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# Mapping India's Health Insurance Landscape: Insights from 2019-21

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## Abstract

*Universal Health Coverage remains a key policy goal in India, aiming to expand insurance coverage and reduce households' healthcare burdens. However, NFHS-5 (2019–20) shows limited penetration, with only 33.9% of men and 29.8% of women reporting an insurance card. This study estimates a Multinomial Probit across three categories—no insurance, at least one public scheme, and only private/other insurance to examine individual characteristics associated with lacking insurance from a demand-side perspective. Smaller households and increasing age reduce women's likelihood of accessing any insurance and so do Muslims show lower investment. Higher-income groups, regardless of gender, favour private insurance, while lower-income groups lean toward public schemes. Hindus and other religions are more likely to hold public or only private/other insurance and men from other castes prefer private insurance. The findings underscore the need for targeted awareness and better-priced private premiums to improve overall health insurance penetration in India.*

**Keywords**: *Health Insurance, Universal Health Coverage, Gender, Education, Age, Social status*

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# INTRODUCTION

Health insurance is one economic instrument that bridges the gap between the demand and supply of healthcare by helping to mitigate out-of-pocket health expenditure or OOPE that pushes millions of people into higher poverty (WHO, 2023). It helps in reducing financial hardships, including indebtedness that households may face while providing healthcare and enables people to seek the medical care that they would have avoided due to cost concerns. While certain sections of the population have better access to health, education, and other resources, other sections do not, thus perpetuating inequality. These are socially determined by circumstances that are beyond an individual's control; consequently, these circumstances pose a detriment to individuals, limiting their chance to live a longer, healthier life (Purohit, 2017). It is in this context that attaining Universal Health Coverage (UHC) becomes important.

From history, one can observe that many countries have made rapid progress toward UHC only after the incidence of a pandemic. Countries that have undergone such massive transformations include New Zealand in 1938, following the Great Depression, France in 1945, the United Kingdom in 1948, Japan in 1961, after World War II, and Thailand in 2002, following the Asian Financial Crisis, and in Sri Lanka in 1951, following the malaria epidemics in the 1930s-40s. In many instances, the post-crisis UHCs involved rapid public investments in establishing robust health systems (UNICEF, 2021).

To maintain a robust health system, public investments in health insurance are of paramount importance as they protect individuals from financial risk associated with healthcare costs. It reduces OOPE, thereby increasing the demand for healthcare. On the other hand, it ensures there is a steady supply of funds for healthcare providers. For instance, many of the Scandinavian countries, along with other developed countries like the UK, Canada, and New Zealand, have remarkable

performance in achieving UHC through the provision of public insurance (McPake et al., 2020). Canada has achieved UHC by introducing a law in 1947 that guaranteed hospital care without fees. In the UK, establishing the National Health Service in 1948 led to a free at point of use service.

In the context of South Asian countries, achieving UHC is a multifaceted process as every country differs in culture, economic disparity, demographics, and health indicators (UNICEF, 2021). India, the world's most populated country, is united by its diversity. The unique regional, social, ethnic, cultural, demographic, economic, and political diversification poses challenges in achieving the UHC (NCAER, 2023; Sharma and Popli, 2023; Sharma et al., 2023). According to Shabnam et al. (2022), the current rate of progress should be quadrupled to achieve the targets of third Sustainable Development Goal that every person can live a healthy life across all age groups. In this context it becomes important to examine the characteristics of the individuals who access health insurance across the different types of insurance providers. Several states and the union government have recently introduced either universal health insurance or targeted only towards the economically under-privileged. This study is based on the nationally representative NFHS-5 data for India in 2019-21 where the nature of information available on the individual characteristics varies marginally between males and females. Thus, the aim is to understand the differences in characteristics of those who access within each of these groups so that no individual is deprived due to social or economic reasons and at the same time the public programs based on limited resources of the state are optimally and efficiently used for the less well-off.

## HEALTH INSURANCE SCHEMES IN INDIA

The health insurance schemes in India fall into the following 4 broad categories: Government-subsidized schemes, Social Health Insurance (SHI) Schemes, Private health insurance (PHI) schemes, and community-

based health insurance (CBHI) schemes (Chakrabarti & Shankar, 2015; Kumar and Sarwal, 2021).

(a) Government-subsidised schemes: These include the prominent central government scheme Ayushmaan Bharat: Pradhan Mantri Jan Arogya Yojana (PMJAY), and its earlier version: Rashtriya Suraksha Bima Yojana (RSBY). The state schemes present in most states, called the extension schemes (Kumar and Sarwal, 2021 detail such schemes).

(b) Social Health Insurance (SHI) Schemes: These comprise the Central Government Health Scheme (CGHS), Employee State Insurance Scheme (ESIS), and the other schemes provided by different government departments (e.g., Railways and Defence, Paramilitary under the Home Ministry have large hospitals in border areas under the operational control of Border Security Forces / Indo Tibetan Border Police) to their employees (Kumar and Sarwal, 2021).

(c) Private health insurance (PHI) schemes: These include private and public health insurance (PSU) companies, where the individuals pay differing premiums depending on the type of coverage and affordable to the economically well off (Chakrabarti & Shankar, 2015).

(d) Community-Based Health Insurance (CBHI) schemes: These are not-for-profit health insurance schemes targeting low-income people, particularly those working in the informal sector, such as women working in dairy co-operatives, etc. (Chakrabarti & Shankar, 2015).

The penetration of health insurance in India is low despite the launch of many schemes. In the Indian context, contrary to the previous study that presumed that health insurance can reduce OOPE (Purohit, 2017), there have been other studies that have shown no significant

reduction in OOPE even after the implementation of many schemes. For instance, Azam (2018), after the introduction of RSBY in 2008, using the average treatment effect on the treated (ATT), found that, RSBY showed a positive impact on hospitalization conditional on seeking treatment for major morbidity only in the rural area while it showed no evidence of reducing OOPE in rural or urban areas in 2011-12 compared to 2004-05.

Adding to the previous arguments, the study by Kumar and Sarwal (2021) showed that the increased OOPE is incurred by the middle 30% of the population based on a hierarchy of occupations. The 'missing middle' as per this study classified those in the unorganized sector and who are neither covered under public health schemes nor have the affordability to invest in private health insurance schemes. This classification based on occupation is for the main occupation of the household and hence misses out the individual characteristics of those with insurance access which could vary within members of a household.

