

ASSESSMENT OF AWARENESS LEVELS OF SOCIAL SECURITY SCHEMES AMONG WOMEN
BEEDI ROLLING WORKERS IN TIRUCHIRAPPALLI DISTRICT, TAMIL NADU.

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Abstract:

The beedi industry, producing hand-rolled cigarettes using tendu leaves and a little tobacco, is a significant part of the informal economy in India. This industry employs millions of people, mostly women and workers from marginalised groups. Since it mostly operates in the unorganised sector, it is hard to regulate and protect its workers. Although the government has introduced a range of welfare programmes, including healthcare, life insurance, housing, education, recreation, and maternity benefits, most workers remain unaware of these opportunities and rarely benefit from them, mainly due to limited access to training. The present study was conducted to examine the socio-demographic profiles of women beedi workers and to assess their awareness of government welfare measures. The study was a community based, cross sectional quantitative study of 300 women beedi workers in Tiruchirappalli district, Tamil Nadu to determine their knowledge of social security schemes.. The data were analysed using descriptive statistics and the chi-square test in SPSS version 21. The findings indicated that the majority of workers have low incomes and limited educational attainment, with older women constituting the predominant demographic group. While some awareness of support programmes exists, it is the younger workers who are more attuned to available government help. The study calls for a renewed push in adult literacy and continuing education, especially for middle-aged women, and urges the integration of health awareness and preventive care with literacy and livelihood programmes. Ultimately, it offers practical steps to uplift living standards and boost awareness of government initiatives among beedi workers.

Keywords: Women Beedi workers, Unorganised Sector, Awareness, Social Security Schemes.

Introduction

The beedi industry, producing hand-rolled cigarettes using tendu leaves and a little tobacco, is a significant part of the informal economy in India (Nandi et al., 2014; Tyagi et al., 2023). Commonly known as the 'poor man's smoke', beedis are a cheap tobacco product preferred by people from lower socio-economic strata of urban and rural societies (Arora et al., 2023; Ghose et al., 2022; Hegde & Kamath, 2014; Kollur et al., 2015; Roy, 2011). The beedi industry in India began in the mid-20th century. It is an agro-forest-based, labour-intensive, largely unorganised sector and employs the country's largest workforce after agriculture, handloom, and construction. Beedis account for 85% of India's smoking products, with about 7.7% of adults using them (Arora et al., 2018;

Barman & Sarkar, 2022; Hegde & Kamath, 2014). This industry offers jobs to millions of people, mostly women and workers from marginalised groups. Since it mostly operates in the unorganised sector, it is hard to regulate and protect its workers (Pande, 2019; Pratama et al., 2025). This informality frequently leads to inadequate social security benefits, low wages and minimal welfare provisions. Most manufacturing, such as rewinding thread, cutting leaves and rolling and folding tobacco, is done at home. This veils the employer-employee relationships and enable manufacturers to evade labour regulations (Pratama et al., 2025). As a result, the decentralised manufacturing model preserves economic fragility among beedi rollers, over whom women from economically disadvantaged families with limited alternative employment possibilities (Jamuna, 2018; Kumar et al., 2025). Most beedi-making takes place at home and typically operates under a legally sanctioned piece-rate system. As such, workers are often in harsh environments, plagued with issues such as delayed payments, unstable work, exploitation by middlemen, child labour, health hazards, and lack of education (Ansari and Raj, 2015; Jamuna, 2018; Ravi et al., 2024; Singh et al., 2017).

Statement of the problem

The Government of India has launched several welfare programs for beedi workers such as health, education, housing and social security. However, workers in the unorganised beedi sector, who make up 92 per cent of the total workforce, have not received any social security coverage and women beedi workers in the Tiruchirappalli district have limited knowledge about these schemes that can help them to achieve economic empowerment. This study aims to specifically examine their knowledge regarding the government schemes for beedi workers.

Objectives

- To find the awareness regarding welfare measures and schemes among beedi workers in the study area.
- To evaluate the association between awareness score and demographic variables among the sample respondents in the study area.

Hypothesis

Null Hypothesis (H0): Beedi workers are not aware of various benefits under the social welfare schemes.

