

Digital Barriers and Awareness of E-Shram Cards among Rural Workers: A Study in Shirsolli P.B. Village, Jalgaon

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Abstract

The unorganized sector forms the backbone of India's workforce yet remains largely excluded from formal social security mechanisms. To address this gap, the Government of India launched the e-Shram portal in 2021 to register unorganized workers and facilitate access to welfare schemes. This study investigates the awareness, accessibility, and digital literacy related to the e-Shram Card among unorganized sector workers in Shirsolli P.B. village, Jalgaon district, Maharashtra. A total of 125 questionnaires were distributed, out of which 107 were completed and returned. Data was collected through a door-to-door household survey conducted between May and June 2024, using a quantitative descriptive design and primary data collection methods.

The structured questionnaire covered demographic details, awareness of the e-Shram scheme, registration status, digital literacy, and knowledge of linked welfare programs. Results indicate that only 38% of respondents had heard of the e-Shram scheme, and just 36% were registered. Major barriers to registration included a lack of knowledge about where to register, missing documents, and time constraints. While mobile phone ownership was high (94%), only 27% could independently fill online forms, and 22% expressed confidence in using government portals. Awareness and benefit uptake for linked schemes such as PMSBY, PM-SYM, and PMEGP remained low. The findings highlight the need for targeted awareness campaigns, simplified registration processes, and community-based digital assistance to improve scheme coverage. Strengthening local facilitation and building trust can ensure that e-Shram and related welfare initiatives effectively reach unorganized workers, thereby enhancing social protection in rural areas.

Keywords: Awareness and Accessibility, Welfare Schemes, Social Security, Unorganized Workers, e-Shram Card

Introduction

The unorganized sector is often described as the backbone of the Indian economy. The Economic Survey 2024–2025 estimates that approximately 58.2 crore people work in the unorganized sector in India [1]. But who exactly is considered an unorganized worker? The term is defined in the Unorganized Workers Social Security Act, 2008. It includes home-based workers, self-employed individuals, and wage workers who are not covered under social security laws such as the Industrial Disputes Act, 1947, the Employees' Provident Fund (EPF), the Employees' State Insurance (ESI), gratuity benefits, or maternity protection [2].

These workers frequently deal with irregular employment, a lack of relationships with their employers, and a lack of safety nets such as insurance, retirement pensions, and other benefits. Recognizing the diversity within this sector, the Ministry of Labour has classified unorganized workers into four major categories:

- Occupational: Farmers, landless laborers, fishermen, and construction workers.
- Nature of Employment: Casual laborers, migrant workers, bonded laborers, and contract workers.
- Distressed Categories: Porters, cart-pullers, and other manual load carriers.
- Service Sector Workers: Domestic workers, street vendors, barbers, midwives, and others in informal services [3].

The 2024-25 Economic Survey also provides a more detailed look at the employment distribution. Agriculture employs 46.1% of the labor force, while manufacturing has decreased from 12.1% to 11.4%. Approximately 29.7% work in the service industry. Interestingly, female participation in agriculture increased to 64.4%, while male participation decreased. Meanwhile, male workers increased their presence in the construction, trade, hotel, restaurant, and transportation sectors [1].

Despite being such a significant part of the country's economy, unorganized workers are frequently excluded from welfare programs due to a variety of barriers, including a lack of awareness, complex registration procedures, a lack of documentation, and limited digital access.

e-Shram Portal

To address these challenges, the Government of India launched the e-Shram portal on August 26, 2021. The main aim of this initiative is to build a national database of unorganized workers and provide each one with a Universal Account Number (UAN) linked to a 12-digit e-Shram card [4]. This platform is intended to make it easier to implement social security schemes and track transitions from the informal to the formal workforce. As of March 31, 2024, over 29.51 crore unorganized workers have registered on the e-Shram portal. Gender-wise, 15.67 crore are women, 13.83 crore are men, and 6,461 identify as others [5].

The e-Shram card also serves as a gateway to various government schemes like Pradhan Mantri Suraksha Bima Yojana (PMSBY) for accident insurance, Pradhan Mantri Shram Yogi Maandhan (PM-SYM) for pensions, and Ayushman Bharat for health coverage.