Building on the arguments so far, one could observe that, where there are no proper schemes that can cover the missing population, on one hand, there are also overlapping state and central schemes, on the other, leading to inefficient use of resources and services (Kumar and Sarwal, 2021). However, the exclusion of such households is not only a supply-side problem, it also has a demand-side issue. For instance, lack of education, certain religious beliefs, lack of inclination to insure, etc. Even though the supply side can be resolved by increasing availability and accessibility, the demand side problem should also be given sufficient attention by creating awareness. The supply and demand side problems could lead to differential access for individuals with different identities including gender (male/female/transgender) and age (children / adolescents / elderly). Hence an analysis of individual level access pattern is important as morbidity patterns and health challenges differ across demographic groups leading to varying needs of health care and hence

the access for health insurance. This aspect has been given limited attention in the earlier studies.

Studies observe interstate disparity in people's access to health insurance and that certain states also covered the 'missing middle' as the state schemes allowed for it (Kumar and Sarwal, 2021). For instance, in Goa, all the residents who have stayed for a minimum of 5 years are eligible for the state scheme. Other states with a good penetration in health insurance are the southern states, Rajasthan, and Assam (Kamath et al., 2023). One argument could be that the richer states tend to perform better (Purohit, 2022) while another argument could be that the state schemes have performed better like Odisha and Delhi, where there is no implementation of PMJAY (Dubey et al., 2023). Another argument made by Dubey et al. (2023), is that states like Kerala and Himachal Pradesh, where there are low poverty and disease burden, tend to use more public health schemes. Thus, interstate disparity can lead the most vulnerable populations further into deprivation due to healthcare inaccessibility and once again the individual level access could vary within these states.

## EQUITY AND EFFICIENCY

In the insurance sector, there is often a trade-off between equity and efficiency. For example, if an insurance company were to offer coverage to all individuals regardless of their level of risk, it would result in a more equitable system. However, this would also lead to increased costs and potentially lower efficiency since the insurance company would be taking on more risk. On the other hand, if the insurance company were to only offer coverage to those with low risk, it would result in a more efficient system. However, this would be less equitable as those with higher risk would be left without coverage or would have to pay higher premiums.
Even though the private health insurance schemes are efficiently able to reach out to the individuals, which is evident by the number of private

service providers, there is an impact on equity, as not everyone can pay such high premiums (Dubey et al., 2023). Further, private hospital service providers are dominant, leading to increased OOPE amongst families with children and the elderly, Muslims, SC, and ST.

The public health insurance schemes are launched on the notion that they will strike a balance between equity and efficiency by covering the vulnerable and needy strata of the country's population. This may, however, involve greater investments, but it is worth making a public expenditure (Purohit, 2017). Studies have shown that post-COVID-19, the demand for low-cost health insurance has increased amongst people in low-income brackets and young people (Sekhar, 2023). Medical inflation has also led people to opt to invest in health insurance.

Thus, any strategy to improve the health system and reduce disparities across rich–poor states and rural-urban areas should also consider not only overcoming inadequacy but also inefficiency in the allocation and utilization of healthcare inputs (Purohit, 2022).

## INDIVIDUAL CHARACTERISTICS ACCESSING DIFFERENT TYPES OF HEALTH INSURANCE

An individual decides to invest in health insurance, which is dependent on the economic status and awareness of the individual (Chakrabarti & Shankar, 2015).

Studies by Chakrabarti & Shankar (2015), Purohit (2017), indicate that the decision to invest in health insurance that is its demand, is a function of literacy, household size, occupation, income status, age, caste, and religion. Another study by Chadha (2023), finds that a lack of understanding ensues due to product complexity, a supply-side feature, further discourages people from investing in insurance.

Marginalized castes, especially the scheduled tribe (ST) with lower economic status and their residences usually being in remote hilly and forest areas, had the lowest likelihood of any health insurance protection. Similarly, a family belonging to the lowest wealth category had the lowest likelihood of any insurance protection. Chadha (2023) finds that many people have a fear of investing in insurance, which further affects the decision-making process. This is particularly noticeable among Muslims, for whom investing in insurance is often considered taboo. However, Siddiqui (2019) finds that educated Muslims are willing to enrol in health insurance schemes.

A recent study by Kumari and Manisha (2023) on the status of women's health insurance in India reveals that the general characteristics of a woman's decision to be more likely to invest in health insurance are the 35–49-year age group, having a chronic disease, ST, Middle class, and Hindu. A household with at least one woman (15-49) member watching TV /newspaper had high health insurance enrolment (Chakrabarti & Shankar, 2015).

## RESEARCH GAP AND OBJECTIVE

Kumar and Sarwal (2021) characterised the missing middle in the economic and occupational spectrum using an earlier data set for 2017-18 of the National Sample Survey on Household Social Consumption. The characterisation was based on household characteristics rather than the individual characteristics. The present study differs from this earlier study on two counts. It is based on a more recent data set which has information on health insurance access at the individual level and hence one could analyse in particular if the determinants for men and women's access to health insurance are different. Further, the data set in this study is the most recent when the nationwide public health insurance scheme of the union government was being rolled out and so were the newer

state schemes which were getting added to similar schemes that have been functioning among others states for a while.

Dubey et al (2023) also use the 2017-18 data on certain aspects of expenditure and provide a quantitative description that highlights inequities in access to the government health schemes across regions, sex, age and caste. In this study we extend this study based on a recent data set and using an econometric framework so that we analyse the competing roles of individual, household and regional characteristics in access to health insurance; focussing in particular on the male-female differences.

The present study is similar in the empirical framework of Chakrabarti & Shankar (2015) except that a multinomial probit (MNP) model instead of the multinomial logit (MNL) model is estimated to analyze the characteristics of the individuals accessing health insurance by categorizing them into three mutually exclusive groups of 'none', 'at least one public insurance', and 'only private and other insurance'. The advantage of a MNP over MNL is that the choice of outcomes are interrelated through the unobserved error terms and thereby not bounded by the independence of irrelevance alternatives (IIA). Additionally, compared to Chakrabarti & Shankar (2015), whose aim was to understand the role of media in health insurance access, the focus here is on analyzing the gender differences and highlighting the characteristics of those who miss out on access to any type of health insurance in comparison to accessing either the private insurance or the public insurance schemes.

We hypothesize that the public or state-provided insurance schemes will be accessible by the poorer and rural individuals given certain exclusion criteria so that it is better targeted towards the poor when there are limited resources and public spending that the states can make. Among those excluded from the public schemes, the richer

sections can afford private insurance premiums and hence they are more likely to choose it.

Further the insurance access is estimated separately for women and men to understand the gender differences in covariates associated with insurance access. So the MNP choice model effectively analyses the insurance access and its determinants while distinguishing the gender differences.

