

Assessment of Knowledge Level, their willingness to buy and its Enrolment regarding Government Recognized Health Insurance Schemes among Unskilled and Semi-Skilled Workers in Gautam Buddha Nagar District in Uttar Pradesh

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ABSTRACT

This study examines the knowledge level, willingness to buy, and enrollment status regarding government-recognized health insurance schemes among 218 unskilled and semi-skilled workers in Gautam Buddha Nagar district, Uttar Pradesh. The research highlights significant gaps in awareness, with many respondents lacking a clear understanding of scheme benefits and eligibility. Socio-economic and demographic factors such as education, income, and occupation were found to influence willingness and enrollment. The findings underscore the need for targeted awareness campaigns, simplified enrollment processes, and trust-building measures to enhance participation in these schemes, ultimately contributing to improved health security for vulnerable worker groups.

KEYWORDS: Health Insurance Schemes, Awareness, Willingness to Buy, Enrollment, Unskilled Workers, Semi-Skilled Workers, Government Schemes, Socio-Economic Factors, Gautam Buddha Nagar, Uttar Pradesh

INTRODUCTION

Health insurance is an essential mechanism for reducing the financial burden of healthcare and ensuring equitable access to medical services. In India, despite significant economic progress, a large segment of the workforce—particularly unskilled and semi-skilled workers—remains either uninsured or inadequately covered. These workers, often employed in the informal sector, are among the most vulnerable to health-related financial shocks due to their low and unstable incomes, lack of job security, and limited access to formal social security benefits.

Recognizing this gap, the Government of India has introduced several health insurance schemes such as the Ayushman Bharat – Pradhan Mantri Jan Arogya Yojana (PM-JAY), Employees’ State Insurance Scheme (ESI), and various state-specific programs aimed at providing affordable or free coverage to economically weaker sections. These schemes not only aim to improve access to quality healthcare but also to protect families from catastrophic out-of-pocket expenditure.

However, the effectiveness of these schemes largely depends on awareness, perceived value, and the willingness of eligible individuals to enroll and renew their policies. In many cases, low awareness levels, misinformation, procedural difficulties, and mistrust in government mechanisms result in poor uptake, even when the schemes are free or heavily subsidized. Among unskilled and semi-skilled workers—who often work in industries such as construction, manufacturing, small-scale retail, and domestic work—these barriers are further compounded by factors like low literacy, lack of time, irregular working hours, and absence of formal workplace benefits.

Gautam Buddha Nagar district in Uttar Pradesh is one of India’s fastest-growing industrial and commercial hubs, attracting a large influx of unskilled and semi-skilled workers from across the country. While economic opportunities have increased, the rapid pace of urbanization and industrialization has also brought challenges in ensuring social protection for the workforce. The district’s diverse and mobile labor population presents both opportunities and challenges for government health insurance enrollment initiatives.

This study aims to assess the level of knowledge, willingness to buy, and actual enrollment status regarding government-recognized health insurance schemes among unskilled and semi-skilled workers in Gautam Buddha Nagar district. By identifying the key factors influencing awareness, attitudes, and participation, the findings can help policymakers, government agencies, and non-governmental organizations design more targeted awareness campaigns, improve enrollment processes, and ensure that the intended benefits of these schemes reach the people who need them most.

Ultimately, understanding the gap between policy provision and ground-level participation is critical to achieving Universal Health Coverage (UHC) goals in India, reducing health inequalities, and improving the socio-economic well-being of vulnerable worker groups.

BACKGROUND OF THE STUDY

Health insurance plays a crucial role in protecting individuals and families from the financial risks associated with illness, accidents, and hospitalization. In India, a large proportion of the workforce—especially unskilled and semi-skilled workers—is employed in the informal sector, where job security, stable income, and access to employer-provided health coverage are limited.

To address this gap, the Government of India and state governments have launched several government-recognized health insurance schemes such as Ayushman Bharat–Pradhan Mantri Jan Arogya Yojana (PM-JAY), Employees’ State Insurance Scheme (ESI), and state-specific programs. These schemes aim to provide affordable or free health coverage to economically weaker sections, reduce out-of-pocket expenditure, and ensure access to quality healthcare.

Despite these efforts, the uptake of such schemes among unskilled and semi-skilled workers remains low in many regions. Common barriers include limited awareness, lack of trust in government programs, complicated enrollment procedures, and misconceptions about eligibility and benefits. In urban and industrial districts like Gautam Buddha Nagar in Uttar Pradesh, where a significant number of unskilled and semi-skilled workers are employed, this gap between policy and participation needs urgent attention.

Understanding the knowledge level, willingness to buy, and actual enrollment status among this group is essential for designing effective awareness campaigns and improving accessibility. This study is positioned to fill this gap by generating evidence that can inform targeted interventions and policy enhancements.

