

Bridging the Implementation Gap: Awareness, Accessibility and Addressing the Challenges of Pradhan Mantri Social Security

Schemes in Rural Karnataka

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Abstract

The Pradhan Mantri social security schemes (Pradhan Mantri Jeevan Jyoti Bima Yojana - PMJJBY, Pradhan Mantri Suraksha Bima Yojana - PMSBY, and Atal Pension Yojana - APY) launched in India a decade ago are still underused, especially in rural areas. This research explores the 3A (Awareness, Accessibility, and Address the challenges) factors among 414 rural respondents from five districts of Karnataka. The data have been collected through a structured questionnaire and interview schedule, through a purposive sampling method. The study uses chi-square tests, independent-samples t-tests, logistic regression, and structural equation modelling (SEM) to show that 44.44 percentage of respondents are enrolled in APY (44.44%). The major source of awareness is interpersonal sources of information - friends, family and local organisations. Education appeared as the strongest predictor of accessibility (Chi-square = 145.073, $p = 0.001$), and gender did not significantly influence awareness ($t = 0.001$, $p = 0.999$). Unexpectedly, perceived problems did not significantly influence scheme enrolment ($p = 0.634$), suggesting that upstream awareness and literacy issues, rather than operational issues, are the key barriers to enrolment. The SEM also verified the role of education as a moderator between awareness and perceived benefits. The paper concludes that to close the implementation gap, literacy-tied awareness-raising campaigns, ease of enrolment, and deepening institutional connections with the grassroots are needed. These insights have important implications for the social protection agenda in India and for other developing countries seeking to achieve universal social security coverage under the Sustainable Development Goals (SDGs).

Keywords: PMJJBY, PMSBY, Atal Pension Yojana, financial inclusion, social security, rural India,

1. Introduction

Financial inclusion and social protection are the pillars of inclusive economic growth. It guarantees the availability and affordability of financial products for all, particularly the poor, to efficiently manage their finances, foster financial growth and enhance their wealth and welfare. First, to offer the poor the opportunity for financial security. More than 90 per cent of the Indian workforce is engaged in the informal sector, and the majority of the population lacks formal insurance, pensions, or income replacement (Ginneken, 2009). To address this vulnerability, the Government of India introduced three flagship social security schemes on 9 May 2015 under the Jan Suraksha banner: the Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY), the Pradhan Mantri Suraksha Bima Yojana (PMSBY), and the Atal Pension Yojana (APY). These schemes, in aggregate, form a basic social protection floor for the unorganised sector in India using the Jan Dhan-Aadhaar-Mobile (JAM) trinity delivery system.

A decade after their launch, the schemes have achieved considerable scale:

Table No-1: Gross Enrolments

S.No	Duration	Gross Enrolments - Cumulative (Crore)		No. of Claim Received - Cumulative (No.)		No. of Claims Disbursed - Cumulative (No.)	
		PMJJBY	PMSBY	PMJJBY	PMSBY	PMJJBY	PMSBY
1	2019-20	5.99	15.74	1,48,276	41,601	1,37,298	32,904
2	2020-21	7.08	18.76	1,94,025	51,111	1,80,848	39,995
3	2021-22	10.32	23.36	2,56,523	58,967	2,39,605	45,674
4	2022-23	12.77	28.37	6,04,889	1,22,082	5,76,121	97,227
5	2023-24	16	33.78	6,90,509	1,46,717	6,60,383	1,15,294
6	2024-25	20.07	44.09	8,18,161	1,77,659	7,85,803	1,35,780

Source: dfs.dashboard.nic.in

The above table suggests not only low claim rates but also a policy implementation gap (Vidyashree & Rathod, 2015). This is especially the case in rural areas, where literacy levels are low, digital penetration is weak and institutional engagement is weak. Although existing research has documented lack of awareness (Srivastava & Kandpal, 2014; Vidhate & Kundap, 2016), lack of accessibility (Kohli et al., 2017; Sachdev et al., 2022) and scheme design limitations (Sane & Thomas, 2015; Anitha, 2017), a paucity of research has applied a multi-method analytical framework to evaluate the three aspects within a single rural sample. Moreover, causal links between awareness/education, accessibility and enrolment in the Indian setting have received little attention.