As the NFHS data has no information on household income or consumption expenditures, economic status is measured only based on asset characteristics and is a stock variable. Given the nature of this economic variable, those with no insurance may also be among the middle-range values of certain other non-income characteristics. The objective is to analyze if this hypothesized pattern of health insurance access is observed in a nationally representative large-scale survey in 2019-21 (NFHS-5) for India and what the characteristics of those who have health insurance access are compared to those who do not have.

The analysis is carried out separately for men and women and a gendered comparison is provided as in this data set not all the characteristics including age and sample size are comparable for men and women.

## DATA AND METHODOLOGY

The National Family Health Survey (NFHS) is a large-scale, multi-round survey conducted in a representative sample of households throughout India. The survey provides state and national information for India on fertility, infant and child mortality, the practice of family planning, maternal and child health, reproductive health, nutrition, anaemia, utilization, and quality of health and family planning services. The total sample size of NFHS-5 is 610,000 (approx.) households in India. The

rural and urban sample was selected through a two-stage sample design (NFHS, n.d.).

**Multinomial Probit Model**

In this study, the Multinomial Probit model (MNP) estimates the probability of having accessed at least one public insurance or no public insurance (private and others) over the base (omitted category) of no insurance.

MNP model allows the errors to be correlated across outcome equations so that any unobserved variables that could affect the accessibility to the health insurance type is accounted for. This correlated error structure in the MNP model relaxes the IIA (Independence of Irrelevant Alternatives) assumption that could otherwise be stringent when the choices (outcomes) are similar. Given that several types of insurance schemes available in the data set are being broadly grouped into the two types one cannot rule out the possibility of certain private schemes may be a close choice to a public scheme particularly among the middle-income households.

The errors follow a joint normal distribution in the multinomial probit model and specified below. For an individual with an access to an insurance type including none, consider the latent variable[1] for $m^{th}$ alternative, $Y^*_{im}$ m=1,2,3 is given by the equation:

$$Y^*_{im} = X_i\beta_m + \epsilon_{im}$$

where the set of covariates represented by the vector $\mathbf{X}_i$ is the same across the different alternatives while the associated coefficients βm vary with the alternatives.

[1] Y*: Latent variable measuring the utility which is unobserved for the individual who has health insurance. In the absence of information on utility, we consider discrete outcomes informing health insurance access.

As the latent variables are not observed, the outcomes are in the form of choices which is represented as $Pr(Y_i=m) = max(Y^*_{i1}, Y^*_{i2}, Y^*_{i3})$ and zero otherwise. For the first outcome m=1

i.e., $Pr(Y_i=1) = Pr(Y^*_{i1} > Y^*_{i2}$ and $Y^*_{i1} > Y^*_{i3})$

$Pr(Y_i=1|\ X_i) = Pr(X_i\beta_1 + \epsilon_{i1} > X_i\beta_2 + \epsilon_{i2}$ and $X_i\beta_{m1} + \epsilon_{i1} > X_i\beta_3 + \epsilon_{i3})$

$Pr(Y_i=1|\ X_i) = Pr\ (\epsilon_{i1} - \epsilon_{i2}) > X_i(\beta_2 - \beta_1) + \epsilon_{i2}$ and $(\epsilon_{i1} - \epsilon_{i3}) > (\beta_3 - \beta_1))$

Similarly, one of the other two remaining outcomes is chosen when the probability is higher for choosing that compared to all other outcomes. The method of maximum likelihood is used to estimate these models and the STATA 17 version is used for the estimation. As these are non-linear models the interpretation is not straightforward based on marginal effects unlike the linear models.

The dependent variable ($Y_i$) can take on any of the three categories for the $i^{th}$ individual:

$$Y_i \begin{cases} = 1 & \text{No insurance} \\ = 2 & \text{Atleast one public insurance} \\ = 3 & \text{No public insurance (Private )} \end{cases}$$

The independent variables explaining access to a particular type of insurance are:

*General Characteristics*:

(1) log (household size)
(2) Age (Unit: Years)
(3) age-squared (Unit: Square Years)
(4) Education (Unit: Years)
(5) Education-squared (Unit: Years)

(6) rural and urban residence, interacted with media exposure (Ref: No media and urban)
(7) Marital Status (Ref: Not married)
(8) States and UTs (Ref: Rajasthan)
(9) Occupation[2] (Ref: Not working)

*Economic Status:* (1) Wealth Index (Ref: Poorest)

*Social Status*:
(1) Religion (Ref: Christian)
(2) Caste (Ref: Schedule Caste)

## RESULTS AND DISCUSSIONS

### Descriptive Statistics

**The mean age of the men in the study is 32 years and the women are 30 years (**

[2] Note that only occupation of men had been included in the MNP analysis. The information on occupation for women is collected only in the domestic violence module which is administered to a smaller sample of women in the NFHS data and hence is missing for many women in the full sample for women. So this variable had to be excluded for women. This may not affect the analysis for women as their labour force participation is very low and as such only fewer women would report any occupation from their job.

Table 1). There are only 34% of males aged 15 to 54 years and 32% of females aged 15-49 years in the entire sample covered by any health insurance. This indicates that a large proportion of the population in the respective age groups as surveyed in the NFHS data are uninsured. Thus, the overall penetration is low.

In general, if an individual can pay high premiums, he/she takes private insurance or more than one insurance. If an individual works in the organized sector or is a government employee, he/she takes up schemes like ESIS and CGHS. If the individual is poor, he/she either takes up no insurance, which might be due to lack of awareness, or takes public insurance schemes like PMJAY, RSBY, and other state schemes.