However, many unorganized workers in rural and tribal areas are still unaware of the portal or find it difficult to access, despite significant outreach efforts and improvements in digital infrastructure. Issues like low digital literacy, unavailability of documents, and lack of exposure to welfare programs continue to hinder widespread participation.

The study was conducted in Shirsoli P.B. village, Jalgaon district, using primary data collected through a household survey. The focus is to assess the awareness, accessibility, and digital readiness of unorganized sector workers about the e-Shram card.

Literature Review

(Pranaya, et al., 2023) The study shows how much rural people in India, especially in Pyalakurthy village, know about the e-Shram card. This card is meant to help workers in unorganized sectors get social security benefits. They interviewed 109 people using a cross-sectional method to see if they knew about the card. The results showed that only about 15% of the people had heard of the e-Shram card. The study also found that things like education, financial status, migration, and smartphone use were linked to whether people

knew about the card. Overall, the study concluded that awareness was very low and suggested that the government should run awareness campaigns and register people at their homes to improve their understanding and usage of the card [6].

The study "Formalisation of Workforce and Legal Protection Including Social Security for Unorganised or Informal Workers" (2023) talks about why it's important to bring informal workers into official legal and social protection systems. It explains that many workers around the world still work without formal jobs and often face unfair treatment, low wages, and no benefits. The study suggests that making their work more official can help ensure they get fair pay, better working conditions, and access to social security programs. It also says that social security is a basic right for all people, and governments should work to make it easier for workers to access these benefits and raise awareness about them. To make this happen, governments, NGOs, and employers need to work together to create fair and inclusive policies [7].

(Mishra, 2017) looked at the problems faced by unorganized workers in India, who make up about 93% of all workers in the country. The study explains that it's very important to provide social security to this large group. Many of these workers work in bad conditions, without job security, healthcare, or retirement benefits. The study says that good policies and social protections are needed to help improve their lives and recognize their important role in the economy [8].

(Pandey, et al., 2022) looked at the living and working conditions of unorganized workers, especially during the COVID-19 pandemic. They used reports and studies to understand the situation. They found that only about 6% of these workers had any kind of social security. Most of them earned very little money (less than Rs. 10,000 a month), and about 80% lost their jobs during the lockdown. These workers also didn't have much power to negotiate for better pay and faced financial worries. The study suggests that stronger policies and better enforcement are needed to create a safety net for these vulnerable workers [9].

Research Questions

1. What is the extent of awareness among unorganized workers about the e-Shram Card and its associated benefits?
2. How many workers are registered under the e-Shram scheme, and what are the key barriers for those who are not?
3. What is the digital capability of workers, and how does it influence their ability to register and benefit from the e-Shram card and government portals?

Objective

1. To assess the level of awareness and knowledge about the e-Shram Card among unorganized sector workers.
2. To examine the accessibility and registration status of the e-Shram Card, along with key barriers faced during the process.
3. To evaluate the digital literacy of workers and its impact on their ability to access government welfare schemes linked to the e-Shram platform.

Methodology

This study follows a quantitative, descriptive research design to understand the awareness, accessibility, and digital literacy related to the e-Shram card among unorganized sector workers in Shirsolli P.B. village,

Jalgaon district, Maharashtra. The village was selected because it has a significant number of unorganized workers involved in occupations such as agricultural labor, domestic work, construction, tailoring, vending, transport, and factory work.

A sample of 125 respondents was selected using random sampling to ensure a fair representation of diverse gender, age, and occupation, etc. Data collection was conducted through door-to-door household surveys using a structured questionnaire from May to June 2024. The questionnaire was first designed in English and translated into Marathi for field use, with simple wording and visual aids to support participant understanding.

Verbal informed consent was taken from all participants before the interviews, and confidentiality was maintained throughout. The responses were manually recorded and later digitized for analysis using charts, tables, and descriptive statistics.

Data Analysis & Result

The study was conducted in Shirsol P.B. village, Jalgaon district, using primary data collected through a household survey. The focus is to assess the awareness, accessibility, and digital readiness of unorganized sector workers about the e-Shram card. 125 questionnaires were distributed to sample individuals, out of which 107 were completed and returned. This means that around 85.6% of the questionnaires received responses.