Although these schemes have been implemented with a progressive intent and rolled out on a wide scale, the effectiveness of such schemes has been uneven, especially in rural areas. States like Karnataka which show both the economic development and disparities in rural areas provides a critical background in understanding the gap between policy formulation and realization at the ground level. Although the official data has shown a consistent growth in the number of people enrolled, a more in-depth review of the data indicates that awareness, accessibility and actual utilization of the benefits are still significantly limited among the rural population (NITI Aayog, 2021; Reserve Bank of India, 2022). The primary factor is Awareness key issues. A large percentage of the qualified beneficiaries in the rural areas are either unaware of such schemes or they only have partial information regarding the benefits, eligibility criteria, and enrolment procedures. Research has indicated that awareness may not always be converted into participation and there are numerous individuals who are not clear on procedural requirements or mistrust the institutional mechanisms (Kumar & Prakash, 2019). Such information asymmetry is also enhanced by the low state of financial literacy and low outreach systems in geographically spread rural population.

Secondly, barriers to accessibility are equally important in the limitation of the effectiveness of Pradhan Mantri Social Security Scheme (PMSSS). These comprise issues to do with documentation, digital infrastructure, and institutional reach. Though these schemes through digital platforms like Aadhaar and bank accounts under the larger financial inclusion agenda has made the schemes more efficient, it has also created some exclusionary pressure on the population without access to or literate with digital platforms (World Bank, 2020). Families living in the rural areas may end up struggling with using online systems, accessing needed documents, or using the banking services, which limits their opportunities to enrol or claim the benefits. The implementation gap is further increased by administrative inefficiencies. Slow processing of claims, inability to coordinate across agencies, and bureaucracies make it less likely that people will trust a government system or even participate in it. In addition to this, socio economic and

cultural aspects such as gender differences, informal working behaviors, and low levels of institutional trust, keep affecting the adoption and utilization of these schemes.

These challenges are well exemplified in the case of rural Karnataka. The state has realized significant gains in digital governance and financial inclusion programs though disparities exist across the districts, particularly in remote and agrarian communities. The other factors that make the effective dissemination and adoption of social security schemes more complicated are the levels of literacy, digital divide, gender inequality, and reliance on the informal employment structures. Furthermore, the access to banking infrastructure and digital platforms to enrol and deliver benefits often leaves out individuals who do not access formal financial services or technology.

Though the state has been making great progressive steps in the sphere of financial inclusion and the delivery of social welfare, the inequalities across districts and demographic groups remain. It is indicated that the enrolment rates are quite diverse, and marginalized groups of people, including women, agricultural workers, and informal workers, are underrepresented in the scheme participation (Government of Karnataka, 2022). That emphasizes the necessity of a more complex approach to localized barriers and context specific implementation strategies. Deb et al (2016), It is against this backdrop that the current study will endeavour to investigate the implementation gap in Pradhan Mantri Social Security Schemes in rural Karnataka by focusing on three important dimensions, namely; awareness, accessibility and administrative issues. The research will determine the underlying factors resulting in low participation and utilization, as well as to suggest strategic interventions that will help to increase the effectiveness of these schemes.

2. Theoretical Framework

The theoretical framework of this research is based on two background frames of access research and is extrapolated in the context of the welfare delivery domain. The five-dimensional model of access to health services developed by Penchansky and Thomas (1981) includes the five dimensions of access, namely, availability, accessibility, accommodation, affordability, and acceptability. This framework has been used extensively in the delivery of social services in other sectors other than in health due to the fact that it has the capacity to capture the structural, geographical and behavioural dimensions at the same time.

Levesque et al. (2013) extended the model by foregrounding the role of individual-level capacities in enabling or constraining access, such as literacy, social capital, and perceived need. Their patient-centred access framework differentiates the supply-side dimensions of a service (approachability, acceptability, availability, affordability, and appropriateness) and the demand-side abilities of the population (ability to perceive, seek, reach, pay and engage). This lens of demand side is especially relevant to the Indian social security context where schemes are technically accessible to millions but practically inaccessible due to informational and literacy barriers.

Based on these backgrounds, the proposed study operationalises a 3A framework Awareness, Accessibility and Addressing Challenges as an applied analytical framework to evaluate the adoption of welfare scheme in rural India. Awareness is the informational and cognitive aspect of access: whether individuals are aware of the existence of a scheme, eligibility criteria, premium structure and benefits. Accessibility incorporates the structural and institutional aspect: whether the processes of enrolment, banking facilities, and communication access allow participation. Addressing Challenges reflects the demand-side Friction dimension: the operational, procedural, and administrative barriers that enrolled, claimed or potential beneficiaries experience.