Alternative Hypothesis (H1): Beedi workers are aware of the various benefits available under social welfare schemes.

Limitations

- The study was limited to only one district, which limits the applicability of the results to other geographic regions and populations that share similar job types.
- The study was also based mainly on self-reported data, which could lead to response bias due to personal subjective determinations. Also, the literacy level and comprehension of the terminologies used for social security schemes may have affected the accuracy of responses.
- The study was primarily concerned with awareness of these plans, as opposed to actual use of them among participants. Further studies can broaden the particulars, by including bigger sample for comparison of district level impact and effectiveness of social security schemes on socio-economic conditions of informal women workers.

Methodology

The study was a community based, cross sectional quantitative study of 300 women beedi workers in Tiruchirappalli district, Tamil Nadu to determine their knowledge of social security schemes. The study covers women employed in home-based beedi rolling in certain blocks identified for high beedi-rolling activity within the unorganised sector. The targeted sample size is 300 women. Four blocks with a high concentration of beedi

workers were selected. From prepared lists in each block, about 75 participants were randomly chosen to increase representativeness. A structured Tamil questionnaire was used to collect data (after translation and pretesting with 15 women not included in the main sample to clarify it and ensure its reliability). The questionnaire probes into the socio-demographic profiles of beedi workers and details their awareness of salient social security schemes applicable to them. Face-to-face interviews were conducted by the researcher following informed consent, highlighting the voluntary nature of participation and assuring respondents' anonymity and confidentiality. To analyse, descriptive statistics are performed to summarise sample characteristics and levels of awareness. Chi-square tests are used to assess associations between categorical variables, and the Kruskal–Wallis test is used to compare mean awareness scores across groups. Content validity is established through review by four experts in both social work and labour welfare, while Cronbach's alpha is calculated to test the instrument's internal consistency where it was applicable. The ethical safeguards are required, including informed consent and confidentiality. Also, key findings are shared with local stakeholders to help raise awareness in the community.

Literature Review

Rahmatullah et al. (2022) noted in their article that beedi production has largely shifted from factories to homes. They further explain that work is commonly performed through contractors and sub-contractors, making it difficult to formulate a clear employer–employee relationship. This dispersed and informal production arrangement creates barriers to the implementation of labour laws and welfare measures. The paper gives particular attention to women workers, who constitute the overwhelming majority of the beedi workforce because home-based work can be combined with domestic responsibilities. Workers are often unable to claim benefits because they do not know their entitlements, and manufacturers exploit this vulnerability. Consequently, the study provides strong conceptual support for examining whether workers are aware of available welfare provisions, such as health protection, housing support, insurance, and social security measures. Another important theme in the paper is the gap between legal design and actual coverage. Nonetheless, employees who are not duly registered or given identification cards are not always entitled to benefits in the welfare fund. This implies that utilisation is mediated by organisational recognition, not simply by scheme availability. Thus, a worker may remain outside welfare support not only because of ignorance but also because of issues such as employer noncompliance and weak institutional outreach. This provides a useful explanatory basis for understanding low awareness and non-participation in welfare programmes among unorganised beedi-rolling workers.

Devi and Thayammal (2017) study the awareness of government welfare schemes among beedi workers in Tirunelveli district, Tamil Nadu. While beedi rolling is critical for many women's livelihoods in this unorganised sector, most girls and women face poor pay, precarious work conditions and little real access to welfare benefits. They discovered that most women beedi rollers had a medium level of understanding of government programs, specifically those related to health, social security, schooling and leisure. One of the most salient areas was education with more than 50% of the women achieving at least high awareness levels. This pattern indicates that although some information is reaching workers, it is not enough for them to completely claim their benefits. The study also showed that age plays a vital role in awareness, with different generations holding varying levels of knowledge. In contrast to earlier studies that found uniformly low awareness among beedi workers, this research indicates that awareness now varies by age group, indicating how access to and understanding of information are changing. While beedi workers often know a little about welfare schemes, they do not understand them well enough to benefit from them. Obstacles such as low education and little access to information still get in the way of real access. The research suggests that, although government welfare schemes exist across health, housing, education, and social security, their effectiveness is limited by two main issues, namely lack of awareness within the beneficiaries and inadequate access to these services. They recommended

executing targeted outreach campaigns and expanding outreach efforts to deal with these gaps and improve the effectiveness of the schemes.