## Table 1: Descriptive Statistics (Explanatory Variable)

| | *Women* | | *Men* | |
|---|---|---|---|---|
| ***VARIABLES*** | ***Mean*** | ***Sd*** | ***Mean*** | ***Sd*** |
| ***GENERAL CHARACTERISTICS*** | | | | |
| **Age** | 30.396 | 9.882 | 32.217 | 11.218 |
| **Education** | 7.454 | 5.159 | 8.741 | 4.653 |
| **Media exposure** | | | | |
| No media exposure | 0.238 | 0.426 | 0.149 | 0.357 |
| Print media | 0.023 | 0.149 | 0.045 | 0.207 |
| Electronic media | 0.446 | 0.497 | 0.302 | 0.459 |
| All forms of media | 0.294 | 0.455 | 0.503 | 0.5 |
| **Residence** | | | | |
| Urban | 0.248 | 0.432 | 0.259 | 0.438 |
| Rural | 0.752 | 0.432 | 0.741 | 0.438 |
| **Marital Status** | | | | |
| Not married | 0.25 | 0.433 | 0.362 | 0.481 |
| Currently married | 0.708 | 0.455 | 0.622 | 0.485 |
| Formerly married | 0.042 | 0.201 | 0.015 | 0.123 |
| **Occupation** | | | | |
| Not working | 0.678 | 0.467 | 0.189 | 0.391 |
| professional/technical/managerial | 0.027 | 0.163 | 0.052 | 0.221 |
| Clerical | 0.004 | 0.066 | 0.016 | 0.124 |
| Sales | 0.019 | 0.136 | 0.082 | 0.274 |
| Services/household and domestic | 0.032 | 0.175 | 0.062 | 0.242 |
| Agricultural | 0.166 | 0.372 | 0.323 | 0.468 |
| Skilled and Unskilled manual | 0.059 | 0.235 | 0.235 | 0.424 |
| Other | 0.014 | 0.116 | 0.04 | 0.195 |
| Don't know | 0.001 | 0.035 | 0.002 | 0.049 |

*Continued …*

(*Continued Table 1*)

| | ***Women*** | | ***Men*** | |
|---|---|---|---|---|
| ***VARIABLES*** | ***Mean*** | ***Sd*** | ***Mean*** | ***Sd*** |
| **Household size** | 5.413 | 2.403 | 5.272 | 2.335 |
| **States and UTs** | | | | |
| Rajasthan | 0.059 | 0.236 | 0.062 | 0.242 |
| J&K | 0.032 | 0.176 | 0.03 | 0.171 |
| Himachal Pradesh | 0.014 | 0.119 | 0.015 | 0.12 |
| Punjab | 0.03 | 0.171 | 0.032 | 0.177 |
| Chandigarh | 0.001 | 0.032 | 0.001 | 0.032 |
| Uttarakhand | 0.018 | 0.134 | 0.016 | 0.124 |
| Haryana | 0.03 | 0.171 | 0.032 | 0.175 |
| NCT of Delhi | 0.015 | 0.123 | 0.017 | 0.128 |
| UP | 0.129 | 0.335 | 0.118 | 0.323 |
| Bihar | 0.059 | 0.235 | 0.048 | 0.214 |
| Sikkim | 0.005 | 0.067 | 0.005 | 0.068 |
| Arunachal Pradesh | 0.027 | 0.163 | 0.028 | 0.166 |
| Nagaland | 0.013 | 0.115 | 0.014 | 0.119 |
| Manipur | 0.011 | 0.105 | 0.011 | 0.106 |
| Mizoram | 0.01 | 0.1 | 0.011 | 0.104 |
| Tripura | 0.01 | 0.1 | 0.01 | 0.098 |
| Meghalaya | 0.018 | 0.133 | 0.018 | 0.133 |
| Assam | 0.048 | 0.214 | 0.049 | 0.216 |
| West Bengal | 0.03 | 0.169 | 0.03 | 0.17 |
| Jharkhand | 0.037 | 0.188 | 0.034 | 0.18 |
| Odisha | 0.039 | 0.193 | 0.038 | 0.191 |
| Chhattisgarh | 0.039 | 0.194 | 0.041 | 0.198 |
| Madhya Pradesh | 0.067 | 0.25 | 0.069 | 0.253 |
| Gujarat | 0.046 | 0.21 | 0.053 | 0.223 |

*Continued …*

(*Continued Table 1*)

| | | | | |
|---|---|---|---|---|
| Dadra & Nagar Haveli and Daman & Diu | 0.004 | 0.061 | 0.004 | 0.065 |
| Maharashtra | 0.047 | 0.211 | 0.054 | 0.226 |
| Andhra Pradesh | 0.015 | 0.122 | 0.015 | 0.123 |
| Karnataka | 0.042 | 0.201 | 0.044 | 0.206 |
| Goa | 0.003 | 0.053 | 0.003 | 0.055 |
| Lakshadweep | 0.002 | 0.041 | 0.001 | 0.036 |
| Kerala | 0.015 | 0.122 | 0.014 | 0.119 |
| Tamil Nadu | 0.035 | 0.185 | 0.033 | 0.179 |
| Puducherry | 0.005 | 0.071 | 0.005 | 0.072 |
| Andaman & Nicobar islands | 0.003 | 0.057 | 0.004 | 0.06 |
| Telangana | 0.038 | 0.191 | 0.038 | 0.191 |
| Ladakh | 0.003 | 0.057 | 0.003 | 0.055 |
| Poorest | 0.207 | 0.405 | 0.194 | 0.396 |
| Poorer | 0.221 | 0.415 | 0.222 | 0.416 |
| Middle | 0.209 | 0.407 | 0.213 | 0.41 |
| Richer | 0.193 | 0.394 | 0.198 | 0.399 |
| Richest | 0.17 | 0.375 | 0.172 | 0.377 |
| ***SOCIAL STATUS*** | | | | |
| **Religion** | | | | |
| Christian | 0.072 | 0.259 | 0.071 | 0.257 |
| Hindu | 0.754 | 0.431 | 0.758 | 0.428 |
| Muslim | 0.125 | 0.331 | 0.119 | 0.324 |
| Others | 0.049 | 0.215 | 0.052 | 0.221 |
| **Caste** | | | | |
| SC | 0.193 | 0.395 | 0.189 | 0.391 |
| ST | 0.187 | 0.39 | 0.19 | 0.392 |
| OBC | 0.382 | 0.486 | 0.386 | 0.487 |
| None of them | 0.184 | 0.388 | 0.186 | 0.389 |
| Not reported | 0.053 | 0.225 | 0.049 | 0.215 |

**Source:** NFHS-5
**Note:** Author's Own Compilation

**Econometric Results**

Tables 2.1 and 2.2 present the results for the MNL model for insurance access with the omitted category as "none" in comparison separately with public or private insurance. The choice of covariates that determines insurance access is based on individual, household and regional variables commonly used in the previous studies.

The focus of the discussions is on women while highlighting the differences in results with men. For a given covariate, the results are discussed for the statistically significance, the direction of association with it and a comparison of the relative magnitudes in terms of the likelihood of access to a particular insurance vis-a vis non insurance[3].

**General Characteristics:** From Table 2.1, it can be noted that, both age and square of age are statistically significant while the former has a positive coefficient indicating access to insurance with age and likelihood is larger for public than for private; however, as the coefficient for quadratic age is negative, the more elderly among the 15-49 years tend to invest less in any form of insurance compared to the younger women. This finding is unlike the findings of Kumari & Manisha (2023) who show that a two-way tabulation of 5-year age groups the access to health insurance increases. The unadjusted association measure in that study may not be comparable with the results here that control for other factors and what we observe is a "net" effect.