The framework is also enlightened by behavioral economics views on passive enrolment versus active enrolment. As per Jain and Ranjan (2017): Basu and Banerjee (2020) arguments, automatic deduction mechanisms and default enrolment architectures can drive initial uptake, but sustained participation

requires real awareness and perceived relevance. This conforms with the SEM findings of this study, which reveal that education intervenes between the awareness and the perception of the benefits, as such informational access alone is not sufficient without the cognitive ability to process and act on the information contained in a scheme.

3. Review of Literature

3.1 Knowledge of Social Security Schemes.

One of the recurring themes in the literature is that there is a superficial presence of awareness of government social security schemes in India. According to Srivastava and Kandpal (2014), the respondents aged 60 and above living in rural Dehradun were aware of the fact the schemes existed, but their understanding of procedural requirements and benefit structures were limited. Equally, in a cross-sectional study of 360 older adults (55-90 years) in rural Delhi, Kohli et al. (2017) found that levels of awareness did not significantly differ according to education, occupation, or marital status - indicating wide but shallow informational coverage.

According to Vidhate and Kundap (2016), 76 per cent of the rural respondents close to a medical college were aware of at least one social security scheme and the level of awareness was moderated by age, gender and literacy. Kumar and Rengma (2022) evaluated the importance of the communication modes in the level of awareness about the Jan Suraksha schemes and concluded that interpersonal channels, especially the bank staff and community workers were more effective in creating meaningful awareness compared to mass media.

In a recent study on the scheme beneficiaries in Haryana, Sharma, Mehla, and Dhankhar (2025) identified that the lack of understanding in the implementation was compounded with the lack of awareness even among the registered participants. This observation is consistent with the current study finding that the percentage of information sources (television, radio, newspaper) was less than five per cent.

3.2 Access and Educational barrier

Education has always proven to be a major mediator of access to schemes. According to Jain and Ranjan (2017), automatic premium deduction made initial enrolment easy among Jan Dhan account holders, but low-literacy populations had difficulties with the claim procedures and renewal requirements. Singh, Sanyal, and Bharati (2015) contended that not only the reforms in scheme design are required but also the corresponding investments in financial literacy.

Dev and Prabhu (2016) warned that enrollment figures are not good proxies of the actual impact on welfare, because structural disparities in education and institutional trust generate unequal effects even among participants who are actually enrolled. Bardhan and Mookherjee (2016) have shown that states that have more local governance institutions, such as Kerala, get higher enrolment and claim settlement rates under APY and PMJJBY, and that institutional competence mediates the accessibility of higher education.

Lahiri and Biswas (2022) affirmed the financial literacy-inclusion nexus in rural India and found that the higher the literacy levels, the better the relationships between literacy levels and insurance scheme participation. Agarwal and Mahajan (2019) specifically studied the gendered exclusion in microinsurance schemes, and found that women had structural barriers to enrolment independent of the level of awareness - a finding that is contrary to the present study result of no significant gender effect on awareness, though this may reflect the relatively high female literacy in Karnataka compared to other states.

3.3 Challenges and Implementation Cases.

Anitha (2017) expressed concerns about the actuarial sustainability of PMJJBY and PMSBY in the long-term given their low premium models, warning that higher claims in the aftermath of health crises would burden insurance funds. One of the implementation failures identified by Singh et al. (2015) was high lapse

rates on renewals, which they attribute to ineffective communication and the lack of grievance redressal mechanisms. The financial limitations of PMJJBY on the district level, stating that the processing of claims and the documentation requirements posed a strain on rural beneficiaries; financial literacy was a significant factor in the adoption of insurance products, and low-literacy households not only show a lower level of awareness but also a lower level of perceived relevance of the available schemes.

In a cross-sectional study that was evaluative and carried out in Kanpur rural, Sachdev et al. (2022) found that their government-supported awareness campaigns had some coverage, but that knowledge of claim procedures among their enrolled beneficiaries was very poor. They find that their results are consistent with the logistic regression result in the present study that perceived challenges is not a significant predictor of enrolment, implying that the challenge barrier may be downstream of the awareness barrier.

