

Perceptions of PDS Beneficiaries in Telangana State: Insights From NFSA, 2013

Kandhula Sateeshkumar

Research Scholar
Osmania University (UCC&BM) Hyderabad-07

Dr. Kamatam Srinivas

Associate Professor
Osmania University (UCC&BM) Hyderabad-07

Abstract:

This study analyzes the impact of various demographic factors on the awareness, accessibility, availability, utilization, stability, satisfaction, and problems associated with the Public Distribution System (PDS) in India. Using ANOVA and Chi-square tests, the research evaluates how demographic variables such as gender, age, education level, occupation, income, and residential area influence beneficiaries' experiences with the PDS. The findings indicate significant relationships between demographic factors and various dimensions of the PDS, suggesting areas for targeted improvements. Enhanced awareness campaigns, better infrastructure, improved inventory management, capacity building, and stronger governance mechanisms are recommended to improve the overall effectiveness and equity of the PDS.

Keywords: Public Distribution System (PDS), demographic factors, awareness, accessibility, availability, utilization, stability, satisfaction, ANOVA analysis, Chi-square analysis, India, social policy, food security, National Food Security Act (NFSA).

1. Introduction:

The Public Distribution System (PDS) is a cornerstone of India's social welfare initiatives, designed to provide essential food commodities at subsidized rates to ensure food security for the nation's vulnerable populations. However, the success and impact of the PDS can vary significantly across different regions, particularly between rural and urban areas. Like many parts of India, Telangana State grapples with challenges in effectively implementing the PDS, often encountering disparities in service delivery and beneficiary experiences between its urban centres and rural communities. Telangana, formed in 2014 as India's newest state, inherits a complex socioeconomic landscape characterized by diverse livelihood patterns, income disparities, and infrastructural variations between its urban and rural zones. Urban centers like Hyderabad, the state capital and a burgeoning technology hub, boast higher per capita income levels and better access to amenities compared to rural districts like Vikarabad, where agriculture remains a predominant occupation and incomes are comparatively lower. The effectiveness of the PDS hinges on several critical factors, including efficient procurement, storage, and distribution of food commodities, as well as beneficiary perceptions and experiences regarding accessibility, availability, quality, and satisfaction with the services provided. Understanding how beneficiaries perceive and experience the PDS is essential for policymakers and stakeholders to identify areas for improvement and to ensure equitable access to food subsidies across different segments of the population. This study focuses on analyzing beneficiary perceptions of the Public Distribution System in Telangana, with a specific emphasis on comparing these perceptions between rural and urban populations. By exploring these differences, the study aims to shed light on disparities in PDS implementation and to assess whether rural-urban variations impact beneficiary attitudes and experiences. The hypothesis under scrutiny is whether there are significant differences in beneficiary perceptions of the PDS based on their rural or urban location. This research is crucial for informing evidence-based policy interventions aimed at optimizing the PDS and ensuring more equitable food security outcomes across Telangana State's diverse landscape.

2. Literature Review

Ajay Bohatan (2019): Examines the Indian Public Distribution System from a supply chain perspective. Utilizes the Performance Objectives-Productivity (PO-P) approach model to assess PDS performance. Offers recommendations to stakeholders based on performance evaluation.

Suprit Panigrahi (2014): Assesses the Targeted Public Distribution System (TPDS) in Sundargarh District, Odisha.

Evaluates access, efficiency, utilization, and impact of the PDS in the region. Explores public opinion on substituting food grain subsidies with cash transfer schemes. Reports overall improvement in the functioning of PDS in Odisha, particularly in rice distribution. Jayan.T (2014):Analyzes the Targeted Public Distribution System in Kerala. Studies how ration subsidies benefit low-income households and those below the poverty line. Investigates the impact of large-scale food grain distribution on market price stabilization.

Research Objective: To analyze the perceptions of beneficiaries on the implementation of the Targeted Public Distribution System in the state (PDS).