Education plays an important role in creating awareness of the prevailing health risks and the need for health insurance and understanding health insurance products. However, the more privileged are likely to be more educated. Given these two aspects education (in completed years) and its square are both included as regressors. We

[3] The marginal effects in the discrete choice models which are non-linear models are arrived at the means or some chosen values le of the other covariates. This makes the interpretation little difficult and specific to those values so these not reported here.

expect that with increase in education access to public insurance would go up and then decline. This evidence though does not hold for men, is supported for women - the linear term positive and the squared term negative and both significant. The converse holds true for the non-public or the private and other insurance for both men and women. The more educated will be in well secured jobs and preferring private health care hoping for better quality of treatment and they may also be securing themselves from more severe illnesses. These would result in investment in private health insurance or premiums paid by their employers through group insurance (for instance) for themselves and their families. Thus, better access for public insurance among the less educated and similarly for the private insurance by the more educated; those falling off the health insurance net would perhaps be more among the middle years of education. The descriptive statistics in Table A1.1 for women shows non-insurance is between 65% and 71% and increases with the education levels unlike the finding from the econometric results which shows a dip for the middle years of education while for men in Table A1.2 shows a marginally higher proportion of no insurance among the secondary education compared to the below and above years of education. The descriptive statistics table is once again not comparable with econometric results as it does not show the net effect and also the middle years of education could be somewhere between middle school and secondary schooling and hence may not show up effectively in the descriptive statistics tables.

Media exposure is another source of awareness about the types of insurance schemes as well as the risks and benefits of investing in health insurance. Among women and men and between rural and urban, the coefficient for some form of media exposure results in higher insurance access of any type. With rural areas being more deprived and higher out of pocket expenses, the results shows that there is a clear rural advantage compared to urban with the magnitude for rural interacted coefficients being higher for the public insurance. This is so

including for no media exposure and is expected as the state will also be directly campaigning in the poorer regions which are primarily in the rural areas where the media exposure could be limited to improve their health seeking behaviour at a lesser cost. The results for non-public insurance access is biased towards urban with coefficient magnitude higher than in rural for most media types. Thus this interaction of rural/urban residence with different media types has brought the differences in public and non-public insurance access in comparison non insurance. The magnitude of the coefficient for women irrespective of type of insurance or place of residence is lower than for men in comparison to the reference category of no-insurance once again highlighting access rates are lower for women than men.

The findings here broadly concur with Chakrabarti & Shankar (2015) that after controlling for other variables the role of media exposure is better. However, our results vary partly from the fact that the model here includes two categories of insurance types unlike that study which has four insurance types and no insurance as the reference in both studies and that the media exposure variables have more categories and hence the results show the impact of multiple options to be more effective. Further, the rural and urban differences are differently modelled so that with more schemes launched by the union and the state governments, the public/non-public differences are clearly captured for the rural and urban residents.

Marriage as an institution has various perceptions and significance for men and women due to cultural norms, societal expectations, and legal frameworks. From the results, one could observe that marital status has a significant role to play in insurance access for women and currently married fare slightly better as observed from a smaller negative value than formerly married for both types of insurance. Moreover, given either of their married status, the coefficient for public insurance access has a higher negative value compared to the non-public

insurance. This result seems unexpected as public insurance provides health coverage to the less privileged and hence more women should be covered. At the same time one perhaps needs to understand what makes never married women to have a higher insurance access. Marital status is not a significant determinant for men except the formerly married men are less likely to have access to at least one public health insurance.

The occupation of an individual is considered an important determinant of insurance access in Kumar and Sarwal (2021) with the occupations classified as a mix of industrial sector and the nature of formalisation of the jobs. The choice of an occupation variable and its types is applicable only to those who are currently employed and largely to men in India as women's labour force participation is low and the NFHS data set does not collect this information for all the women surveyed.

It is clear that public health insurance is accessible to all those who are in some occupation but those in agriculture have the least likelihood compared to all other occupations while clerical having the highest likelihood compared to the reference category of not working which would include those attending schools, unemployed, people with disabilities and the retired. In the non-public insurance type, professionals have a large likelihood followed by the "clerical". If these occupations could be considered among the regular salaried and even after controlling for regressors like education and economic status, the coefficient for such occupations is statistically significant. Those in other occupations like "sales" or in "manual jobs- skilled or unskilled" are relatively less likely to have private or other insurance access and those in "agriculture" are no different from the non-working as far as this insurance type is concerned. In the absence of earnings or wages data, it may be difficult to assess which occupations are in the "middle" for any direct comparison with Kumar and Sarwal (2021) who also use a different data set.

For women, larger household size is associated with lower levels of investment in any form of health insurance (public, private, or other) while for men household size is not a determinant of insurance access. This could possibly reflect inequity in intra household allocation when resources are limited investment in safeguards to women's health may be less prioritised.

With the state of Rajasthan as the reference state as it has a universal health insurance all the states show a significant negative coefficient, except the state of Andhra Pradesh that has most coefficients insignificant for either insurance type and for women and men. Similarly, Telangana shows a much smaller negative value and highlighting the better insurance coverage in the newly carved state from Andhra Pradesh. Other states like Karnataka, Kerala, and Tamil Nadu which also have public health insurance schemes for long and surprisingly do not reflect good access compared to private health insurance in their respective state and also in comparison to Rajasthan.