3.4 Scheme-Specific Literature: PMJJBY, PMSBY and APY.

The scheme of PMJJBY and PMSBY as financial inclusion tools and how they were integrated with the Jan Dhan Yojana account infrastructure as an enabling factor to the mass enrolment. They also pointed out the democratising characteristics of the nominal premium structure of Rs 436 per year on PMJJBY and Rs 20 on PMSBY as democratising, but added that the benefit ceiling of Rs 2 lakh per year might be too low to adequately recover family financial loss following a death.

The actuarial basis of APY through rigorous simulation, and suggested automatic enrolment with equal government contributions. Bhattacharjee and Rengma (2020) found that generally, the attitudes towards APY were positive among enrolled participants but reported poor understanding of the mechanics of pension accumulation among non-enrolled populations. Joseph (2018) provided a conceptual synthesis of the entirety of the three Jan Suraksha schemes and argued that their combined potential of achieving financial inclusion was conditional on overcoming the awareness-accessibility nexus. The study by Singh, Singh, and Singh (2022) analyzed the experience of PMSBY, PMJJBY, and APY in Himachal Pradesh and found the enrolment trends to be largely similar to the experience of Karnataka in the same domain - APY leading, followed by PMJJBY, with the lowest participation recorded by PMSBY.

3.5 Research Gap

Although the literature that remains is replete with scheme-specific and regional evaluations, there are a number of gaps in the literature. First, the data used in most studies is either cross-sectional secondary data or small convenience samples, which limits their analytical generalisability. Second, the few researches that have involved the structural equation modelling to test the causal direction between awareness, education, accessibility, and enrolment to an integrated framework. Third, the empirical underutilization of the counterintuitive finding, which claims that the problems do not significantly predict the enrolment, and vice versa, is underutilized. Fourth, Karnataka, in spite of being one of the more developed states in India, has received little coverage in the social security schemes literature as compared to the northern and north-eastern states. This current research focus on the above gaps bring the suitable outcomes.

4. Methodology

4.1 Research Design and Approach:

This research design is quantitative, cross-sectional research design with prescriptive orientation. This is an explanatory research design that aims not only at describing patterns of awareness, accessibility and challenges but also in identifying causal relationships which can be used to inform the policy. Individual rural residents in Karnataka who are eligible to or currently enrolled to PMJJBY, PMSBY or APY is the unit of analysis.

4.2 Area and Population of Study

The geographical area is rural Karnataka where the data was collected on five geographical districts; Bangalore Rural (23.2%), Tumkur (21.7%), Mandya (20.5%), Ramnagara (16.2%), and Mysore (20.5%). Purposive (judgement) sampling was used to select these districts to guarantee representation of both peri-urban and remote rural populations in the southern and central agro-climatic regions of Karnataka. The target population was residents between the ages of 18 and 70 years and having or capable of having savings bank accounts, including farmers, self-employed, daily wage earners, and homemakers.

4.3 Sample Size and Sampling Method

In the study, a total of 414 respondents took part in the study. Purposive sampling was used because it was necessary to include those respondents who had either direct or potential exposure to the three schemes. Though purposive sampling inherently limits the scope of the external validity, it was considered as the right choice, as the aim was to capture scheme relevant experiences and not a population representative estimate. The sample is spread in five districts to give intra-state geographic variation.

4.4 Data Collection Instruments

The data were taken using a structured questionnaire that has five sections, such as; demographic details, level of awareness on NSSS, accessibility and affordability, challenges while using the schemes and benefits and financial inclusion. The tool was complemented with a semi-structured interview schedule that will be conducted by trained research assistants. A pilot-test and full deployment of the questionnaire were done to ensure clarity of items and cultural appropriateness.

4.5 Reliability and Validity

Cronbachs alpha was used to determine the internal consistency of the 27-item scale. The total alpha was 0.866, which implies that there is high reliability. The sub-scale alphas included: Awareness = 0.897, Accessibility = 0.807, Challenges = 0.781, and Benefits = 0.800 all above the accepted threshold of 0.70 (Nunnally, 1978). Content validity was determined by reviewing the content with expertise of the research team and pilot testing.