Hypothesis: H01 - There is no significant difference in awareness, Accessibility, Availability, Utilization, Stability, Satisfaction and Problems level of respondents based on various demographic factors towards PDS.

3. Methodology

A quantitative research approach was adopted for this study. Data was collected through a structured questionnaire administered to 400 beneficiaries, comprising 200 respondents from Hyderabad (urban) and 200 from Vikarabad (rural). The questionnaire included items related to awareness, accessibility, availability, satisfaction, utilization, stability, problems and prospects, monitoring, and grievances within the PDS. Statistical analysis included descriptive statistics, ANOVA, Chi-square test and other relevant tests to assess hypotheses.

4. Analysis and Outcome:

PDS ANOVA analysis among various demographic factors

Demographic variable		Gender	Age	Marital status	Education level	Occupation	Monthly income	Number of family members	Social status	Duration	Type of card	Residential area
Awareness	F	17.442	0.895	1.177	6.116	1.483	3.23	2.686	1.033	2.478	0.002	20.256
	Sign	0	0.444	0.309	0	0.228	0.041	0.069	0.39	0.061	0.961	8.906
Accessibility	F	0.968	3.128	1.254	1.969	0.02	1.597	0.479	0.525	0.762	0.156	1.16
	Sign	0.326	0.026	0.287	0.118	0.98	0.204	0.62	0.718	0.516	0.693	0.282
Availability	F	0.433	0.122	0.566	2.405	5.459	1.527	0.446	3.318	0.964	0.009	9.75
	Sign	0.511	0.947	0.568	0.067	0.005	0.219	0.641	0.011	0.41	0.925	0.001
Utilisation	F	0.891	0.123	0.617	3.568	0.537	4.427	1.966	0.606	0.489	4.133	36.185
	Sign	0.346	0.947	0.54	0.014	0.585	0.013	0.141	0.658	0.69	0.043	4.07
Stability	F	2.878	0.498	2.132	2.885	0.68	0.121	0.13	0.801	0.81	3.172	1.692
	Sign	0.091	0.684	0.12	0.036	0.507	0.886	0.878	0.525	0.489	0.076	0.194
Satisfaction	F	1.085	0.78	2.278	7.992	1.283	0.682	2.108	1.53	1.489	0.024	11.886
	Sign	0.298	0.506	0.104	0	0.278	0.506	0.123	0.193	0.217	0.877	0
Problems	F	0.081	2.088	1.126	1.062	2.417	0.757	0.187	0.423	0.548	0.04	17.721
	Sign	0.776	0.101	0.325	0.365	0.09	0.47	0.83	0.792	0.65	0.841	0

Awareness: Gender (F = 17.442, Sig. = 0.000): Highly significant, indicating a strong relationship between gender and awareness. Education level (F = 6.116, Sig. = 0.000): Highly significant, suggesting education level greatly influences awareness. Monthly income (F = 3.230, Sig. = 0.041): Significant, showing income impacts awareness. Number of family members (F = 2.686, Sig. = 0.069): Marginally significant. Type of card (F = 2.478, Sig. = 0.061): Marginally significant. Residential area (F = 20.256, Sig. = 8.906): This appears to be a formatting error; it likely indicates a highly significant relationship, given the context and the high F-value.

Accessibility: Age (F = 3.128, Sig. = 0.026): Significant, suggesting age influences accessibility. No other demographic variable shows a significant relationship with accessibility, as all Sig. values are above 0.05.

Availability: Education level (F = 2.405, Sig. = 0.067): Marginally significant. Occupation (F = 5.459, Sig. = 0.005): Highly significant, indicating occupation impacts availability. Social status (F = 3.318, Sig. = 0.011): Significant, showing social status influences availability. Residential area (F = 9.750, Sig. = 0.001): Highly significant, suggesting a strong relationship with availability.

Utilisation: Education level (F = 3.568, Sig. = 0.014): Significant, indicating education level impacts utilisation. Monthly income (F = 4.427, Sig. = 0.013): Significant, showing income influences utilisation. Type of card (F = 4.133, Sig. = 0.043): Significant, suggesting the type of card impacts utilisation. Residential area (F = 36.185, Sig. = 4.070): This likely indicates a highly significant relationship, given the high F-value.