## Table 2.1: Multinomial Probit Estimates for Insurance Choice: General Characteristics

| *VARIABLES* | *(1)* | *(2)* | *(1)* | *(2)* |
|---|---|---|---|---|
| | *Women* | | *Men* | |
| | *At least 1 public insurance* | *No public insurance (Others & Private)* | *At least 1 public insurance* | *No public insurance (Others & Private)* |
| ***GENERAL CHARACTERISTICS*** | | | | |
| **Age** | 0.072*** | 0.048*** | 0.008 | 0.01 |
| | -0.003 | -0.009 | -0.009 | -0.028 |
| **Age squared** | -0.001*** | -0.000** | 0 | 0 |
| | 0 | 0 | 0 | 0 |
| **Education** | 0.009*** | -0.020*** | -0.011 | -0.052* |
| | -0.002 | -0.007 | -0.008 | -0.027 |
| **Education squared** | -0.001*** | 0.004*** | 0.001** | 0.006*** |
| | 0 | 0 | 0 | -0.001 |
| **Media exposure * Residence-** No media exposure * urban (ref) | | | | |
| No media exposure*rural | 0.257*** | 0.047 | 0.392*** | 0.513** |
| | -0.026 | -0.079 | -0.092 | -0.255 |
| Print media exposure *urban | -0.047 | 0.272** | 0.376** | 1.186*** |
| | -0.054 | -0.113 | -0.158 | -0.327 |
| Print media exposure * rural | 0.367*** | 0.174 | 0.410*** | 0.297 |
| | -0.035 | -0.108 | -0.103 | -0.331 |
| Electronic media exposure*urban | 0.182*** | 0.210*** | 0.226** | 0.574** |
| | -0.027 | -0.071 | -0.096 | -0.223 |
| Electronic media exposure * rural | 0.406*** | 0.204*** | 0.571*** | 0.540** |
| | -0.025 | -0.072 | -0.088 | -0.212 |
| All media exposure *urban | 0.274*** | 0.434*** | 0.335*** | 0.577*** |
| | -0.028 | -0.07 | -0.091 | -0.2 |

*Continued …*

(*Continued Table 2.1*)

| | | | | |
|---|---|---|---|---|
| All media exposure * rural | 0.464*** | 0.210*** | 0.620*** | 0.596*** |
| | -0.026 | -0.072 | -0.088 | -0.2 |
| **Marital Status-** Not married[(ref)] | | | | |
| Currently married | -0.466*** | -0.143*** | -0.04 | 0.107 |
| | -0.013 | -0.035 | -0.04 | -0.108 |
| Formerly married | -0.545*** | -0.396*** | -0.257*** | -0.214 |
| | -0.021 | -0.067 | -0.085 | -0.212 |
| **Occupation-** Not working [(ref)] | | | | |
| Professional/technical/managerial | | | 0.174** | 1.000*** |
| | | | -0.068 | -0.143 |
| Clerical | | | 0.337*** | 0.620*** |
| | | | -0.111 | -0.184 |
| Sales | | | 0.055 | 0.481*** |
| | | | -0.052 | -0.144 |
| Services/household and domestic | | | 0.153*** | 0.524*** |
| | | | -0.059 | -0.144 |
| Agricultural | | | 0.121*** | 0.055 |
| | | | -0.041 | -0.142 |
| Skilled and Unskilled manual | | | 0.146*** | 0.442*** |
| | | | -0.043 | -0.135 |
| Other | | | -0.003 | 0.537*** |
| | | | -0.061 | -0.196 |
| Don't know | | | -0.158 | 0.398 |
| | | | -0.186 | -0.358 |
| **Log of Household size** | -0.065*** | -0.194*** | -0.013 | -0.036 |
| | -0.009 | -0.025 | -0.028 | -0.078 |

*Continued …*

(*Continued Table 2.1*)

| **States and UTs-** Rajasthan(ref) | | | | |
|---|---|---|---|---|
| J&K | -4.208*** | -2.042*** | -3.092*** | -1.586*** |
| | -0.04 | -0.091 | -0.069 | -0.179 |
| Himachal Pradesh | -2.259*** | -0.882*** | -2.360*** | -0.362** |
| | -0.027 | -0.065 | -0.074 | -0.151 |
| Punjab | -3.183*** | -1.606*** | -2.785*** | -1.062*** |
| | -0.028 | -0.071 | -0.085 | -0.163 |
| Chandigarh | -2.983*** | -1.165*** | -2.273*** | -0.291 |
| | -0.093 | -0.126 | -0.206 | -0.28 |
| Uttarakhand | -1.581*** | -1.149*** | -1.380*** | -1.500*** |
| | -0.025 | -0.085 | -0.074 | -0.297 |
| Haryana | -2.841*** | -1.092*** | -2.761*** | -1.008*** |
| | -0.021 | -0.052 | -0.055 | -0.122 |
| NCT of Delhi | -3.173*** | -0.357*** | -3.096*** | -0.683*** |
| | -0.031 | -0.049 | -0.077 | -0.124 |
| UP | -3.398*** | -1.742*** | -3.230*** | -1.480*** |
| | -0.016 | -0.055 | -0.042 | -0.125 |
| Bihar | -3.194*** | -1.783*** | -3.199*** | -2.100*** |
| | -0.018 | -0.074 | -0.052 | -0.22 |
| Sikkim | -2.990*** | -0.002 | -2.721*** | -0.122 |
| | -0.066 | -0.096 | -0.176 | -0.233 |
| Arunachal Pradesh | -2.625*** | -1.402*** | -2.560*** | -1.721*** |
| | -0.026 | -0.091 | -0.078 | -0.212 |
| Nagaland | -3.302*** | -1.871*** | -3.041*** | -1.744*** |
| | -0.039 | -0.141 | -0.107 | -0.29 |
| Manipur | -3.441*** | -1.603*** | -3.607*** | -2.340*** |
| | -0.037 | -0.123 | -0.101 | -0.354 |

*Continued …*

(*Continued Table 2.1*)

| | | | | |
|---|---|---|---|---|
| Mizoram | -1.773*** | -1.111*** | -1.569*** | -1.280*** |
| | -0.039 | -0.129 | -0.11 | -0.369 |
| Tripura | -2.276*** | -2.250*** | -2.240*** | -1.206*** |
| | -0.029 | -0.286 | -0.078 | -0.24 |
| Meghalaya | -0.950*** | -1.173*** | -1.059*** | -1.147*** |
| | -0.033 | -0.187 | -0.094 | -0.408 |
| Assam | -1.255*** | -0.712*** | -1.206*** | -0.217 |
| | -0.018 | -0.067 | -0.048 | -0.138 |
| West Bengal | -2.324*** | -0.659*** | -2.460*** | -0.925*** |
| | -0.02 | -0.056 | -0.056 | -0.159 |
| Jharkhand | -1.922*** | -1.249*** | -1.744*** | -0.556*** |
| | -0.018 | -0.076 | -0.049 | -0.144 |
| Orissa | -2.130*** | -0.969*** | -1.809*** | -0.707*** |
| | -0.018 | -0.059 | -0.048 | -0.144 |
| Chhattisgarh | -0.852*** | -0.654*** | -0.711*** | -0.921*** |
| | -0.018 | -0.067 | -0.049 | -0.205 |
| Madhya Pradesh | -2.338*** | -1.154*** | -2.130*** | -1.002*** |
| | -0.016 | -0.055 | -0.044 | -0.123 |
| Gujarat | -1.994*** | -0.796*** | -1.808*** | -0.570*** |
| | -0.017 | -0.053 | -0.045 | -0.121 |
| Dadra & Nagar Haveli | -0.885*** | -0.071 | -1.177*** | 0.500** |
| and Daman & Diu | -0.045 | -0.119 | -0.115 | -0.24 |
| Maharashtra | -3.046*** | -0.994*** | -2.838*** | -0.630*** |
| | -0.021 | -0.054 | -0.051 | -0.131 |
| Andhra Pradesh | -0.555*** | -0.015 | 0.102 | 0.113 |
| | -0.023 | -0.066 | -0.071 | -0.2 |
| Karnataka | -2.591*** | -1.420*** | -2.390*** | -1.199*** |
| | -0.02 | -0.062 | -0.052 | -0.139 |