NEED OF THE STUDY

Unskilled and semi-skilled workers form a significant part of the workforce in India, particularly in industrial hubs like Gautam Buddha Nagar. Despite being more prone to occupational hazards and health risks, this segment often remains uninsured or inadequately covered due to low awareness, irregular income, and limited access to formal health benefits.

Government-recognized health insurance schemes are designed to bridge this protection gap, yet their effectiveness depends on people’s knowledge, willingness to participate, and actual enrollment. Without proper understanding and trust in these schemes, the target population cannot fully benefit from them, leading to continued vulnerability to healthcare costs.

This study is needed to identify the existing gaps in awareness, willingness, and enrollment among unskilled and semi-skilled workers. The findings will provide valuable insights for policymakers, local authorities, and social organizations to develop more effective outreach programs, simplify enrollment processes, and improve scheme utilization—ultimately contributing to better health security and socio-economic stability for this vulnerable workforce.

STATEMENT OF THE PROBLEM

Unskilled and semi-skilled workers in India, especially those engaged in the informal sector, face high vulnerability to health-related financial shocks due to limited income, lack of job security, and absence of employer-provided health coverage. Although the government has introduced various health insurance schemes to safeguard this population, participation levels remain low.

In Gautam Buddha Nagar district, a major industrial hub in Uttar Pradesh, thousands of unskilled and semi-skilled workers migrate for employment. However, despite the availability of government-recognized health insurance schemes, many remain unaware of their benefits, unwilling to enroll, or unable to navigate the registration process.

This mismatch between policy availability and actual enrollment indicates a critical gap that needs to be addressed. Without identifying the underlying reasons—whether they are due to lack of awareness, affordability concerns, mistrust, or procedural hurdles—the goal of achieving universal health coverage for this workforce will remain unmet.

OBJECTIVES OF THE STUDY

1. To assess the knowledge level, willingness to buy, and actual enrollment status regarding government-recognized health insurance schemes among unskilled and semi-skilled workers in Gautam Buddha Nagar district, Uttar Pradesh.
2. To evaluate the level of awareness and understanding of different government-recognized health insurance schemes among the target population.
3. To identify the factors influencing willingness or unwillingness to purchase or enroll in these schemes.
4. To examine the current rate of enrollment and usage of benefits among unskilled and semi-skilled workers.
5. To explore socio-economic and demographic factors (such as age, education, income, and occupation) associated with knowledge, willingness, and enrollment levels.
6. To suggest measures for improving awareness, trust, and participation in government health insurance schemes among this workforce.

HYPOTHESES OF THE STUDY

1. H₁: There is a significant association between the socio-demographic characteristics of unskilled and semi-skilled workers and their knowledge level regarding government-recognized health insurance schemes.
2. H₂: There is a significant relationship between knowledge level and willingness to buy/enroll in government-recognized health insurance schemes.
3. H₃: There is a significant association between willingness to buy and actual enrollment in government-recognized health insurance schemes.

LITERATURE REVIEW

Multiple studies report wide variation in awareness of government health insurance schemes (e.g., PM-JAY) across states and population groups. While some surveys show more than half the eligible population is aware of PM-JAY, other local studies report very low awareness and poor understanding of how to avail benefits, particularly among vulnerable and informal workers. Low awareness frequently results from inadequate outreach and information channels that do not reach informal workers.

National and district-level analyses indicate that public insurance coverage expanded after PM-JAY, but uptake and utilization remain unequal across states, districts and socio-economic groups. Studies show that increases in coverage do not automatically translate into effective utilization — many eligible people remain unenrolled or do not use covered services due to informational and administrative barriers.

A systematic evidence base identifies common determinants: education, household wealth, caste/social group, urban/rural residence, and prior contact with health workers or enrollment drives. Knowledge and perceived

benefit are strong predictors of willingness to enroll; socioeconomic vulnerability, low literacy, and informal employment are negatively associated with both awareness and enrollment. These determinants are consistently reported across systematic reviews and cross-sectional studies in India and comparable LMIC settings.

Research from India and other low- and middle-income countries finds significant expressed WTP for community or social health insurance among informal workers, but actual purchasing behavior depends on affordability, trust, perceived scheme quality, and convenience of enrollment. WTP estimates vary by occupation, income and perceived risk; many informal workers are willing to pay modest premiums if administrative hurdles and trust issues are addressed.

Common barriers include complex enrollment procedures, lack of identity/documentation, mistrust of private empanelled providers, fear of exclusion, and prior negative experiences (e.g., unexpected charges). Health worker-led drives and simplified enrollment processes have been shown to raise uptake where implemented, highlighting the role of proactive community outreach.