Stability: Education level (F = 2.885, Sig. = 0.036): Significant, suggesting education level impacts stability. Type of card (F = 3.172, Sig. = 0.076): Marginally significant. No other demographic variable shows a significant relationship with stability.

Satisfaction: Education level (F = 7.992, Sig. = 0.000): Highly significant, indicating education level greatly influences satisfaction. Residential area (F = 11.886, Sig. = 0.000): Highly significant, showing a strong relationship with satisfaction. No other demographic variable shows a significant relationship with satisfaction.

Problems: Monthly income (F = 2.417, Sig. = 0.090): Marginally significant. Residential area (F = 17.721, Sig. = 0.000): Highly significant, suggesting a strong relationship with problems. No other demographic variable shows a significant relationship with problems.

PDS Chi-square analysis among Demographic factors

Demo graphi c variab le	Awareness			Accessibilit y			Availability			Utilisation			Stability			Satisfaction			Problems		
	χ^2	d f	Si g.	χ^2	d f	Si g.	χ^2	d f	Sig.	χ^2	d f	Si g.	χ^2	d f	Sig.	χ^2	d f	Si g.	χ^2	d f	Si g.
Gender	7.313a	2	0.026	.656a	1	0.418	.629a	2	0.730	3.435a	2	0.179	5.649a	2	0.059	1.213a	2	0.545	1.061a	2	0.588
Age	4.445a	6	0.617	7.046a	3	0.070	13.901a	6	0.031	4.881a	6	0.559	2.246a	6	0.896	8.007a	6	0.238	9.117a	6	0.167
Marital status	4.513a	4	0.341	2.431a	2	0.297	9.706a	4	0.046	4.711a	4	0.318	6.216a	4	0.184	13.58a	4	0.009	5.307a	4	0.257

Educational level	9.307a	6	0.157	2.033a	3	0.566	10.877a	6	0.092	11.571a	6	0.072	20.062a	6	0.003	27.297a	6	0	12.629a	6	0.049
Occupation	9.801a	4	0.044	4.028a	2	0.133	19.551a	4	0.001	9.681a	4	0.046	8.398a	4	0.078	27.367a	4	0	6.685a	4	0.153
Monthly income	2.652a	4	0.618	.890a	2	0.641	8.754a	4	0.068	18.500a	4	0.001	5.723a	4	0.221	2.412a	4	0.666	7.983a	4	0.092
Number of family members	6.335a	6	0.387	2.906a	3	0.406	3.391a	6	0.758	11.843a	6	0.066	3.886a	6	0.692	5.916a	6	0.433	8.298a	6	0.217
Social status	6.588a	8	0.582	2.602a	4	0.626	17.252a	8	0.028	16.418a	8	0.037	7.455a	8	7.455a	13.224a	8	0.104	9.537a	8	0.299
Duration	7.562a	6	0.272	.348a	3	0.951	10.331a	6	0.111	7.996a	6	0.238	1.459a	6	0.962	17.810a	6	0.007	8.058a	6	0.234
Type of card	.365a	2	0.833	1.475a	1	0.225	1.065a	2	0.587	2.943a	2	0.23	.730a	2	0.694	1.220a	2	0.543	.253a	2	0.881
Residential area	15.463a	2	0.000	1.876a	1	0.171	3.914a	2	0.141	25.882a	2	0	4.608a	2	0.100	5.457a	2	0.065	14.861a	2	0.001

Awareness: Gender ($\chi^2 = 7.313$, $df = 2$, $Sig. = 0.026$): Significant, indicating a relationship between gender and awareness. Residential area ($\chi^2 = 15.463$, $df = 2$, $Sig. = 0.000$): Highly significant, showing a strong relationship between residential area and awareness. Other variables do not show a significant relationship with awareness.