5. Data Analysis

The study conducted is a Quantitative Research studying the Awareness, Accessibility and Challenges of people in Rural areas of Karnataka in using National Social Security Schemes. This Chapter 4 provides an insight on the empirical results and findings of the study derived from the analysis done as per the requirements.

Table 4.1: Demographic Profile of the Participants

Source: Primary Data

Table 4.2: Reliability Statistics

Factor	Cronbach's alpha	No of Items
Awareness	0.897	08
Accessibility	0.807	05
Challenges	0.781	09
Benefits	0.800	05

Source: Primary Data

The consistency and the strength of the measurement scale used in the study is indicated in the reliability

Sl. No	Variables	Respondents	Frequency	Percentage
1	Gender	Male	212	51.2
		Female	202	48.8
		Total	414	100
2	Age	18 to 25	61	14.7
		26 to 35	51	12.3
		36 to 45	80	19.3
		46 to 55	90	21.7
		56 to 65	80	19.3
		66 to 75	52	12.6
		Total	414	100
3	Education	No Formal Education	110	26.6
		SSLC and Below	106	25.6
		Higher Secondary / PUC	88	21.3
		Undergraduate	104	25.1
		Post Graduate	6	1.4
		Total	414	100
4	Districts	Bangalore Rural	96	23.2
		Mandya	85	20.5
		Mysore	76	18.4
		Tumkur	90	21.7
		Ramnagara	67	16.2
		Total	414	100
5	Enrolment Status	PMSBY	53	12.8
		PMJJBY	76	18.4
		APY	104	25.1
		None of the above	181	43.7
		Total	414	100
6	Source of Information	TV / Radio	3	0.7
		Newspapers	11	2.7
		Social Media	17	4.1
		Bank / Post Office	65	15.7
		Friends / Relatives	75	18.1
		SHGs / NGOs	14	3.4
		Grama Panchayath	49	11.8
		None of the Above	180	43.5
		Total	414	100

analysis. The alpha values of all the four factors are within desirable to excellent ranges, this proves that the items of each factor are highly correlated and they accurately measure the construct of that factor. The Awareness factor the alpha of which is 0.897 and has eight items demonstrates a high level of consistency in its answers, which means that there is a high level of reliability in the answers to this factor questions. Similarly, the Accessibility factor (0.807) and Benefits factor (0.800), both having five items, have high

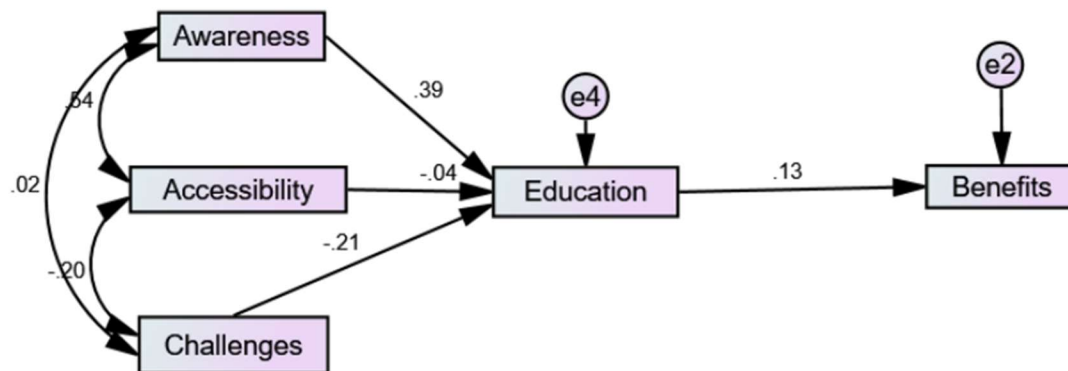
[illegible]

Awareness	Equal variance assumed	.193	.660	-.001	412	.999	.000	.091	-.179	.178
	Equal variance not assumed			-.001	410.422	.999	.000	.091	-.179	.178

Source: Primary Data

Independent Samples t -test was applied to determine the existence of difference between the mean awareness regarding National Social Security Schemes among males and females' respondents. The Test of Equality of Variances in Levene gave a significance of 0.660, which was greater than 0.05 hence showing that the hypothesis of equal variance was changed. t -statistic = -0.001 at 412 dfs, and at the same time, the two tailed significant value = 0.999. Since this p -value is significantly higher than the traditional level of 0.05, the outcome suggests that there is no significant difference between the mean awareness of both genders. The difference of the means was statistically very close to zero (0.000), and the confidence interval of -0.179 to +0.178, which once again shows that there was actually no meaningful difference. In line with this, the null hypothesis (H0), which is the mean in awareness on National Social Security Schemes is the same across the genders, is accepted and the alternative hypothesis (H1) is rejected.