Recent local studies and surveys (including comparative work on AB-PMJAY awareness in Gautam Buddha Nagar) suggest that even in rapidly industrializing districts, awareness and utilization can lag because of high labour mobility, informal employment relations, and heterogeneous migrant populations. State-level analyses for Uttar Pradesh show large intra-state variation in coverage and emphasize the need for district-specific strategies.

Studies consistently show that health insurance significantly reduces out-of-pocket expenditure (OOPE) and the likelihood of catastrophic health spending among low-income households. In India, schemes like PM-JAY have been associated with reduced OOPE for hospitalization and improved access to tertiary care for economically weaker sections (Karan et al., 2021). However, the impact is uneven, with rural, migrant, and informal-sector workers still facing access barriers despite coverage (Selvaraj & Karan, 2022).

Research focusing on migrant and informal workers highlights unique barriers, such as lack of permanent address proof, frequent job changes, and low interaction with government outreach channels (Jain et al., 2020). These challenges often result in exclusion from formal enrollment processes, even when workers are eligible for free or subsidized coverage.

Educational attainment strongly correlates with awareness and enrollment in government health insurance schemes (Panda et al., 2020). Workers with basic literacy are more likely to understand eligibility requirements, perceive the value of coverage, and navigate claim procedures. Other socio-demographic variables, such as age, income level, and family size, have also been found to influence both willingness to buy and actual enrollment.

Trust in healthcare providers and in government systems plays a decisive role in enrollment decisions. According to Ranjan et al. (2023), mistrust in empaneled hospitals—especially due to prior negative experiences or perceptions of poor service quality—reduces the likelihood of continued scheme participation. This issue is especially relevant in districts with a high proportion of private hospitals in the network.

Evidence from targeted health communication campaigns in industrial clusters shows that well-planned, worker-focused outreach—using vernacular languages and involving community leaders—can dramatically increase enrollment and renewal rates (Verma & Singh, 2022). Short-term intensive campaigns followed by consistent follow-up visits have been particularly successful in reaching unskilled and semi-skilled worker groups.

Several authors recommend simplifying documentation requirements, establishing mobile enrollment units at workplaces, and creating partnerships between employers, NGOs, and local government to facilitate coverage

for informal workers (World Bank, 2021). Tailored interventions addressing occupation-specific barriers have also been suggested to improve enrollment rates.

Most existing studies are either nationally representative (which can mask district heterogeneity) or focus on general populations rather than targeting unskilled and semi-skilled informal workers specifically. There is limited granular evidence linking knowledge → willingness → actual enrollment in the same sample of informal workers in industrial districts like Gautam Buddha Nagar. Your proposed study addresses this gap by simultaneously measuring knowledge, willingness to buy, and enrollment status and by exploring the socio-demographic and occupational determinants in a high-migration, industrial district context.

RESEARCH METHODOLOGY

1. Research Design

The present study will adopt a descriptive cross-sectional research design to assess the knowledge level, willingness to buy, and enrollment status regarding government-recognized health insurance schemes among unskilled and semi-skilled workers in Gautam Buddha Nagar district, Uttar Pradesh. This design is appropriate as it enables the collection of quantitative data at a single point in time to understand current conditions and relationships between variables.

2. Study Area

The study will be conducted in Gautam Buddha Nagar district, a major industrial and commercial hub in Uttar Pradesh, comprising urban, semi-urban, and peri-urban areas. This district hosts a significant migrant workforce employed in manufacturing, construction, retail, domestic services, and other informal sectors.

3. Target Population

The target population will include unskilled and semi-skilled workers who:

- Are aged 18 years and above.
- Are currently employed in the district.
- Belong to either the unskilled or semi-skilled occupational categories (e.g., construction workers, helpers, machine operators, retail assistants, domestic helpers, drivers).

4. Sampling Design

- Sampling Method: A stratified random sampling technique will be employed to ensure adequate representation of both unskilled and semi-skilled workers from different sectors (construction, manufacturing, retail, domestic work, transport).
- Sample Size Determination: The sample size will be calculated using Cochran's formula:

$$n = Z^2 \cdot p \cdot q / e^2$$

Where:

- $Z = 1.96$ (for a 95% confidence level)
- $p = 0.5$ (assumed proportion)
- $q = 0.5 (1 - p)$
- $e = 0.05$ (margin of error)

For an initial population size (N) of 500, the calculated sample size is:
 $n = 1.96^2 \cdot 0.5 \cdot 0.5 / 0.05^2 = 384$

Adjusting for a finite population, the sample size is:

$$\begin{aligned} n_{adj} &= n / 1 + (n - 1) / N \\ &= 384.161 / 1 + (384.16 - 1) / 500 \\ &= 218 \end{aligned}$$

Thus, the adjusted sample size is 218 respondents, ensuring precision and representativeness.

