid arthritis
- 5) COPD 6) Others, if so specify _____
- If yes, Duration _____
- Receiving treatment: 1. Yes / 2. No
19. Mention if a family member in your house with any chronic medical illness (self-reported - with duration)
- 1) Diabetes 2) Hypertension 3) Cardio-vascular disease 4) Rheumatoid arthritis
- 5) COPD 6) Others, if so specify _____
- If yes, Duration _____
- Receiving treatment: 1. Yes / 2. No

To assess the knowledge and attitude of Community health care providers towards health insurance

II. Knowledge about health insurance

20. Have you heard about 'health insurance' any time before? 1. Yes / 2. No
21. When did you first hear about 'health insurance'?
- 1) <1 year ago 2) 1-5 years ago 3) >5 years ago
22. What is the source of your information regarding 'health insurance'?
- 1) Fellow health care workers 2) Family and friends 3) TV 4) Radio
5) Newspapers 6) Insurance agents/ staff 7) Government circulars / orders
8) Others, specify _____
23. How many insurance schemes have you come across? _____
Can you name some of them?
1. _____
2. _____
3. _____
24. What type of health insurance scheme coverages are you aware of?
- | | |
|--------------------------------|----------------|
| 1) Individual coverage (self) | 1. Yes / 2. No |
| 2) Dependents' coverage | 1. Yes / 2. No |
| 3) Full family coverage | 1. Yes / 2. No |
| 4) Employer provided | 1. Yes / 2. No |
| 5) Central Govt / State Govt | 1. Yes / 2. No |
| 6) Disease specific (COVID-19) | 1. Yes / 2. No |
25. Are you aware of 'free cancellation period' of a health insurance policy?
1. Yes / 2. No

III. Attitude / Perception towards health insurance

26. Would you prefer to opt health insurance scheme? 1. Yes / 2. No / 3. Don't know
27. What do you prefer while choosing insurance scheme?
- | | |
|---------------------|----------------|
| 1) Medications | 1. Yes / 2. No |
| 2) IPD admissions | 1. Yes / 2. No |
| 3) Investigations | 1. Yes / 2. No |
| 4) Procedures | 1. Yes / 2. No |
| 5) Transit coverage | 1. Yes / 2. No |

28. What factors do you consider while choosing a health insurance scheme?
- 1) Premium 2) Coverage 3) Ease of reimbursement
4) Others, specify _____ 5) Don't know
29. Has the COVID-19 pandemic influenced you to opt health insurance? 1. Yes / 2. No
30. If you were to seek health care services in case of any illness or morbidity, what is your perception of your health insurance service:
(1. Strongly agree, 2. Agree, 3. Neither agree/disagree, 4. Disagree, 5. Strongly disagree)
- 1) Does it take care of your health expenses? 1. / 2. / 3. / 4. / 5.
2) Does it ease the access to health care? 1. / 2. / 3. / 4. / 5.
3) Does it subsidize the health services? 1. / 2. / 3. / 4. / 5.
4) Is it associated with increased health seeking behaviour? 1. / 2. / 3. / 4. / 5.
5) Does it alleviate poverty resulting from health care expenses? 1. / 2. / 3. / 4. / 5.
6) Does it include free health services / screening? 1. / 2. / 3. / 4. / 5.
31. What is your preference of seeking health insurance?
1. Offline (through an agent/ employer provided) 2. Online

IV. Utilization pattern of health insurance schemes

32. Do you already have health insurance (in last 12 months)? 1. Yes / 2. No
- If yes, then –
- 1) Mention the name of your health insurance policy

- 2) Which company covers your health insurance?

- 3) What is the source of your insurance provider?
1. Central Government 2. State Government 3. Private / Personal
4. Employer provided 5. Disease specific 6. Others, specify
- 4) How much policy premium did you pay for the preceding year?