Structural Equation Modelling (SEM)



Source: Primary Data

Table 2: SEM Path Coefficients (Selected)

Path	Standardised β	C.R.	p-value	Significance
Awareness → Education	-0.495	7.231	0.000	***
Awareness → Challenges	-0.527	4.508	0.000	***
Accessibility → Education	-0.068	—	0.048	*
Education → Benefits	-0.082	2.737	0.004	**

Source: Primary Data. Note: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$

The SEM model examined causal pathways among awareness, education, accessibility, challenges, and perceived benefits. Key path coefficients are presented in Table 2. Awareness had a strong positive effect on education ($b = -0.495$, C.R. = 7.231, $p = 0.000$) and a significant negative effect on challenges ($b = -0.527$, C.R. = 4.508, $p = 0.000$), indicating that higher awareness reduces perceived challenges. Accessibility had a slight negative effect on education ($b = -0.068$, $p = 0.048$). Education demonstrated a significant positive effect on benefits ($b = -0.082$, C.R. = 2.737, $p = 0.004$), confirming its role as a mediating variable between awareness and the perception of scheme benefits.

Fit Statistics of the Measurement Model

Particulars	Calculated Value	Recommend value
C-Min	11.264	<3
Degrees of Freedom(d.f.)	3	
C-Min / d.f.	3.754	
Comparative Fit Index (CFI)	0.816	>0.9
Normalized Fit Index (NFI)	0.767	>0.8
Tucker Lewis Index (TLI)	0.713	>0.9

Source: Primary Data

Model fit indices showed moderate adequacy: CMIN/DF = 3.754, CFI = 0.816, NFI = 0.767, TLI = 0.713, and RMSEA = 0.017. While CFI, NFI, and TLI fall below the conventional thresholds of 0.90, the RMSEA of 0.017 indicates excellent approximation. As Hu and Bentler (1999) note, no single index is definitive, and the model demonstrates substantially better fit than the independence baseline across all indices. The moderate fit indices are acknowledged as a limitation and suggest scope for model refinement with expanded variable sets in future research.

5. Findings and Analysis

5.1 Demographic Profile

The sample comprised 212 males (51.2%) and 202 females (48.8%), reflecting near-parity in gender representation. Age distribution showed that the economically active and pre-retirement cohorts were dominant: 46–55 years (21.7%), 36–45 years (19.3%), and 56–65 years (19.3%). Young adults aged 18–25 years accounted for only 14.7% of respondents, suggesting lower youth participation in social security scheme discourse. Educational attainment was low: 26.6% had no formal education, 25.6% had education up to SSLC level, and only 25.1% were graduates.

Enrolment data revealed a substantial participation gap: 43.7% of respondents were not enrolled in any NSSS. Among enrolled respondents, APY recorded the highest participation at 25.1%, followed by PMJJBY at 18.4 per cent and PMSBY at 12.8%. The higher uptake of APY relative to insurance-based schemes is noteworthy and may reflect the tangibility and long-term accumulation appeal of pension-based products over risk-pooling instruments.

Information sourcing patterns were dominated by informal channels, friends and relatives were the most cited source (18.1%), followed by banks and post offices (15.7%), and Gram Panchayaths (11.8%). Mass media contributed negligibly: television/radio (0.7%), newspapers (2.7%), and social media (4.1%). Critically, 43.5% of respondents reported having no source of information about NSSS whatsoever a finding that underscores the structural inadequacy of current outreach mechanisms.

The chi-square test yielded a Pearson Chi-square value of 145.073 ($df = 68$, $p = 0.001$), with a statistically significant linear-by-linear association of 18.246 ($p = 0.001$). The null hypothesis that accessibility to NSSS does not differ across educational levels is rejected. Higher educational attainment is significantly

associated with greater accessibility, affirming that literacy is a structural enabler of institutional navigation and enrolment. This finding is consistent with Lahiri and Biswas (2022) and Dev and Prabhu (2016), who identified educational attainment as a key driver of financial inclusion scheme participation.