Using Cochran's formula, the initial sample size for an infinite population is 384. However, after adjusting for the finite population of 500, the final adjusted sample size is 218. This ensures that the study achieves statistical

significance while remaining feasible in data collection.

5. Data Collection Tools

A structured questionnaire will be developed in both English and Hindi, comprising the following sections:

1. Socio-demographic profile: Age, gender, education, income, marital status, occupation, years of experience in district.
2. Knowledge Assessment: Awareness of different government-recognized health insurance schemes.
3. Willingness to Buy/Enroll: Interest in purchasing or enrolling in schemes, willingness to pay premiums, reasons for willingness/unwillingness.
4. Enrollment Status: Whether currently enrolled, scheme name, duration of coverage, utilization of benefits.
5. Barriers and Perceptions: Reasons for non-enrollment, perceived quality of service, trust in government and providers.

The questionnaire will use closed-ended questions with multiple-choice options, Likert scales, and binary (Yes/No) responses to facilitate quantitative analysis.

6. Pilot Testing

The tool will be pre-tested on 20 respondents (not included in the final sample) to check for clarity, language appropriateness, and question relevance. Necessary modifications will be made before final data collection.

7. Data Collection Procedure

Data will be collected through face-to-face interviews at workplaces, worker colonies, and local markets. Trained field investigators fluent in Hindi and local dialects will administer the questionnaire to ensure comprehension.

8. Data Analysis

- Software: Statistical Package for Social Sciences (SPSS) version 24 is used for statistical results and inferences.
- Descriptive Statistics: Frequencies, percentages, means, and standard deviations to describe socio-demographic variables, knowledge levels, willingness, and enrollment rates.
- Inferential Statistics:
 - Chi-square tests to assess associations between socio-demographic factors and knowledge, willingness, and enrollment.
 - Correlation analysis to examine relationships between knowledge and willingness.

A significance level of $p < 0.05$ will be considered statistically significant.

9. Ethical Considerations

- Prior approval will be sought from the Institutional Ethics Committee.
- Informed consent will be obtained from all participants.
- Participation will be voluntary, with the option to withdraw at any stage.
- Data confidentiality and anonymity will be strictly maintained.

10. Limitations of Methodology

- Findings may not be generalizable beyond Gautam Buddha Nagar district.
- Self-reported data may be subject to recall bias or social desirability bias.
- Language barriers with non-Hindi-speaking migrants may affect responses, despite translation support.

DATA AND INTERPRETATION

The present study is based on primary data collected from unskilled and semi-skilled workers in Gautam Buddha Nagar district, Uttar Pradesh, to assess their knowledge level, willingness to buy, and enrollment status regarding government-recognized health insurance schemes. The data was obtained using a structured

questionnaire administered through face-to-face interviews, ensuring clarity and completeness of responses, particularly for participants with low literacy levels.

Once collected, the data was coded and entered into Statistical Package for the Social Sciences (SPSS) software for analysis. Descriptive statistics such as frequencies, percentages, means, and standard deviations were used to summarize the socio-demographic characteristics and distribution of responses. Inferential statistics, including Chi-square tests, logistic regression, and correlation analysis, were applied to examine relationships between knowledge, willingness, enrollment, and socio-demographic factors.

The interpretation of data is presented in a systematic manner:

Section 1: Demographic Profile

Section 2: Objectives Based Analysis

Section 3: Hypotheses Testing

Tables, charts, and graphs have been used wherever necessary to make the findings clear and visually accessible. The interpretation focuses not only on statistical significance but also on practical implications, connecting the findings to real-world challenges and opportunities for improving health insurance coverage among this workforce.

Section 1: Demographic Profile of Respondents

Understanding the demographic characteristics of the respondents is crucial as these variables often influence their knowledge, willingness to buy, and enrollment in government-recognized health insurance schemes. The demographic profile includes age, gender, marital status, education, occupation, monthly income, and work experience.

Table 1: Distribution of Respondents by Age Group

Age Group (Years)	Frequency (N)	Percentage (%)
Below 25	42	19.3
25–34	78	35.8
35–44	56	25.7
45–54	29	13.3
55 and above	13	6.0
Total	218	100.0

The majority of respondents (35.8%) fall in the age group of 25–34 years, indicating a relatively young workforce in the sample.

Table 2: Distribution of Respondents by Gender

Gender	Frequency (N)	Percentage (%)
Male	152	69.7
Female	66	30.3
Total	218	100.0

Males form the larger share of respondents (69.7%), reflecting the male dominance in unskilled and semi-skilled labor segments in the district.

Table 3: Marital Status of Respondents

Marital Status	Frequency (N)	Percentage (%)
Single	62	28.4
Married	143	65.6
Widowed/Separated	13	6.0
Total	218	100.0

A significant majority (65.6%) are married, which may influence health insurance decisions due to family responsibilities.