Accessibility: Age ($\chi^2 = 7.046$, $df = 3$, $Sig. = 0.070$): Marginally significant. Other variables do not show a significant relationship with accessibility.

Availability: Age ($\chi^2 = 13.901$, $df = 6$, $Sig. = 0.031$): Significant, indicating a relationship between age and availability. Marital status ($\chi^2 = 9.706$, $df = 4$, $Sig. = 0.046$): Significant, suggesting marital status impacts availability. Occupation ($\chi^2 = 19.551$, $df = 4$, $Sig. = 0.001$): Highly significant, indicating a strong relationship between occupation and availability. Social status ($\chi^2 = 17.252$, $df = 8$, $Sig. = 0.028$): Significant. Residential area ($\chi^2 = 3.914$, $df = 2$, $Sig. = 0.141$): Marginally significant. Other variables do not show a significant relationship with availability.

Utilisation: Monthly income ($\chi^2 = 18.500$, $df = 4$, $Sig. = 0.001$): Highly significant, suggesting a strong relationship between income and utilisation. Occupation ($\chi^2 = 9.681$, $df = 4$, $Sig. = 0.046$): Significant. Social status ($\chi^2 = 16.418$, $df = 8$, $Sig. = 0.037$): Significant. Residential area ($\chi^2 = 25.882$, $df = 2$, $Sig. = 0.000$): Highly significant, indicating a strong relationship between residential area and utilisation. Other variables do not show a significant relationship with utilisation.

Stability: Education level ($\chi^2 = 20.062$, $df = 6$, $Sig. = 0.003$): Highly significant, indicating a strong relationship between education level and stability. Other variables do not show a significant relationship with stability.

Satisfaction: Education level ($\chi^2 = 27.297$, $df = 6$, $Sig. = 0.000$): Highly significant, suggesting education level greatly influences satisfaction. Duration ($\chi^2 = 17.810$, $df = 6$, $Sig. = 0.007$): Significant. Other variables do not show a significant relationship with satisfaction.

Problems: Education level ($\chi^2 = 12.629$, $df = 6$, $Sig. = 0.049$): Significant, indicating a relationship between education level and problems. Residential area ($\chi^2 = 14.861$, $df = 2$, $Sig. = 0.001$): Highly significant, suggesting a strong relationship between residential area and problems. Other variables do not show a significant relationship with problems.

5. Findings:

1. Awareness: Beneficiaries demonstrate a high level of awareness regarding the existence of FPS/Ration shops in their area and the objectives of the PDS under the NFSA. However, there is a need for improved awareness regarding specific government schemes and entitlements available through the PDS.
2. Accessibility: While beneficiaries generally find PDS outlets easily accessible, issues such as inconvenient locations and transportation barriers persist, particularly in rural areas. Efforts to enhance the physical accessibility of PDS outlets are warranted to ensure equitable access to subsidized food grains.
3. Availability: Beneficiaries express utilisation with the regular opening of FPS outlets and the availability of essential food items. However, concerns regarding stockouts and inconsistent availability remain prevalent, signaling the need for better inventory management and distribution systems.
4. Utilization: The majority of beneficiaries report utilizing their entitlements from the PDS effectively. However, observed instances of underutilization and barriers to full participation highlight the importance of targeted interventions to enhance beneficiaries' access and utilization of PDS benefits.
5. Stability: Beneficiaries perceive the PDS as relatively stable in their areas, with measures in place to ensure continuity during crises. However, disruptions due to external factors and the lack of specific crisis management strategies pose challenges to the system's resilience.
6. Utilisation: Overall, beneficiaries express moderate utilisation with various aspects of PDS operations, including food quality, staff conduct, and grievance redressal mechanisms. However, concerns regarding cleanliness standards, timeliness of distribution, and pricing of entitlements persist, indicating areas for improvement.
6. Problems Encountered: Beneficiaries encounter several challenges in availing PDS benefits, including inconvenient work timings, under-weighting of entitlements, poor quality of goods, overcrowding at PDS outlets, technological issues, instances of corruption, and delays in service delivery.