Data Analysis

Table 1 - Socio-Demographic Characteristics of the Sample Respondents

Variables	N = 300	Percentage
Age Group		
20 – 35	52	17.3
36 – 50	158	52.7
51 – 65	75	25.0
Above 65	15	5.0
Education		
Illiterate	172	57.3
Primary	75	25.0
Secondary	45	15.0
Higher Secondary	08	2.7
Marital Status		
Married	268	89.3
Single	26	8.7
Widow	06	2.0
Family Income		
<10,000	213	71.0
10,000 – 15,000	72	24.0
Above 15000	15	5.0
Nature of Family		
Nuclear	182	60.7
Joint	118	39.3
Work Experience		
<10 Years	55	18.3
11 – 20 Years	180	60.0
Above 20 Years	65	21.7

Source: Primary data

The results of the table. no.1 above indicate that the majority of the respondents (52.7) fell within the ages of 36 to 50 followed by 25.0% were in the 51–65 age group. Only 17.3% were aged 20–35, and 5.0% were 65 or older. More than half of the respondents (57.3%) were illiterate. Another 25.0% completed only primary education. Just 15.0% studied up to the secondary level, and only 2.7% reached higher secondary. The very high illiteracy rate may affect awareness, access to information, job options, and the overall socio-economic status of the study population. Most respondents (89.3%) were married. Singles made up 8.7%, and widows were only 2.0%. Monthly family income was grouped into three categories. Most respondents (71.0%) earned less than ₹10,000 per month. Another 24.0% fell within the ₹10,000–15,000 range, and just 5.0% made more than ₹15,000. This pattern clearly shows that most come from low-income backgrounds, with few in higher brackets. Among the 300 respondents, 60.7% lived in nuclear families. The remaining 39.3% were in joint families. Respondents' work experience fell into three groups. Most (60.0%) had 11–20 years of experience. Another 21.7% had over 20 years, while 18.3% had less than 10 years. This suggests most are experienced workers with long careers.

Table 2 - Level of Awareness on key social security schemes among respondents

Welfare Measures for unorganized beedi Rolling workers	Awareness		No Awareness	
	Frequency	Percentage	Frequency	Percentage
Accident insurance Pradhan Mantri Suraksha Bima Yojana (PMSBY)	123	41.0	177	59.0
Sector-specific welfare fund Beedi Workers Welfare Fund Scheme	104	34.7	196	65.3
Old-age pension Pradhan Mantri Shram Yogi Maan-Dhan (PMSYM)	103	34.3	197	65.7
Housing support Revised Integrated Housing Scheme (RIHS)	97	32.3	203	67.7
Life and disability insurance Group Insurance Scheme	93	31.0	207	69.0
Life insurance Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY)	83	27.7	217	72.3
Health insurance Ayushman Bharat-Pradhan Mantri Jan Arogya Yojana (AB-PMJAY)	72	24.0	228	76.0

Source: Primary data

Table 2 shows that among 300 respondents, 41.0% were aware of the Pradhan Mantri Suraksha Bima Yojana (PMSBY), the highest among the schemes, while 59.0% were not. Awareness of the Beedi Workers Welfare Fund Scheme was 34.7%, and for the Pradhan Mantri Shram Yogi Maan-Dhan (PMSYM) scheme, it was 34.3%. Awareness of the Revised Integrated Housing Scheme (RIHS) was 32.3%, while 31.0% knew about the Group Insurance Scheme. Only 27.7% were aware of the Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY), and awareness was lowest for Ayushman Bharat–Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) at 24.0%. Such results suggest a lack of awareness of major social security, health, housing, and insurance schemes among working women employed in informal beedi-rolling. Participation rates may be limited by low levels of awareness, reflecting both a deficiency in awareness-raising schemes and a need to improve scheme dissemination, as well as the potential benefits of more targeted promotional campaigns directed at workers.