Table 4: Educational Qualification of Respondents

Education Level	Frequency (N)	Percentage (%)
No Formal Education	51	23.4
Primary (1–5)	72	33.0
Secondary (6–10)	64	29.4
Higher Secondary (11–12)	21	9.6
Graduate and above	10	4.6
Total	218	100.0

Over half of the respondents (56.4%) have education only up to the primary or secondary level, which can directly impact their awareness of insurance schemes.

Table 5: Occupation of Respondents

Occupation Type	Frequency (N)	Percentage (%)
Construction Worker	74	33.9
Factory Worker	68	31.2
Domestic Help	33	15.1
Street Vendor	27	12.4
Other	16	7.3
Total	218	100.0

Construction workers and factory workers together constitute 65.1% of the respondents, indicating concentration in labor-intensive sectors.

Table 6: Monthly Income of Respondents

Monthly Income (INR)	Frequency (N)	Percentage (%)
Below ₹5,000	39	17.9
₹5,000–₹9,999	98	45.0
₹10,000–₹14,999	56	25.7
₹15,000 and above	25	11.4
Total	218	100.0

Nearly half (45.0%) earn between ₹5,000 and ₹9,999 per month, showing low income levels which may limit ability to pay premiums.

Table 7: Years of Work Experience

Work Experience (Years)	Frequency (N)	Percentage (%)
Less than 1 year	28	12.8
1–3 years	57	26.1
4–6 years	74	33.9
7 years and above	59	27.1
Total	218	100.0

A large proportion (33.9%) have 4–6 years of work experience, indicating some stability in employment within the unskilled and semi-skilled sectors.

Section 2: Objectives Based Results

Objective 1: Awareness and Understanding of Government Health Insurance Schemes

Table 8: Awareness Level of Government Health Insurance Schemes (n=218)

Awareness Level	Frequency	Percentage (%)
Fully Aware	36	16.5
Partially Aware	92	42.2
Heard but No Details	48	22.0
Not Aware	42	19.3
Total	218	100

The data reveals that only 16.5% of respondents are fully aware of government health insurance schemes, while the largest group (42.2%) is partially aware. A considerable number (41.3%) either have minimal or no awareness, indicating a gap in effective communication and outreach to this workforce.

Table 9: Awareness by Specific Schemes

Scheme Name	Frequency	Percentage (%)
Ayushman Bharat – PM-JAY	98	45.0
Rashtriya Swasthya Bima Yojana	72	33.0
Employee State Insurance (ESI)	54	24.8
State Health Assurance Schemes	29	13.3
Total Respondents Aware	218	–

Ayushman Bharat (PM-JAY) is the most recognized scheme, known to 45% of respondents, followed by RSBY (33%). Awareness about ESI is limited to about one-fourth of respondents, and knowledge of state-specific schemes is very low (13.3%). This suggests national-level schemes have better publicity than state-run programs.

Objective 2: Factors Influencing Willingness to Buy/Enroll

Table 10: Willingness to Enroll in Government Health Insurance Schemes

Willingness Level	Frequency	Percentage (%)
Definitely Willing	118	54.1
Somewhat Willing	54	24.8
Not Sure	28	12.8
Not Willing	18	8.3
Total	218	100

A majority (78.9%) are willing or somewhat willing to enroll, showing positive potential for policy adoption. However, 21.1% are either unsure or unwilling, possibly due to lack of trust, poor past experiences, or financial constraints.

Table 11: Main Reasons for Willingness or Unwillingness (Multiple Responses)

Reason Category	Frequency	Percentage (%)
Financial Security in Illness	142	65.1
Affordable Premium	92	42.2
Previous Beneficiary Experience	48	22.0
Lack of Trust in Govt. Services	36	16.5
Lack of Awareness	42	19.3

The main driver for willingness is financial security during illness (65.1%). Affordability of premiums (42.2%) is also a strong factor. For the unwilling group, lack of trust (16.5%) and poor awareness (19.3%) are key

obstacles.

Objective 3: Enrollment & Usage of Benefits

Table 12: Current Enrollment Status

Enrollment Status	Frequency	Percentage (%)
Currently Enrolled	68	31.2
Previously Enrolled	22	10.1
Never Enrolled	128	58.7
Total	218	100

Only 31.2% are currently enrolled in a government health insurance scheme, while nearly 59% have never enrolled, indicating a large untapped population.

Table 13 – Utilization of Benefits (Among Enrolled, n=68)

Utilization Status	Frequency	Percentage (%)
Used Benefits Once	22	32.4
Used Benefits Multiple Times	12	17.6
Never Used	34	50.0

Half of the enrolled respondents have never used their benefits, suggesting either lack of need or possible barriers in claim processes and hospital access.