Gender Distribution of Respondents

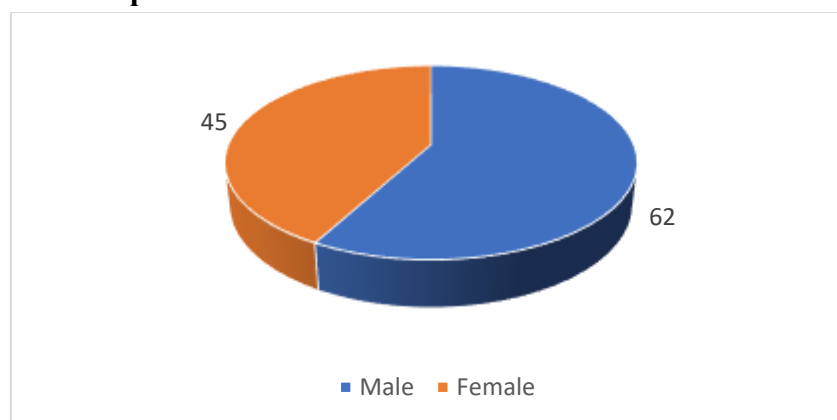


Figure 1: Gender Distribution of Respondents

Among the 107 respondents, 62 were men and 45 were women, as shown in Figure 1. This shows there are slightly more men, but women still make up a significant part of the informal workforce. Knowing the trends by gender helps us find where there may be gaps in awareness and access. Although women are actively involved in informal work, they might face more obstacles with digital access or institutions, which need special attention.

Age Group of Respondents

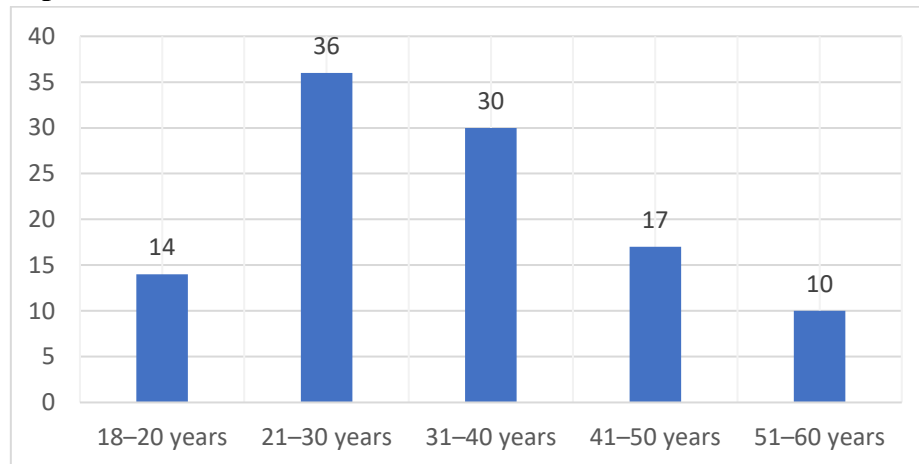


Figure 2: Age Group of Respondents

From Figure 2, Most respondents (62%) are between 21 and 40 years old. This group is the most economically active and mobile part of the informal workforce. The younger group (18–20) and the older group (51–60) are less represented.

Focusing awareness and digital access efforts on the 21–40 age group may help more people quickly benefit from welfare schemes. However, it's important not to forget the younger and older workers, as they might need more help to access their entitlements.

Educational Level of Respondent

Out of 107 respondents, 51 (about 48%) studied beyond the 10th grade, while 22% (24 respondents) had education only up to primary school or were illiterate. Most had basic to middle-level education, as shown in Figure 3.

Better literacy skills can help people become more aware and participate in digital activities. However, because about a quarter of the respondents have limited education, there is a need for simple and easy-to-understand outreach and support services.