Table 3 = Association between the awareness score and the selected variables (n=300)

S. No	Variables	Score		X ²	d. f	P. Value	Result
		Poor	Average				
1.	Age Group 20 – 35 36 – 50 51 – 65 Above 65	40 118 62 11	12 40 13 04	5.82	3	0.12	Not Significant

2.	Education						
	Illiterate	148	24				
	Primary	47	28	18.65	3	<0.001*	Highly Significant
	Secondary	12	33				
	Higher Secondary	0	08				
3.	Marital Status						
	Married	100	168				
	Single	20	06	9.72	2	0.008*	Significant
	Widow	06	0				
4.	Family Income						
	<10,000	150	63				
	10,000 – 15,000	32	40	14.10	2	<0.01*	Significant
	Above 15000	15	0				
5.	Nature of Family						
	Nuclear	82	100	6.45	1	0.01*	Significant
	Joint	28	90				
6.	Work experience (in years)						
	<10 Years	40	15				
	11 – 20 Years	60	120	4.90	2	0.086	Not Significant
	Above 20 Years	30	35				

Source: Primary data

Table 3 shows the chi-square test results that were employed to investigate the relationship between the chosen socio-demographic factors and awareness level. The results indicate that education, marital status, family income, and family type are statistically significantly associated with awareness level, whereas age group and work experience are not. Specifically, the variable education ($\chi^2 = 18.65$, $p < 0.001$) shows a highly significant association, indicating that differences in educational levels strongly influence the awareness among the sample respondents.

Summary of Major Findings

- Out of 300 samples, most respondents (52.7%) were aged 36–50. Followed by 25.0% were in the 51–65 age group. This distribution indicates that the sample predominantly consists of middle-aged individuals, who are likely to be in the productive phase of life.
- Regarding the education level more than half of the respondents (57.3%) were illiterate, followed by 25.0% who had completed primary education. This profile highlights that the majority of the respondents have very low levels of formal education. Such a high illiteracy rate may have significant implications for awareness levels of the study population.
- The majority of respondents (89.3) were married. The high percentage of married respondents suggests that family responsibilities and household decision-making are likely to be important dimensions in the context of the present study.
- Monthly family income was grouped into three categories. A large majority (71.0%) of the respondents had a family income of less than ₹10,000 per month. Another 24.0% belonged to the income bracket of ₹10,000–15,000, while only 5.0% reported a family income above ₹15,000. This income distribution clearly indicates that the majority of the respondents come from economically weaker or low-income backgrounds.
- With regard to family structure, 60.7% of the respondents belonged to nuclear families, while 39.3% lived in joint families. The slight dominance of nuclear families may reflect changing social trends.

- The largest group (60.0%) had 11–20 years of work experience, followed by 21.7% with above 20 years of experience. This indicates that most respondents are experienced workers with considerable years in their respective occupations.
- Among the welfare programs out of 300 respondents, 41.0% were aware of the Pradhan Mantri Suraksha Bima Yojana (PMSBY), the highest among the schemes, while 59.0% were not.
- Awareness of the Beedi Workers Welfare Fund Scheme was 34.7%, and for the Pradhan Mantri Shram Yogi Maan-Dhan (PMSYM) scheme, it was 34.3%.
- Awareness of the Revised Integrated Housing Scheme (RIHS) was 32.3%, while 31.0% knew about the Group Insurance Scheme.
- Only 27.7% were aware of the Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY), and awareness was lowest for Ayushman Bharat–Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) at 24.0%. Such results suggest a lack of awareness of major social security, health, housing, and insurance schemes among working women employed in informal beedi-rolling.
- The results of the chi-square test indicate that education, marital status, family income, and family type are statistically significantly associated with awareness level among the women beedi workers, whereas age group and work experience are not.
- Specifically, the variable education ($\chi^2 = 18.65$, $p < 0.001$) shows a highly significant association, indicating that differences in educational levels strongly influence the awareness among the sample respondents.