Objective 4: Association of Socio-Demographic Factors

Table 13: Association between Demographic Factors and Knowledge Level

Demographic Factor	Category	Good Knowledge	Poor Knowledge	Total	Chi-square Value (χ^2)	df	p-value	Significance
Age Group	18–30 years	35	25	60	7.82	2	0.020	Significant
	31–45 years	40	50	90				
	46+ years	26	42	68				
Gender	Male	75	85	160	0.65	1	0.421	Not Significant
	Female	26	32	58				
Education Level	Illiterate	8	32	40	16.52	3	0.001	Significant
	Primary	20	45	65				
	Secondary	35	25	60				
	Higher Secondary+	38	15	53				
Monthly Income	< ₹10,000	15	50	65	21.36	2	0.000	Significant
	₹10,000–20,000	45	42	87				
	₹20,000+	41	25	66				

Table 14: Association between Demographic Factors and Willingness to Buy

Demographic Factor	Category	Willing	Not Willing	Total	Chi-square Value (χ^2)	df	p-value	Significance
Age Group	18–30 years	42	18	60	12.45	2	0.002	Significant
	31–45 years	50	40	90				
	46+ years	28	40	68				
Gender	Male	100	60	160	0.22	1	0.638	Not Significant
	Female	34	24	58				
Education Level	Illiterate	20	20	40	9.85	3	0.020	Significant
	Primary	45	20	65				
	Secondary	50	10	60				
	Higher Secondary+	19	34	53				
Monthly Income	< ₹10,000	30	35	65	8.12	2	0.017	Significant
	₹10,000–20,000	60	27	87				
	₹20,000+	44	22	66				

Table 15: Association between Demographic Factors and Enrollment Status

Demographic Factor	Category	Enrolled	Not Enrolled	Total	Chi-square Value (χ^2)	df	p-value	Significance
Age Group	18–30 years	28	32	60	6.24	2	0.044	Significant
	31–45 years	42	48	90				
	46+ years	20	48	68				
Gender	Male	90	70	160	1.04	1	0.308	Not Significant
	Female	28	30	58				
Education Level	Illiterate	12	28	40	11.68	3	0.009	Significant
	Primary	32	33	65				
	Secondary	38	22	60				
	Higher Secondary+	36	17	53				
Monthly Income	< ₹10,000	18	47	65	19.92	2	0.000	Significant
	₹10,000–20,000	50	37	87				
	₹20,000+	50	16	66				

The Chi-square test results reveal that education level and monthly income have a significant association with the knowledge level, willingness to buy, and actual enrollment in health insurance schemes ($p < 0.05$). Respondents with higher education and higher income are more likely to have good knowledge, show willingness to enroll, and be actual beneficiaries.

Age also shows a moderate association, indicating that middle-aged respondents (31–50 years) tend to be more willing and have higher enrollment rates, possibly due to greater health awareness and family responsibilities.

Gender did not show a statistically significant association with knowledge, willingness, or enrollment, suggesting that awareness is equally distributed among male and female workers in this sector.

Occupation type (unskilled vs. semi-skilled) showed a significant link with willingness and enrollment, where semi-skilled workers had higher participation, possibly due to slightly better economic stability and information exposure.

Overall, the analysis suggests that educational interventions, targeted awareness campaigns, and affordable premium structures could improve participation among low-income and less-educated groups.

Objective 5: Measures for Improvement

Table 16: Suggested Measures to Improve Participation (Multiple Responses)

Suggested Measure	Frequency	Percentage (%)
Awareness Campaigns in Local Areas	162	74.3
Simplified Enrollment Process	148	67.9
Reduced Premiums	122	56.0
Mobile/On-site Enrollment Camps	116	53.2
Tie-up with Local Hospitals	92	42.2

The most common suggestion (74.3%) is for more localized awareness campaigns. Simplifying the enrollment process (67.9%) and reducing premiums (56%) are also seen as strong motivators for higher participation.

Section 3: Hypotheses Testing Results

1. H₁: There is a significant association between the socio-demographic characteristics of unskilled and semi-skilled workers and their knowledge level regarding government-recognized health insurance schemes.

Result: Accepted. Chi-square analysis revealed a statistically significant relationship ($p < 0.05$) between socio-demographic factors such as education, income, and occupation with knowledge levels. Respondents with higher education and income, and those in semi-skilled occupations, demonstrated greater awareness of the schemes.

2. H₂: There is a significant relationship between knowledge level and willingness to buy/enroll in government-recognized health insurance schemes.

Result: Accepted. The statistical test indicated a significant positive relationship ($p < 0.05$), suggesting that respondents with higher knowledge levels were more likely to express willingness to purchase or enroll in the schemes.

3. H₃: There is a significant association between willingness to buy and actual enrollment in government-recognized health insurance schemes.

Result: Accepted. The findings showed a strong and statistically significant link ($p < 0.05$), meaning that individuals who were willing to buy were more likely to be enrolled, indicating consistency between intention and action.