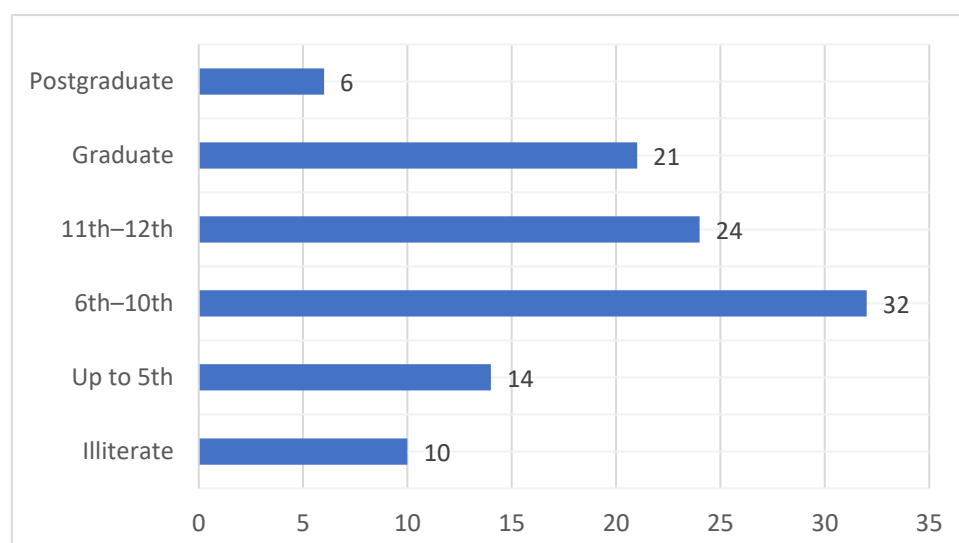


Figure 3: Educational Level of Respondent

Occupation of Respondents

According to Figure 4, most respondents are involved in informal work. The biggest group works as agricultural laborers (27%), followed by those in construction (19%) and migrant work (11%). Fewer people work in skilled jobs like factory work (7.5%) and tailoring (6%). This shows that many rely on low-paying, insecure jobs.

Since most work in unorganized sectors, there is a big need to spread awareness and easy access to social welfare schemes like e-Shram, Ayushman Bharat, and PMSBY. It also shows the importance of training and skill programs to help people find more stable jobs and reduce financial risks.

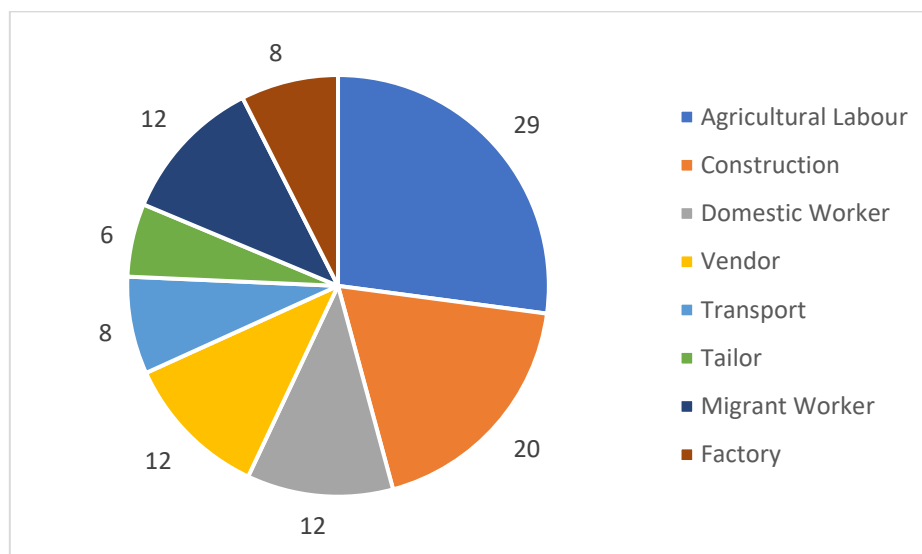


Figure 4: Occupation of Respondents

e-Shram Card Scheme awareness among Respondents:

Out of 107 people, only 38% had heard of the e-Shram Card scheme, while 62% did not know about it. This shows that many workers, especially in rural or unorganized areas, are still unaware of the scheme. Even though the government has shared information, it has not reached a large part of the target group. This low awareness directly affects registration and getting benefits from the scheme. It's important to reach the target through gram panchayats, local workers, and the media. Increasing awareness is key to ensuring informal workers get the social security they need.

Respondents' Understanding of e-Shram Card Features:

The data shows that only 37% of respondents knew that the e-Shram Card links to government schemes. About 30% knew it provides accident insurance, while fewer people knew about pension benefits (17%) or job opportunities (21%). Interestingly, 36% said they didn't know what the card offers, which shows a lot of confusion or a lack of information, according to Figure 5.