- 5) What is the frequency of your premium payment?
1. Yearly 2. Half yearly 3. Quarterly 4. Monthly

- 6) What is the coverage of your health insurance policy?
1. < 1 lakh 2. 1-1.99 lakhs 3. 2-4.99 lakhs 4. 5-9.99 lakhs 5. > 10 lakhs
- 7) Who are the beneficiaries under this health insurance policy?
1. Independent 2. Spouse 3. Dependent children 4. Full family 5. Employee
- 8) Have you utilized your health insurance to seek health care services in the preceding year?
1. Yes / 2. No
- 9) If yes, what was the frequency of health care services utilization in the preceding year?
1. Once 2. Twice 3. 3-5 times 4. >5times
- 10) What services did your insurance policy cover?
1. Medications 2. MCH services 3. IPD services (medical)
4. IPD services (surgical) 5. Health checks 6. Investigations
7. Don't know
- 11) If yes, how long did it take to avail the claim?
1. Days 2. Week 3. Month 4. More than one month, specify duration
- 12) How much was the total health care expenses when claimed? _____
- 13) How much of the cost incurred was covered by your insurance? _____
- 14) If there was any, what was your out-of-pocket expenditure for the same? _____
33. After joining the health care service, when did you first purchase your health insurance policy? 1. < 1 year ago 2. 1-5 years ago 3. > 5 years ago 4. >10 years ago
34. Did you incur any catastrophic health care expenses in the last one year?
1. Yes /2. No
35. Did you borrow a loan from your family/friends for health care expenses in the last one year? 1. Yes / 2. No
36. Did you mortgage/sell any land / property for health expenses in the last one year?
1. Yes / 2. No
37. What difficulties did you come across with the insurance provider while availing the service (insurance claim)?
1) Delayed reimbursement 2) Reduced claim amount 3) Rejected claim
4) Long process time to avail the service 5) Others, specify_____

38. Did you have health insurance policy last year and discontinue this year? 1. Yes /
2. No

If yes, then what was the reason for discontinuation?

- 1) Delayed reimbursement 2) Rejected claim 3) Faulty records
maintenance 4) Unutilized service 5) Others, specify _____

39. Do you have any life insurance scheme? 1. Yes / 2. No

If yes, mention the name of your insurer company _____

Mention the premium paid last year _____ and insured amount _____

V. PERFORMANCE SCORES

33. Has there been any improvement in quality of delivery of health care services to the beneficiary (if enrolled for health insurance for > 1 year and availed the service before)? 1. Yes 2. No 3. Don't know

34. Grade your opinion regarding the following, if you have used health insurance scheme in the preceding year, by encircling the appropriate option-

(1. Excellent, 2. Good, 3. Fair, 4. Poor, 5. Very poor)

- | | |
|----------------------------------|-------------------|
| 1) Coverage | 1 / 2 / 3 / 4 / 5 |
| 2) Time taken for reimbursement | 1 / 2 / 3 / 4 / 5 |
| 3) Any cashless benefit | 1 / 2 / 3 / 4 / 5 |
| 4) Customer service | 1 / 2 / 3 / 4 / 5 |
| 5) Support for redressal | 1 / 2 / 3 / 4 / 5 |
| 6) Ease of access | 1 / 2 / 3 / 4 / 5 |
| 7) Ease of utilization of scheme | 1 / 2 / 3 / 4 / 5 |
| 8) Overall experience | 1 / 2 / 3 / 4 / 5 |

35. Suggestions for improvement in service delivery by different Health insurance schemes-

- 1) _____
2) _____
3) _____

-----THANK YOU-----

ANNEXURE - III

KEY TO MASTERCHARTI A. Socio-demographic details:

A - Serial Number

B - Age in years:

- | | |
|----------|----------|
| 1) 20-30 | 2) 30-40 |
| 3) 40-50 | 4) 50-60 |

C - Gender :

- | | |
|---------|-----------|
| 1) Male | 2) Female |
|---------|-----------|

D - Area of residence:

- | | |
|----------|----------|
| 1) Rural | 2) Urban |
|----------|----------|

E - PHC/UHC:

- | | |
|-------------------|--------------------------|
| 1) PHC Kinaye | 2) PHC Vantamuri (rural) |
| 3) UHC Ashoknagar | 4) UHC Rukmininagar |
| 5) UHC Ramnagar | |

F - Occupation:

- | | | |
|------------------------------|-------------------|-------------------|
| 1) ASHA worker | 2) AWW | 3) ANM |
| 4) Lady Health Visitor (LHV) | 5) Nurse | 6) Pharmacist |
| 7) Clerk | 8) Lab technician | 9) Group-D worker |
| 10) Male health worker | 11) Support Staff | |

G - Duration of service in health care:

- | | |
|----------------|----------------|
| 1) 1-10 years | 2) 10-20 years |
| 3) 20-30 years | 4) 30-40 years |

H - Religion:

- | | | | |
|----------|-----------|--------------|---------|
| 1) Hindu | 2) Muslim | 3) Christian | 4) Jain |
|----------|-----------|--------------|---------|

I - Category:

- | | | | |
|-------|-------|--------|-----------|
| 1) SC | 2) ST | 3) OBC | 4) Others |
|-------|-------|--------|-----------|

J - Education status (maximum schooling):

- | | | |
|------------------------|-----------------|---------------|
| 1) No formal schooling | 2) Class 1-5 | 3) Class 6-10 |
| 4) PUC/ Diploma | 5) Graduate /PG | |

K - Marital status:

- | | |
|-------------------|-------------------------|
| 1) Married | 2) Unmarried |
| 3) Widow /Widower | 4) Divorcee / Separated |

L - Type of family:

- | | |
|------------|----------|
| 1) Nuclear | 2) Joint |
|------------|----------|

M - Socio economic status (Modified B G Prasad's classification):

- | | | | | |
|------------|-------------|--------------|-------------|------------|
| 1) Class I | 2) Class II | 3) Class III | 4) Class IV | 5) Class V |
|------------|-------------|--------------|-------------|------------|

N - Do you have a BPL Ration Card?

- | | |
|--------|-------|
| 1) Yes | 2) No |
|--------|-------|

I B. Personal and family medical history**17. Habits:**

- | | | |
|-------------------------|--------|-------|
| O - Smoking | 1) Yes | 2) No |
| P - Alcohol consumption | 1) Yes | 2) No |
| Q - Tobacco consumption | 1) Yes | 2) No |
| R - Illicit drug abuse | 1) Yes | 2) No |

18. Any chronic medical illness:

- | | | |
|-----------------------------|--------|-------|
| S - Diabetes | 1) Yes | 2) No |
| T - Hypertension | 1) Yes | 2) No |
| U - Cardio-vascular disease | 1) Yes | 2) No |
| V - Rheumatoid arthritis | 1) Yes | 2) No |
| W - COPD | 1) Yes | 2) No |
| X - Others | 1) Yes | 2) No |

Y - Diabetes	1) Yes	2) No
Z - Hypertension	1) Yes	2) No
AA - Cardio-vascular disease	1) Yes	2) No
AB - Rheumatoid arthritis	1) Yes	2) No
AC - COPD	1) Yes	2) No
AD - Others	1) Yes	2) No

1) Yes 2) No

1) <1 year ago 2) 1-5 years ago 3) >5 years ago

1) Fellow health care workers	2) Family and friends	3) TV
4) Radio	5) Newspapers	6) Insurance agents
7) Government circulars / orders	8) Others	

AI - Individual coverage	1) Yes	2) No
AJ - Dependents' coverage	1) Yes	2) No
AK - Full family coverage	1) Yes	2) No
AL - Employer provided	1) Yes	2) No
AM - Central Govt / State Govt	1) Yes	2) No
AN - Disease specific (COVID-19)	1) Yes	2) No

1) Yes 2) No

III. Attitude / Perception towards health insurance:

AP - Would you prefer to opt health insurance scheme?