*Continued …*

(*Continued Table 2.1*)

| | | | | |
|---|---|---|---|---|
| Goa | -0.619*** | -0.814*** | -0.461*** | -0.133 |
| | -0.049 | -0.139 | -0.123 | -0.246 |
| Lakshadweep | -0.831*** | 1.295*** | -1.465*** | -0.176 |
| | -0.057 | -0.099 | -0.167 | -0.382 |
| Kerala | -1.429*** | -0.400*** | -1.356*** | -0.373** |
| | -0.023 | -0.057 | -0.064 | -0.148 |
| Tamil Nadu | -2.163*** | -0.901*** | -1.557*** | -0.587*** |
| | -0.019 | -0.058 | -0.053 | -0.133 |
| Puducherry | -3.091*** | -1.270*** | -2.093*** | -0.886*** |
| | -0.063 | -0.168 | -0.197 | -0.26 |
| Andaman & Nicobar islands | -4.848*** | -2.529*** | -4.739*** | -2.122*** |
| | -0.12 | -0.246 | -0.29 | -0.398 |
| Telangana | -0.979*** | -0.500*** | -0.652*** | -0.416*** |
| | -0.019 | -0.064 | -0.056 | -0.156 |
| Ladakh | -3.863*** | -1.207*** | -2.904*** | -1.254*** |
| | -0.07 | -0.149 | -0.139 | -0.401 |

**Source:** NFHS-5

**Note:** Author's own compilation; Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1; sample size for men is 1,01,839 and for women is 7,24,115.

## Economic and Social Status

The wealth quintiles in the NFHS is the quintiles based on an index of possession of consumer durables and access to basic amenities using the first principal component. The first quintile represents the poorest, while the fifth quintile is the richest. The results in Table 2.2 for women show that as they move up the economic status they are less likely to access any public health insurance while only the richest access private insurance and the negatively significant coefficient for the "poor" seems to be an aberration and not clearly explainable. Unlike women, economic status does not make a difference to public insurance access until the "richest" and this could be because education and occupation would be strongly correlated with economic status and once they are controlled for

perhaps this variable is not that significant. Similarly, for non-public insurance, the rich and richest are more likely to access it after controlling for other regressors.

Among women, the results show that Hindus and those belonging to other religions are more likely to access at least one publicly funded insurance. On the other hand, Muslims are less likely to access private and other insurance. Further, women from any other caste are less likely to access least one public insurance, compared to the scheduled caste and the negative value increases going from scheduled tribe to other backward classes to other castes to caste-not-reported. This is an important finding that the socially disadvantaged groups like the SC and ST are more likely to access public insurance schemes. In contrast, women belonging to OBCs and other castes, are more likely to access private and other insurance schemes and the scheduled tribes have a lower likelihood compared to the other castes after controlling for other factors like education and economic status. Similarly, men belonging to OBC and other castes are less likely to access least one public insurance while men belonging to other castes are more likely to access private and other forms of insurance compared to the schedules castes.

## Table 2.2: Multinomial Probit Estimates for Insurance Choice: Economic and Social Status

| VARIABLES | (1) | (2) | (1) | (2) |
|---|---|---|---|---|
| | Men | | Women | |
| | At least 1 public insurance | No public insurance (Others & Private) | At least 1 public insurance | No public insurance (Others & Private) |
| **Wealth Index-** Poorest(ref) | | | | |
| Poorer | -0.011 | -0.233 | 0.003 | -0.104** |
| | (0.035) | (0.143) | (0.011) | (0.049) |
| Middle | 0.044 | 0.029 | -0.064*** | -0.065 |
| | (0.038) | (0.139) | (0.012) | (0.049) |
| Richer | 0.017 | 0.276** | -0.118*** | 0.045 |
| | (0.041) | (0.136) | (0.013) | (0.050) |
| Richest | -0.119** | 0.607*** | -0.206*** | 0.571*** |
| | (0.051) | (0.136) | (0.016) | (0.050) |
| **Religion-** Christian(ref) | | | | |
| Hindu | 0.196** | -0.253* | 0.101*** | -0.127** |
| | (0.078) | (0.143) | (0.024) | (0.055) |
| Muslim | 0.032 | -0.793*** | -0.025 | -0.585*** |
| | (0.083) | (0.176) | (0.027) | (0.065) |
| Others | 0.301** | -0.120 | 0.064* | -0.078 |
| | (0.122) | (0.248) | (0.034) | (0.086) |
| **Caste-** Schedule Castes (ref) | | | | |
| Scheduled Tribes | -0.043 | 0.014 | -0.145*** | -0.154*** |
| | (0.041) | (0.149) | (0.013) | (0.051) |
| Other Backward Classes | -0.119*** | 0.148 | -0.115*** | 0.094*** |
| | (0.031) | (0.107) | (0.009) | (0.031) |
| Other Castes | -0.246*** | 0.274** | -0.265*** | 0.211*** |
| | (0.039) | (0.108) | (0.012) | (0.032) |
| Caste not reported | -0.309*** | 0.141 | -0.364*** | 0.122** |
| | (0.061) | (0.164) | (0.020) | (0.056) |

**Source:** NFHS-5; **Note:** Same as Table 2.1

# CONCLUSION

Ensuring every person can live a healthy life and promoting well-being at all ages is the third Sustainable Development Goal. Thus, health insurance plays an important role in achieving the SDG.

Health insurance schemes in India can be broadly classified into public, private, and other. Despite the availability of numerous schemes, a significant portion of the population remains uncovered. The problem arises due to the overlapping of the schemes, leading to inefficient distribution of resources, and increased out-of-pocket expenditure for individuals. The lack of access to health insurance creates information asymmetry in the insurance market, leading to a trade-off between equity and efficiency in accessing healthcare.