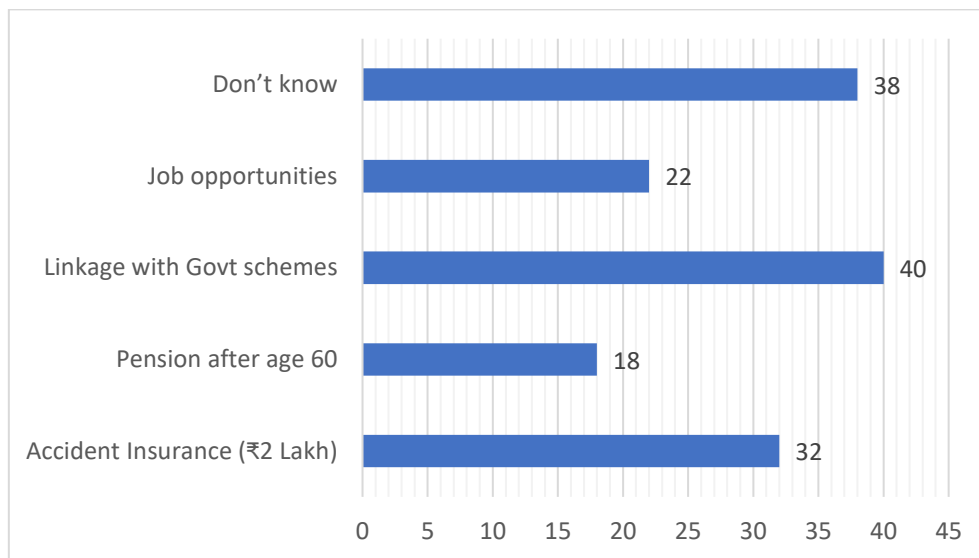


Figure 5: Respondents' Understanding of e-Shram Card Features

This poor understanding can stop people from registering or using the scheme entirely. It's very important to run awareness campaigns that clearly explain the real benefits of the e-Shram Card to workers in the unorganized sector.

e-Shram Card Registration Status Among Respondents:

Out of 107 people, only 36% (39 respondents) have an e-Shram Card, while 64% (68 respondents) have not registered for it. This shows that most workers in the unorganized sector are still not part of the formal social security system, even though the scheme is available across the country. Knowing about the scheme does not always lead to getting the card.

The low number of people with the card suggests there are some obstacles, like a lack of information, needed documents, or digital access. To help more workers get coverage, we need simpler registration steps, local help, and better outreach efforts.

Barriers to e-Shram Card Registration:

Among the 68 unregistered individuals, the most common reason was not knowing where to register, 47%. Many also didn't know enough about the scheme, 37%, or they didn't have time, 27%. Others faced issues like missing documents (22%), not being interested, or fearing their data might be misused (10%). These reasons show that there are many different barriers—some about information, some about logistics, and some personal, as shown in Figure 6.

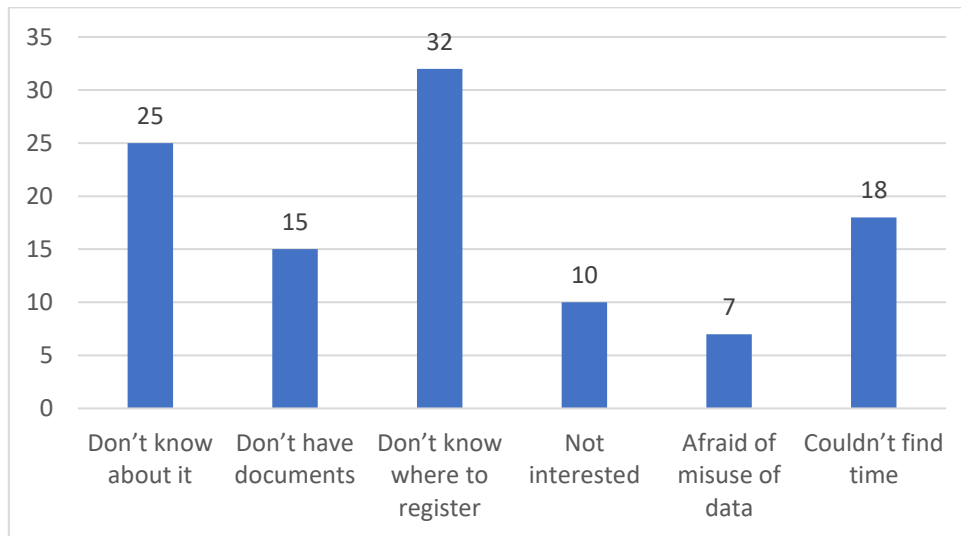


Figure 6: Barriers to e-Shram Card Registration

The findings highlight to us that it's important to have local help to guide workers through the registration process. Improving information, making documents easier to submit, and building trust can help more workers join the scheme and get the benefits.