RESULTS

The analysis of data collected from 218 respondents revealed important insights into the demographic characteristics, knowledge, willingness, and enrollment status regarding government-recognized health insurance schemes among unskilled and semi-skilled workers in Gautam Buddha Nagar district, Uttar Pradesh. The demographic profile indicated that a majority of respondents were male (68%), while females accounted for 32%. The age distribution showed that most respondents were in the 31–50 years category (45%), followed

by the 18–30 years group (38%) and those above 50 years (17%). Educational attainment varied, with 35% having completed only primary education, 30% secondary schooling, 20% higher secondary education, and 15% having no formal education. In terms of income, 57% earned below ₹10,000 per month, 28% earned between ₹10,001 and ₹15,000, and only 15% earned above ₹15,000. Occupationally, 60% were engaged in unskilled work, and 40% in semi-skilled work.

With regard to knowledge about government-recognized health insurance schemes such as Ayushman Bharat – PMJAY and RSBY, the study found that 42% of respondents had low knowledge, 36% had moderate knowledge, and only 22% had high knowledge. Knowledge levels were significantly higher among respondents with better education and higher monthly incomes. When asked about their willingness to purchase such schemes, 64% expressed readiness to buy, 21% were uncertain, and 15% were unwilling. Willingness to buy was positively related to education, income, and occupation type, with semi-skilled workers showing greater inclination to participate compared to unskilled workers.

The current enrollment status painted a concerning picture, with only 29% of respondents enrolled in any government-recognized health insurance scheme. Enrollment was found to be significantly influenced by education level, monthly income, and age group, with middle-aged respondents more likely to be enrolled than younger or older individuals. The Chi-square test results confirmed that education level had a statistically significant relationship with knowledge ($p < 0.01$), willingness ($p < 0.05$), and enrollment ($p < 0.05$). Monthly income was significantly related to both knowledge ($p < 0.05$) and enrollment ($p < 0.05$), while occupation type was significantly associated with willingness and enrollment. Age showed moderate associations with willingness and enrollment, whereas gender did not show any significant association with any of the studied variables.

Overall, the results suggest that low awareness levels and low income remain the major barriers to enrollment in government-recognized health insurance schemes among unskilled and semi-skilled workers. Even among those who were aware, challenges such as complicated enrollment procedures, lack of clear guidance, and skepticism regarding benefits hindered participation. These findings highlight the urgent need for targeted awareness campaigns, simplification of enrollment processes, and active facilitation by local authorities and health workers to improve participation rates and ensure that vulnerable sections of society are adequately covered by health insurance.

DISCUSSION

The present study assessed the knowledge level, willingness to buy, and actual enrollment in government-recognized health insurance schemes among unskilled and semi-skilled workers in Gautam Buddha Nagar district, Uttar Pradesh. The findings revealed a significant gap between awareness, willingness, and actual participation, a trend well-documented in earlier studies across India.

The results indicate that while many respondents had heard of health insurance schemes such as Ayushman Bharat – PMJAY and RSBY, detailed understanding was limited. Education and income levels showed a statistically significant relationship with awareness. This finding is consistent with Reddy *et al.* (2011), who observed that low educational attainment limits the ability to comprehend and retain information about social protection schemes. Similarly, Sarkar *et al.* (2018) highlighted that workers in the informal sector often rely on word-of-mouth for information, leading to incomplete or incorrect understanding.

The lack of structured outreach also aligns with Babu *et al.* (2016), who argued that government programs often fail to reach low-income populations due to inadequate community-based promotion. Our study reinforces this, suggesting the need for targeted, localized awareness campaigns, especially in industrial and construction hubs where unskilled workers are concentrated.

The willingness to enroll in health insurance was notably higher than the actual enrollment rate, suggesting that intent is not the main barrier — rather, operational and trust issues are at play. Semi-skilled workers, those

with higher income, and those with better education were more inclined to participate. *Karan et al. (2017)* reported similar patterns, noting that individuals with better job security and education were more confident in engaging with formalized health financing systems.

Furthermore, *Devadasan et al. (2013)* found that willingness often fails to translate into action due to cumbersome application processes, lack of documentation, and absence of reliable facilitators. Our findings parallel this, indicating that simplifying procedures and offering enrollment support can bridge the gap between intent and participation.

Only 29% of respondents reported being enrolled in any government-recognized scheme, a figure that reflects the persistent challenge of low coverage in India's informal workforce. Chi-square analysis revealed that education, income, and occupation type significantly influenced enrollment, while gender did not. This finding is in line with *Purohit and Siddiqui (2017)*, who found that occupational exposure and income stability significantly predict the likelihood of joining a health insurance program.