The independent samples t-test returned $t = 0.001$ ($df = 412$, $p = 0.999$), with a mean difference of 0.000 and a 95 per cent confidence interval of -0.179 to 0.178. Gender does not significantly differentiate awareness levels of NSSS. This finding suggests that informational barriers are distributed uniformly across genders in rural Karnataka, contrasting with Agarwal and Mahajan's (2019) finding of gendered exclusion in microinsurance in other regional contexts. It implies that awareness interventions need not be gender-targeted but should address the household and community level more broadly.

6. Discussion

The results of the current study all seem to point to a single direction, i.e. the main obstacles to the implementation of Pradhan Mantri social security schemes in rural Karnataka are not the operational challenges but the informational and educational shortages. This is repositioning the policy diagnosis as not a post-enrolment issue such as how to make schemes easier to use, but rather a pre-enrolment issue such as how to make eligible populations aware and educationally prepared to participate.

The least intuitive aspect and the one that should be closely interpreted is that the perceived challenges do not significantly predict enrolment ($p = 0.634$). This does not imply that obstacles are non-existent according to the respondents, there is significant procedural churn, such as long claim processes, insufficient knowledge of the bank staff, and unclear grievance procedures. Instead, it indicates that those challenges are being experienced more by those who have already enrolled, than by those who have not yet enrolled: the awareness-and-comprehension barrier. This is in line with Jain and Ranjan (2017), who argued that passive enrolment through automatic deduction can be used to drive initial uptake without real awareness of what they are committing to, and with Dev and Prabhu (2016), who warned that numbers of enrolment hide deeper participation failures.

The high status of education as a mediator between awareness and benefits, proved by the SEM, has a great impact on intervention design. It is implied that the dissemination of information is not enough, but also the cognitive infrastructure to process, evaluate and act upon the scheme information is also required. This is consistent with the result of that insurance product adoption is driven by financial literacy, rather than simply financial access. This cognitive infrastructure gap is very large in rural Karnataka where 52% of sample had no formal education or education up to SSLC level.

The fact that there is no gender differentiation in the level of awareness is a subtle conclusion. On the one hand, it shows that informational exclusion in this case is not gendered, both men and women are equally uninformed. Alternatively, it can be seen as a reflection of the relatively more female literacy in Karnataka than the national rural average, and a counterbalancing effect of Self-Help Groups (SHGs), which has historically served as a source of information to women in southern India (Verma, Sinha, and Kumar, 2020). The observation underpins universal, as opposed to gender-specific, awareness intervention.

The prevalence of interpersonal sources of information, including friends, relatives, and Gram Panchayaths, over those of mass media is supported by the results of Chattopadhyay and Dey (2020) in rural West Bengal and Sharma et al. (2025) in Haryana. This convergent interstate evidence indicates a structural inadequacy in the government mass communication policy of social security schemes. The low reach of television (0.7%) and social media (4.1%) in this sample is especially important in light of the growing dependence of the government on digital outreach and points to a digital divide that could increase the plight of the least educated rather than alleviate it.

The increased number of enrolments in APY as compared to PMJJBY and PMSBY is worth consideration in policymaking. The long-term accumulation rationale of the pension scheme and the fact that a guaranteed monthly pension is a real thing may make it more attractive than risk-pooling instruments the benefits of which depend on an adverse event.

7. Policy Recommendations

The findings of this research form the three-level policy intervention model, taking care of each of the three dimensions of the 3A model:

7.1 Awareness: Literacy-Linked, Community-Anchored Campaigns

Since 43.5% of the respondents had no source of information and since education is a significant mediator between awareness and benefit conversion, awareness campaigns should be co-designed with financial literacy content. Awareness of the schemes should be integrated into the adult literacy programmes being implemented under the National Education Policy (NEP) 2020 and the Saakshar Bharat mission. Gram Panchayaths, which were mentioned by 11.8% of the respondents as a source of information, should be official declared as first-point-of-contact to scheme awareness with elected representatives being trained as scheme facilitators. Bank Correspondents (BCs) with potential role emphasized by Kandasamy (2024) must be deployed in all villages that have specific NSSS information requirements and performance indicators.