Difficulties Faced During e-Shram Card Registration:

Out of 39 people who registered for the e-Shram Card, 36% faced some problems, while 64% had a smooth experience. This means about 39% of the people faced challenges while registering. The problems could be technical issues, a lack of digital skills, or confusion about what documents and steps are needed. Since many people face difficulties, there is a need for user-friendly registration systems and help from local helpers. Establishing help desks in local areas or providing mobile support can make the process easier, helping more workers register smoothly in the future.

Type of Mobile Phone Ownership Among Respondents:

According to Figure 7, out of 107 people, 94% have a mobile phone. Among them, 50% use smartphones, and 45% have basic phones. Only six percent don't have a phone at all. This shows that most people have access to mobile phones, especially in semi-urban or rural areas.

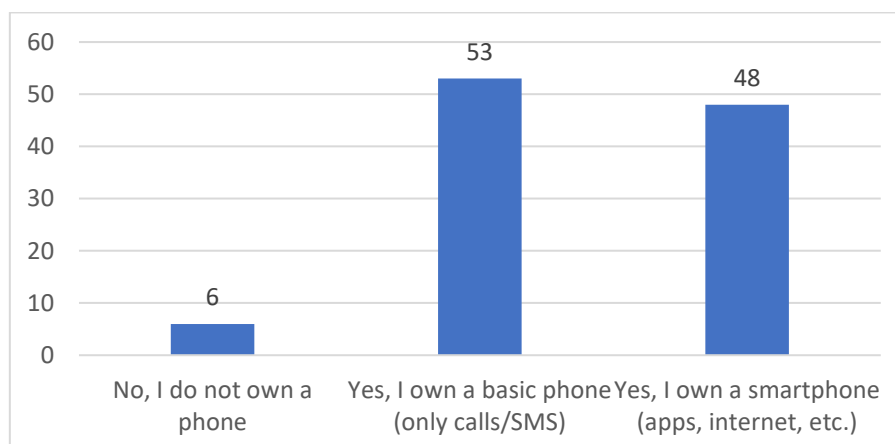


Figure 7: Type of Mobile Phone Ownership Among Respondents

The widespread use of smartphones is a big opportunity for offering digital services, like e-Shram registration. However, since some people use basic phones and a few don't have phones, they might face difficulties accessing online platforms. So, providing help through offline support or assisted registration is still important to reach everyone.

Digital Form-Filling Experience Among Respondents:

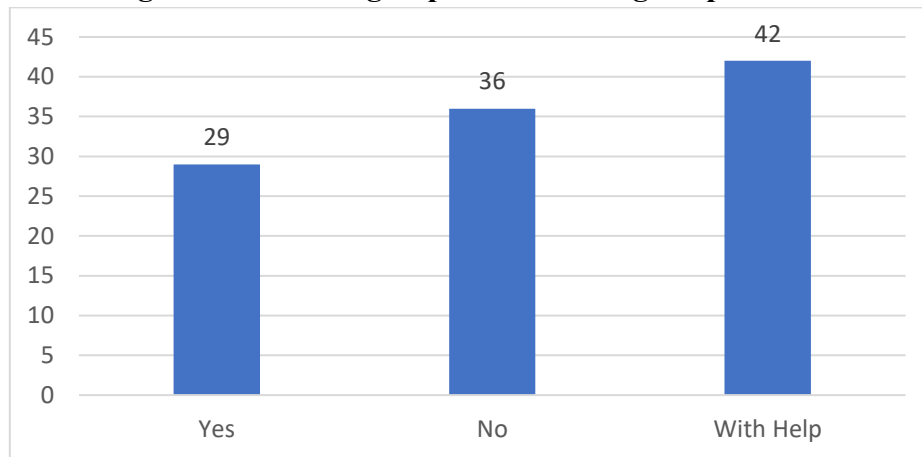


Figure 8: Digital Form-Filling Experience Among Respondents

According to Figure 8, out of 107 people, 27% have filled online forms by themselves, 39% did it with help, and 34% have never done it before. This shows that even though most people have mobile phones, many still don't feel confident or skilled enough to complete online tasks on their own.