Conclusions:

1. Awareness and Education: Enhancing awareness campaigns to inform beneficiaries about specific government schemes and entitlements available through the PDS can improve uptake and utilization of benefits.
2. Infrastructure and Accessibility: Investing in infrastructure improvements, such as establishing more conveniently located PDS outlets and addressing transportation barriers, can enhance beneficiaries' access to subsidized food grains, particularly in rural areas.
3. Inventory Management: Strengthening inventory management systems to prevent stockouts and ensure consistent availability of essential food items is crucial for maintaining beneficiaries' confidence in the PDS.
4. Capacity Building: Implementing capacity-building initiatives to address barriers to utilization and enhance beneficiaries' understanding of their entitlements can promote more effective participation in the PDS.
5. Crisis Management: Developing robust crisis management strategies and contingency plans to mitigate disruptions caused by external factors is essential for ensuring the stability and resilience of the PDS.

6. Service Quality Improvement: Enhancing service quality standards, including cleanliness, timeliness of distribution, and pricing transparency, can enhance beneficiaries' overall utilisation with the PDS.
7. Governance and Accountability: Strengthening governance mechanisms, including measures to address instances of corruption and improve grievance redressal mechanisms, is critical for building trust and accountability within the PDS

References:

1. Ajay, B. (2019). Analysis of indian Public Distribution System: a supply chain perspective (Doctoral Dissertation, The Northcap University, Gurgav, India). Retrieved from <http://hdl.handle.net/10603/245922>.
2. Suprit, P. (2014). An evaluation of Targeted Public Distribution System in sundargarh district of Odisha (Doctoral dissertation, NIT Rourkela, Odisha, India). Retrieved from <https://shodhganga.inflibnet.ac.in>.
3. Jayan, T. (2014). Targeted Public Distribution system in kerala (Doctoral dissertation, Kerala university, Kerala, India). Retrieved from <https://shodhganga.inflibnet.ac.in>.
4. Ranjan, Om. (2021). Food Security Policy in India: Challenges and Performance.
5. Kumar, Amit & Suar, Damodar & Sahoo, Bimal. (2018). National Food Security Act, 2013: Problems and Prospects. Engage/social action. 3. 265-275.
6. Ranjan, Rajiv. (2016). India's National Food Security Act (NFSA): Fiscal Assessment and Implementation Challenges. FIIB Business Review (FBR). 5. 3-12. 10.1177/2455265820160201.
7. Rama Naik D(2022) An Economic Analysis On Food Security In Karanataka (Doctoral dissertation, Vijayanagara Sri Krishnadevaraya University, Bellary, Karnataka, India). Retrived from <http://hdl.handle.net/10603/405781>
8. Tanksale, Ajinkya & Jha, J.K.. (2015). Implementing National Food Security Act in India: issues and challenges. British Food Journal. 117. 1315-1335. 10.1108/BFJ-07-2014-0239.
9. Somal, Gurdeep Kaur. (2013). Organization and Working of Public Distribution System A study of Punjab.
10. Shikavar, Neha(2022) Food systems and Food Security (Doctoral dissertation, Dayalbagh educational institute, Uttar Pradesh, India). Retrieved from <http://hdl.handle.net/10603/399050>
11. DRÈZE, J., & KHERA, R. (2013). Rural Poverty and the Public Distribution System. Economic and Political Weekly, 48(45/46), 55–60. <http://www.jstor.org/stable/23528609>
12. Krishnamurthy, Prasad & Pathania, Vikram & Tandon, Sharad. (2013). Public Distribution System Reforms and Consumption in Chhattisgarh: An Empirical Analysis. SSRN Electronic Journal. 49. 10.2139/ssrn.2322614.
13. DEB, S. (2009). Public Distribution of Rice in Andhra Pradesh: Efficiency and Reform Options. Economic and Political Weekly, 44(51), 70–77. <http://www.jstor.org/stable/25663916>.
14. Mani, K.P. (2002). Revamping PPDS through people OF KERALA.