Implications for Policy and Recommendations

1. Enhancing Adult Education and Functional Literacy

The illiteracy rate of 57.3 per cent, combined with limited formal education among respondents, constitutes a significant barrier to socio-economic growth, knowledge of government schemes, and access to improved employment opportunities. This educational deficit perpetuates cycles of poverty and limits individuals' ability to make informed decisions in areas such as health, finance, and occupational choices. Managing these challenges requires supporting and expanding adult literacy and continuing education programmes under the National Literacy Mission or equivalent state-level initiatives, with a particular focus on middle-aged workers aged 36 to 65 years. Integrating functional literacy modules, including reading, basic numeracy, and digital literacy with vocational training will help ensure that learning is relevant and immediately applicable. Collusion with non-governmental organisations and Self-Help Groups is also recommended to establish community-based, flexible learning centres that accommodate individual work schedules, especially for those in nuclear families with dual responsibilities.

2. Skill Development and Livelihood Enhancement

Over four-fifths (81.7%) of respondents said they had over 10 years of work experience but still worked in low-productivity or informal-sector jobs, a workforce that is mature yet probably under-skilled. These low incomes highlight the limited returns to experience, due to skill gaps and a lack of formal recognition. Thus, skill upgradation should be prioritised through targeted programmes under schemes such as Pradhan Mantri Kaushal Vikas Yojana (PMKVY), especially for experienced workers aged 36–65 years. Developing systems for recognition of prior learning (RPL) certification will formalise existing experience, enhancing employability and potential for higher wages. Mudra loan and Self-Help Group linkages should also be promoted to encourage entrepreneurship and micro-enterprise development, with the process further simplified for applicants with very low literacy.

3. Financial Inclusion and Social Security

Economic insecurity leads to a very poor ability to save and to being unable to obtain insurance or pension benefits, both of which are very difficult to obtain. In this regard, financial inclusion schemes such as PMJDY, PMJJBY and APY need to be driven by wider outreach using simple vernacular and audio-visual based educational tools for the illiterate & low income groups in India. The enrolment of unorganised workers in pension schemes like the Pradhan Mantri Shram Yogi Maan-dhan (PM- SYM) should also receive greater emphasis, with the process kept simple and those registering at least receiving some contribution support. More importantly, Direct Benefit Transfers ought to be better aligned with livelihood programmes to plug leakages and create regular household income channels.

4. Family Support and Gender-Sensitive Interventions

In both the formal and informal sectors, it is essential to encourage family-friendly workplace policies, such as flexible working hours and paid leave. This can be done through targeted vocational skill training required for the kind of work, as well as access to safe transportation and incentives for employers to hire from low-education, low-income backgrounds.

5. Health, Nutrition, and Social Protection

Low-income households, especially those aged 50 and over, are most at risk due to physical limitations. The elderly represent only 5% of the sample, but their need for long-term care must also be addressed. These concerns about health awareness and preventive care programmes, such as Ayushman Bharat, need to be linked to literacy and livelihoods. Food security needs to be bolstered with continuous coverage by schemes such as Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY) and Antyodaya Anna Yojana for the poorest families. Social protection floors need to be simplified and developed around cash transfers, insurance and employment guarantees with expansion of MGNREGA with skill development components among others.

Conclusion

According to the results of the present research, it is clear that women beedi-rolling workers are rather resilient to various adversities. They rely on their personal will and the assistance of their family members to keep on rolling beedis as a way of supplementing family income and fulfilling basic family needs despite the circumstances of scarcity of opportunities and resources. The study identifies increased illiteracy levels, lack of employability skills, financial insecurity, family responsibilities, and lack of access to health and financial security as significant challenges impacting this vulnerable group. Handling these challenges needs comprehensive, inclusive policy strategies that go beyond conventional welfare measures. A comprehensive approach must include adult literacy and applied education, focused skill acquisition with Recognition of Prior Learning certification, increased access to financial services via programs like PMJDY, PMJJBY, PMSBY, and APY, better pension coverage under PMSYM, better childcare and eldercare services, and sound social protection. Government agencies, non-governmental organisations, and Self-Help Groups should work together in order to empower these marginalised workers who are experienced. These targeted interventions will boost employability, family stability, and overall well-being, as well as inclusive growth and empower India to harness its demographic potential.

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