Because many rely on help, it points to a gap in digital skills. To help more people participate independently, we need programs to teach digital skills and local help centers. This is especially important for those who want to use online services but find it difficult to do so alone.

Confidence in Using Online Government Portals:

As shown in Figure 9, out of 107 people, only 22% feel confident using online portals, while 37% need guidance, and 41% don't feel confident at all. This shows that most people either lack digital skills or are unsure how to use online platforms independently.

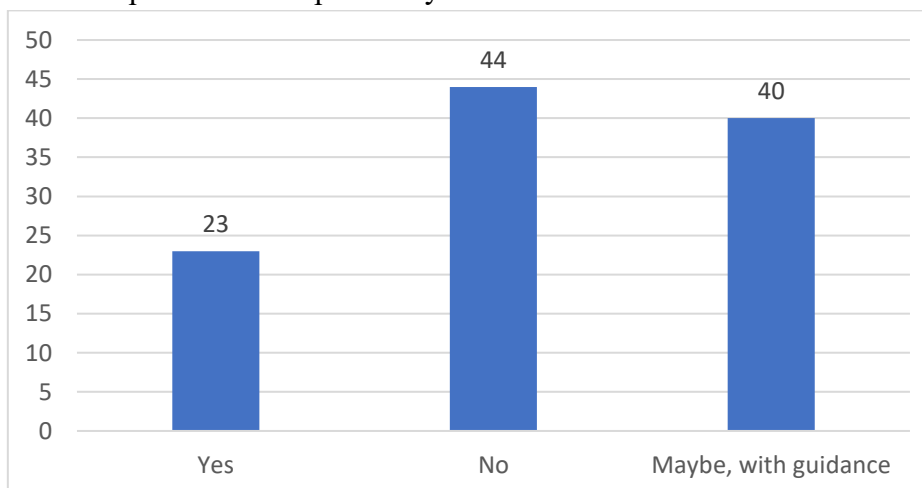


Figure 9: Confidence in Using Online Government Portals

When people lack confidence with digital tools, it can directly affect participation in schemes like e-Shram, which require online registration. To improve access to these schemes, we need to provide guided support, digital training, and simple websites that are easy to use, especially for workers in the unorganized sector who have less experience with online systems.

Scheme-wise Awareness, Registration & Benefits among e-Shram Respondents

The data shows that many people know about schemes like MGNREGA (72%) and Ayushman Bharat (64%), but very few know about others like PM SVANidhi (18%) and PMEGP (22%). Even though some people are aware of these schemes, fewer have actually registered, and even fewer have received benefits. For example, only 4% received help through PM-SYM, even though 26% aware of it.