7.2 Accessibility: streamlined Enrolment and reinforced institutional Reach.

The chi-square result that accessibility differs significantly with education ($p = 0.001$) demands enrolment simplification which will reduce literacy dependency. Enrolment based on biometric should be scaled; this involves doing away with literacy intensive paper-based enrolment, which requires the involvement of literate staff in the process. The current integration of NSSS with the Jan Dhan account infrastructure should be exploited more aggressively: every new activation of a Jan Dhan account should include a mandatory, opt-out default enrolment to PMSBY due to its nominal Rs 20 premium, which is comparable in magnitude to the behavioural nudge design proposed by Basu and Banerjee (2020). Training of bank staff on the details of the schemes should be regularised as a complaint reported by the respondents that the bank staff did not know enough about the schemes.

7.3 Addressing Challenges: Grievance Redressal and Claims Transparency

Although the presence of challenges did not significantly predict non-enrolment, their presence among those beneficiaries who are enrolled is a reality and can contribute to dropout. An easy to use, mobile based system of filing claims, which would be accessible through feature phones, and not necessarily the smartphones, would help cut down the literacy and technology barrier in filing claims. The grievance redressal mechanism, which the respondents rated to be unclear, should be reshaped in such a way to incorporate a toll-free helpline with the support of vernacular languages, a tracking system accessed through SMS and a 30-day settlement requirement that is supported by penalties to delays. Districts must be obliged to post monthly claims settlement rates as a transparency tool, allowing the civil society to monitor.

7.4 Structural Recommendation: A SERVQUAL Based Monitoring Framework.

The results of the study indicate that a service quality monitoring framework for the delivery of NSSS is worth introducing based on the SERVQUAL model (Parasuraman, Zeithaml, & Berry, 1988). Independent assessments of scheme delivery, at the Gram Panchayath level, across the five dimensions (tangibles, reliability, responsiveness, assurance and empathy) would give early warning signals of implementation gaps, before they turn into low claims settlement or high dropout rates. Karnataka has an enabling e-governance infrastructure that makes it a good pilot state for such an infrastructure before it is rolled out nationwide.

From a policy and governance perspective, this gap signals the need to have a more nuanced perspective on the issues of implementation at the grassroots level. A careful design of comprehensive schemes is not enough: the same consideration should be given to delivery schemes, user experience, and adaptation to the local context. In this process, the intermediaries – banks, local government bodies, community organisations become important. Moreover, the incorporation of behavioral implications in the policy formulation can be used to deal with the problems associated with trust, awareness and perceived complexity.

8. Conclusion

The study has attempted to analyze the 3A dimensions (Awareness, Accessibility and Addressing Challenges) of the three Pradhan Mantri social security schemes of 414 rural respondents in the five districts of Karnataka. The findings show that the operational issues are not the main ones for the adoption of the schemes, but informational and educational issues. Expecting difficulty to prevent enrolment does not significantly predict non-enrolment; rather the imperceptibility of challenges and low levels of education (as mediated through the structural equation model) are principal barriers.

The three main contributions of the study are outlined below. The study has three main contributions. Empirically it confirms that operational challenges come after the awareness-education hurdle and changes the policy diagnosis. From methodological perspective, it introduces a novel approach to the use of SEM in the context of NSSS adoption, which identified the mediating role of education between awareness and benefit perception. Prescriptively, it is suggesting a three-step intervention pathway: evidence-informed literacy-related awareness initiatives; streamlined enrolment processes; and improved grievance procedures.

There are some limitations to the study which should be considered in future study. For external validity, the sample size is purposive limiting generalisability and a probability-based sample from a larger set of districts in Karnataka or from more than one state would enhance the generalisability. The moderate fit statistics (CFI = 0.816, TLI = 0.713) for the SEM indicate that the model may require further specification through other variables such as institutional trust, social influence, perceived relevance. A longitudinal design would allow for the monitoring of shifts in awareness and enrolment in response to targeted policy measure(s). Focus group discussions would follow this and add to the qualitative understanding of social and cultural aspects of scheme non-participation.

Having now reached the 10th year of the Jan Suraksha schemes, it is not so much a set of scale issues with crores of people enrolled, as a set of depth and equity issues. To ensure that the most disadvantaged rural populations reap the benefits of these schemes, rather than merely enrolling, more needs to be done to ensure that the schemes are truly known, trusted by institutions, and have easy claim processes. The lessons learnt from Karnataka provide an analytical and policy language that can be replicated for this transition.

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