- 1) Yes 2) No 3) Don't know

27. What do you prefer while choosing insurance scheme?

- | | | |
|-----------------------|--------|-------|
| AQ - Medications | 1) Yes | 2) No |
| AR - IPD admissions | 1) Yes | 2) No |
| AS - Investigations | 1) Yes | 2) No |
| AT - Procedures | 1) Yes | 2) No |
| AU - Transit coverage | 1) Yes | 2) No |

AV - What factors do you consider while choosing a health insurance scheme?

- | | | |
|---------------|---------------|--------------------------|
| 1) Premium | 2) Coverage | 3) Ease of reimbursement |
| 4) Popularity | 5) Don't know | |

AW - Has the COVID-19 pandemic influenced you to opt health insurance?

- 1) Yes 2) No

30. Perception of your health insurance service:

(1. Strongly agree, 2. Agree, 3. Neither agree/disagree, 4. Disagree, 5. Strongly disagree)

- | | |
|---|----------------------|
| AX - Does it take care of your health expenses? | 1. / 2. /3. /4. / 5. |
| AY - Does it ease the access to health care? | 1. / 2. /3. /4. / 5. |
| AZ - Does it subsidize the health services? | 1. / 2. /3. /4. / 5. |
| BA - Is it associated with increased health seeking behaviour? | 1. / 2. /3. /4. / 5. |
| BB - Does it alleviate poverty resulting from health care expenses? | 1. / 2. /3. /4. / 5. |
| BC - Does it include free health services / screening? | 1. / 2. /3. /4. / 5. |

BD - What is your preference of mode of seeking health insurance?

- 1) Offline 2) Online

BP - How much of the health expenses was covered by insurance?

- | | | |
|-----------|------------|-----------|
| 1) 0% | 2) < 25% | 3) 25-50% |
| 4) 50-75% | 5) 75-100% | 6) 100% |

BQ - Was there any out-of-pocket expenditure (in rupees)?

- | | | |
|--------------|--------------|--------------|
| 1) 0 | 2) < 1 lakh | 3) 1-2 lakhs |
| 4) 2-5 lakhs | 5) > 5 lakhs | |

BR - When did you first purchase your health insurance policy?

- | | |
|------------------|------------------|
| 1) < 1 year ago | 2) 1-5 years ago |
| 3) > 5 years ago | 4) >10 years ago |

BS - Did you incur any catastrophic health care expenses in the last one year?

- | | |
|--------|-------|
| 1) Yes | 2) No |
|--------|-------|

BT - Did you borrow a loan from your family/friends for health care expenses in the last one year?

- | | |
|--------|-------|
| 1) Yes | 2) No |
|--------|-------|

BU - Did you mortgage/sell any land / property for health expenses in the last one year?

- | | |
|--------|-------|
| 1) Yes | 2) No |
|--------|-------|

BV – Did you face any difficulties faced while claiming insurance?

- | | | |
|--------------------------|-------------------------|-------------------|
| 1) Delayed reimbursement | 2) Reduced claim amount | 3) Rejected claim |
| 4) Tedious process | 5) None | |

BW - Did you have health insurance policy last year and discontinue this year?

- | | |
|--------|-------|
| 1) Yes | 2) No |
|--------|-------|

BX - Reason for discontinuation of health insurance policy?

- | | |
|-------------------------------|-----------------------|
| 1) Delayed reimbursement | 2) Rejected claim |
| 3) Faulty records maintenance | 4) Unutilized service |

BY - Do you have any life insurance scheme?

- | | |
|--------|-------|
| 1) Yes | 2) No |
|--------|-------|

BZ – If yes, what is the name of your life insurance provider?

- | | |
|--------|----------|
| 1) LIC | 2) ICICI |
|--------|----------|

ANNEXURE - IV MASTER CHART

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]