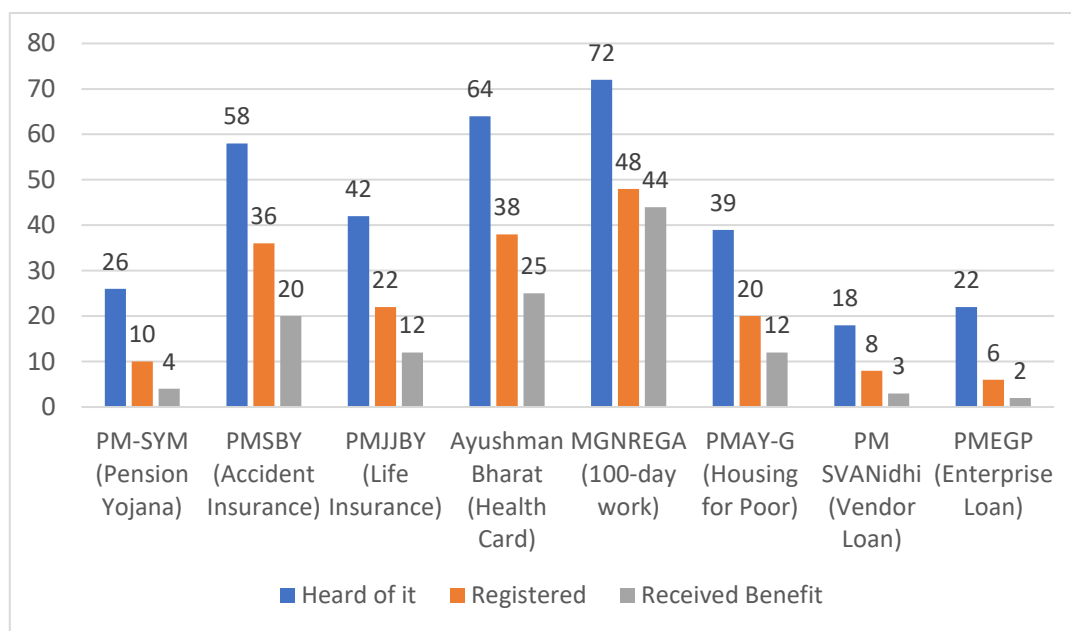


Figure 10: Scheme-wise Awareness, Registration & Benefits among e-Shram Respondents

Figure 10 shows problems at different stages; people know about the schemes, but many don't register or get the benefits. The results indicate a need for better communication, easier registration processes, and ongoing follow-up. Many eligible people may miss out because of a lack of clarity, document issues, or digital gaps. To make sure these schemes reach and help unorganized workers and vulnerable groups, local outreach, simple procedures, and regular checks are very important.

Discussion

This study shows that in Shirsoli village, both men (62%) and women (45%) work in the unorganized sector, which means many people are involved in informal jobs like farming, construction, and housework. Most workers are between 21 and 40 years old, meaning they are young and active in their careers. About half of the respondents had studied beyond 10th grade, but 24% had little or no education. This shows that knowing how to use digital tools is not always linked to education.

Many workers do low-paid and insecure jobs. Awareness about the e-Shram card scheme is still low—only 38% of people have heard of it. Even among those who knew about it, few understood the benefits fully. For example, 37% knew it was linked to government programs, 30% knew about insurance, but 36%

didn't know what the card was for. Many hadn't registered for the scheme—only 36% of those aware had done it.

The main reasons people didn't register were not knowing where or how to apply 47%, not having the required documents 22%, lack of time 27%, fear of data misuse, or simply losing interest. Even among those who registered, many faced problems like confusion or technical issues. Though 94% owned mobile phones, only 27% filled out online forms on their own. Many needed help, and only 22% felt confident using online portals.

When it comes to other welfare schemes, many knew about programs like MGNREGA (72%) and Ayushman Bharat (64%), but not many used or received benefits from them. For example, only 4% got help from the PM-SYM scheme, even though about a quarter of them knew it existed. This shows that there are many hurdles from just knowing about the schemes to actually getting help.

Overall, the study shows that while the systems are in place and intended to help workers, issues like lack of awareness, limited digital literacy, complicated procedures, and weak follow-up stop these programs from reaching their full potential in rural, informal worker communities.

Conclusion

This village-level study shows important insights about how well unorganized workers know about and can access the e-Shram Card. Even though men and women are pretty evenly represented, women in informal jobs may face more challenges, so they need special attention. Most workers are between 21 and 40 years old, which is a young, active group, but support should also be given to both younger and older workers. While many had some schooling beyond 10th grade, about a one-fourth of them had little or no education, showing the need for simpler information and assistance.

Awareness about the e-Shram scheme is still low; only 38% had heard of it, and even fewer understand what benefits it offers. This makes it harder for people to register; only about 36% have registered. Many faced issues like not knowing where to apply, a lack of documents, or insufficient time. Even among those who registered, many faced difficulties, showing that the process needs to be made simpler and more user-friendly.

Though mobile phones are common, many people lack the digital skills to use online systems. Most needed help to fill out forms, and only 22% felt confident using government websites. This limits their access to important welfare programs. Awareness and benefits from related schemes like PMSBY, PM-SYM, and others are also low, pointing to gaps in communication and implementation.

To bridge these gaps, there is a need for coordinating efforts — like digital literacy training, local help centers, awareness campaigns, and easy registration processes. Making sure people know about and can use schemes like e-Shram is key to creating a more inclusive and secure environment for India's large workforce in the informal sector.

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