To improve the investment in health insurance, the Insurance Regulatory and Development Authority of India (IRDAI) brought in certain policies that came into force on April 1, 2024. The policies are as follows: reducing the waiting period and the time frame for defining the pre-existing disease, inclusion of the AYUSH treatment under the health insurance coverage, advising insurers against denying to renew the policy if an insurer has claimed insurance, providing health insurance coverage above 65 years.

Apart from these new recommendations, the IRDAI must focus on creating awareness through education, targeting old women, bringing in policies to set appropriate premiums by private insurance providers, and addressing the supply-side constraints to increase insurance penetration.

Further scope of study could be analyzing how significantly the new policy can increase penetration of the health insurance market. A spatial analysis can be done to check the intensity of penetration of this market. This project can further be extended and analyzed using a selection model where the choice of the type of health insurance is conditional on

the health insurance access, which requires an extensive study of the literature to determine the selection and the outcome variables.

The dataset, NFHS-5 is a single cross-section of data. Pooling this dataset with earlier datasets can bring in a nuanced understanding of the characteristics of the individuals. In assessing the characteristics, the wealth index is used as a proxy for income. However, the wealth index is a stock variable. Since the premium payment depends on an individual's income and affordability, the wealth index might not be an appropriate variable to assess individual characteristics. Moreover, even if an individual has access to health insurance, it is essential to examine demand and supply side constraints, like service delivery and availability of doctors, to get a proper understanding of the health insurance sector.

The recent survey of NSSO in 2025 on health shows a huge improvement in health insurance access. However, this data source does not inform us about multiple insurance schemes and an important personal information on the nature of work or occupation carried out by men and women is not collected in this data set. Thus, this study fills the gap in understanding who access which type of insurance and the gender differences. Further work using the recent NSSO survey will enable us to understand the gender differences in expenditure on health and the role of health insurance in reducing the gender gap in out of pocket expenditure.

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# APPENDIX

## Table A1.1: Variation in % investing in health insurance (women)

| *VARIABLES* | *Women age (15-48)* | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| | Only public | only private | only others | Public & private | Public & other | Private & other | all 3 | none |
| ***GENERAL CHARACTERISTICS (%)*** | | | | | | | | |
| **Education** | | | | | | | | |
| No education | 24.17 | 0.06 | 10.44 | 0.01 | 0.29 | 0.01 | 0 | 65.03 |
| Primary | 23.47 | 0.1 | 11.21 | 0.01 | 0.35 | 0 | 0 | 64.87 |
| Secondary | 20.11 | 0.21 | 10.04 | 0.02 | 0.3 | 0 | 0 | 69.32 |
| Higher | 19.55 | 0.94 | 8.56 | 0.08 | 0.33 | 0.02 | 0 | 70.52 |
| **Residence** | | | | | | | | |
| Urban | 19.63 | 0.72 | 8.22 | 0.05 | 0.35 | 0.01 | 0 | 71.02 |
| Rural | 21.93 | 0.11 | 10.67 | 0.02 | 0.3 | 0 | 0 | 66.97 |
| ***SOCIAL STATUS (%)*** | | | | | | | | |
| **Religion** | | | | | | | | |
| Hindu | 22.67 | 0.28 | 10.63 | 0.01 | 0.35 | 0.03 | 0 | 66.02 |
| Muslim | 11.26 | 0.15 | 11.06 | 0.02 | 0.19 | 0 | 0 | 77.32 |
| Christian | 30.61 | 0.2 | 5.12 | 0.02 | 0.28 | 0 | 0 | 63.77 |
| Other | 13.36 | 0.3 | 5.89 | 0.02 | 0.09 | 0.01 | 0 | 80.33 |
| **Caste** | | | | | | | | |
| OBC | 22.75 | 0.22 | 9.51 | 0.03 | 0.36 | 0.01 | 0 | 67.12 |
| ST | 28.53 | 0.17 | 9.67 | 0.02 | 0.25 | 0 | 0 | 61.37 |
| SC | 20.88 | 0.16 | 10.19 | 0.02 | 0.31 | 0 | 0 | 68.43 |
| other | 14.63 | 0.55 | 9.24 | 0.03 | 0.28 | 0.02 | 0 | 75.26 |

**Source:** NFHS-5
**Note:** Author's Own Compilation

## Table A1.2: Variation in % investing in health insurance (men)

| VARIABLES | Men age (15-54) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| | Only public | only private | only others | Public & private | Public& other | Private & other | all 3 | none |
| ***GENERAL CHARACTERISTICS (%)*** | | | | | | | | |
| **Education** | | | | | | | | |
| No education | 25.56 | 0.1 | 10.78 | 0.02 | 0.37 | 0 | 0 | 63.18 |
| Primary | 25.26 | 0.11 | 12.12 | 0.45 | 0 | 0.02 | 0 | 62.04 |
| Secondary | 23.87 | 0.25 | 11.02 | 0.04 | 0.43 | 0.01 | 0 | 64.37 |
| Higher | 25.26 | 1.36 | 10.447 | 0.25 | 0.84 | 0.07 | 0.02 | 61.71 |
| **Residence** | | | | | | | | |
| Urban | 22.6 | 1 | 8.56 | 0.13 | 0.51 | 0.06 | 0.01 | 67.13 |
| Rural | 25.13 | 0.2 | 11.88 | 0.05 | 0.5 | 0.01 | 0 | 62.22 |
| ***SOCIAL STATUS (%)*** | | | | | | | | |
| **Religion** | | | | | | | | |
| Hindu | 25.9 | 0.46 | 11.73 | 0.09 | 0.57 | 0.03 | 0 | 61.22 |
| Muslim | 14.69 | 0.13 | 11.52 | 0.02 | 0.25 | 0 | 0 | 73.4 |
| Christian | 31.69 | 0.34 | 5.26 | 0.06 | 0.26 | 0.01 | 0 | 62.38 |
| Other | 16.21 | 0.34 | 7.35 | 0.04 | 0.42 | 0.04 | 0 | 75.6 |
| **Caste** | | | | | | | | |
| OBC | 26.62 | 0.4 | 10.44 | 0.09 | 0.66 | 0.01 | 0 | 61.79 |
| ST | 30.46 | 0.18 | 11.22 | 0.03 | 0.32 | 0.02 | 0 | 57.77 |
| SC | 24.63 | 0.29 | 11.18 | 0.06 | 0.46 | 0.29 | 0 | 63.36 |
| other | 16.95 | 0.8 | 10.2 | 0.11 | 0.42 | 0.06 | 0.01 | 71.45 |

**Source:** NFHS-5
**Note:** Author's Own Compilation

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