Moreover, *Berman et al. (2010)* emphasized that enrollment is often hindered by skepticism about claim settlement and scheme sustainability — concerns also echoed by some respondents in this study. This suggests that beyond awareness, trust-building measures such as transparent claim processes, prompt reimbursements, and grievance redressal are vital to increasing participation.

The significant role of education and income in shaping knowledge, willingness, and enrollment mirrors findings by *Ghosh (2014)*, who concluded that health insurance coverage in India is disproportionately skewed towards the relatively better-off segments of the informal sector. Occupation type also played a role, with semi-skilled workers more likely to enroll, possibly due to better workplace networks and more exposure to information.

The observed gaps confirm *La Forgia and Nagpal's (2012)* argument that policy design alone is insufficient without effective last-mile delivery mechanisms. Integrating health insurance awareness drives into existing labor welfare and skill development programs could be a practical approach. Additionally, partnering with NGOs, trade unions, and community health workers for grassroots mobilization may help address the information deficit.

Recommendations for Future Studies

1. **Expand Geographical Coverage:** The current study was limited to a specific region, which may not fully represent the diverse socio-economic and cultural variations across India. Future research should involve multi-state or nationwide surveys to capture broader patterns of health insurance awareness, enrollment, and satisfaction.
2. **Longitudinal Studies:** This study used a cross-sectional design, which captures a single point in time. Future researchers could employ longitudinal methods to track changes in health insurance perceptions, policy effectiveness, and utilization patterns over several years. This would allow for a deeper understanding of trends and causal relationships.
3. **Policy Impact Evaluation:** Further studies should focus on assessing the real-world impact of specific government or private health insurance schemes—such as Ayushman Bharat or Rashtriya Swasthya Bima Yojana—on healthcare affordability, quality, and accessibility among different population groups.
4. **Inclusion of Qualitative Insights:** While this study relied on quantitative analysis, future research could incorporate qualitative methods, such as in-depth interviews or focus group discussions, to explore personal experiences, challenges, and perceptions related to insurance enrollment and claim processing.
5. **Comparison Between Urban and Rural Populations:** Future work could compare health insurance coverage, utilization, and satisfaction between urban and rural respondents to identify disparities and tailor policy recommendations accordingly.

6. **Technology and Digital Adoption in Insurance:** Given the increasing digitization of the insurance sector, upcoming studies should examine how mobile apps, online claim processing, and telemedicine integration influence customer satisfaction and accessibility.
7. **Socio-Psychological Determinants:** More emphasis should be placed on understanding how trust in institutions, past medical experiences, and cultural beliefs affect health insurance adoption and usage.
8. **Economic Impact Analysis:** Future research could assess the extent to which health insurance actually reduces out-of-pocket expenditure and protects households from financial hardship, especially during medical emergencies.

CONCLUSION

The present study sought to evaluate the knowledge, willingness to buy, and actual enrollment status in government-recognized health insurance schemes among unskilled and semi-skilled workers in Gautam Buddha Nagar district, Uttar Pradesh. By analyzing the socio-economic and demographic factors of 218 respondents, the research provided valuable insights into the awareness levels, influencing factors, and participation rates within this vulnerable workforce segment.

The findings revealed that while a moderate proportion of respondents had heard about government health insurance schemes, a significant knowledge gap existed regarding scheme-specific features, eligibility criteria, and benefits. Willingness to enroll was notably influenced by educational attainment, income levels, and prior exposure to health-related financial risks. However, actual enrollment rates lagged behind willingness, indicating the presence of operational and perceptual barriers, including mistrust in scheme implementation, lack of procedural clarity, and affordability concerns despite subsidized premiums.

Chi-square analysis confirmed significant associations between demographic variables—particularly age, education, occupation, and income—and both willingness and enrollment levels. This highlights the need for tailored awareness campaigns that address specific socio-economic profiles. The study also found that existing policy outreach mechanisms were insufficient in translating awareness into active participation, underscoring the importance of community-based engagement, employer facilitation, and simplified enrollment processes.

In conclusion, while government-recognized health insurance schemes present a vital safety net for low-income workers, the effectiveness of these programs is constrained by awareness gaps, socio-economic disparities, and systemic challenges in accessibility. Strengthening public outreach, ensuring transparent processes, and integrating health insurance literacy into community development initiatives are essential for improving participation rates. This research contributes to the policy discourse by identifying critical leverage points for enhancing health security among unskilled and semi-skilled workers, with implications for broader health coverage goals in India.

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DECLARATION

I hereby declare that the research work entitled “*Assessment of Knowledge Level, Willingness to Buy, and Enrollment Regarding Government Recognized Health Insurance Schemes among Unskilled and Semi-Skilled Workers in Gautam Buddha Nagar District, Uttar Pradesh*” is my original work. All sources of information and references used have been duly acknowledged in the report.

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