Page: 2146-2161 *URL: www.lijdlr.com*

LAWFOYER INTERNATIONAL JOURNAL OF DOCTRINAL LEGAL RESEARCH

ISSN: 2583-7753

LawFoyer International Journal of Doctrinal Legal Research

[ISSN: 2583-7753]

Volume 3 | Issue 4

2025

DOI: https://doi.org/10.70183/lijdlr.2025.v03.216

VICTIMS OF ALGORITHMIC HARM IN INDIA'S WELFARE SYSTEM: ARTICLES 14 & 21 REMEDIES

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I. ABSTRACT

India's welfare delivery increasingly relies on digital and automated systems for identification, eligibility verification, record linkage, and benefit disbursal. While these tools promise efficiency, they can also cause wrongful exclusions at scale due to data mismatches, opaque backend processing, and automated classifications treated as final. This paper conceptualizes those affected as victims of algorithmic harm in the welfare state and argues that constitutional enforcement under Articles 14 and 21 can supply an effective remedy framework even in the absence of a dedicated AI statute. Article 14's anti-arbitrariness and equality principles support enforceable duties of intelligible reasons, reviewability, and non-discriminatory impact in automated welfare administration. Article 21's dignity-linked procedural fairness requires notice, meaningful opportunity to contest, and time-bound access to correction and redress because welfare exclusion can threaten subsistence and health. The paper proposes a constitutional minimum for high-impact welfare automation: notice of automated action, intelligible reasons, access to relevant personal data used, practical correction pathways, meaningful human review with override power, and interim relief pending review. It then outlines judicial and policy remedies: speaking-order requirements, disclosure directions, auditability and record-keeping standards, independent impact assessments, procurement controls to prevent black-box outsourcing, and specialized grievance mechanisms. Data connectivity and proprietary obstacles can impede transparency and successful redress, as demonstrated by a case study of Telangana's Samagra Vedika "entity resolution" system. In order to increase delivery through automation without turning poverty into a compliance failure or welfare rights become unquestionable database outputs, the article ends with a Victim Remedy Framework specifically designed for welfare situations.

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II. KEYWORDS

Automated decision making, algorithmic damage, welfare exclusions, Article 14 and Article 21, natural justice, human scrutiny, grievance relief, and transparency.

III. INTRODUCTION

Welfare administration is one of the most consequential sites of state power because it governs access to food support, pensions, housing assistance, and other social protection measures. In contrast to many regulatory decisions that affect market participation or reputation, welfare decisions can affect subsistence immediately. India's welfare architecture has progressively adopted digital infrastructure and automated processes databases, record linkage, deduplication, authentication, and backend payment pipelines to manage beneficiaries and improve delivery.

When automation transitions from a support tool to a result determinant without clear justification, a meaningful hearing, or a responsible human override, a legal challenge arises. In these situations, the system uses secret matching rules, thresholds, or backend triggers to categorise a beneficiary as "eligible/ineligible" or "active/suspended," with the impacted individual receiving little more than a rejection or failure status. Beneficiaries may run against a procedural wall when the conclusion is unfavourable: front-line staff consider the system output as final, don't explain why, and don't give a fast way to fix mistakes.

Because it concentrates constitutional analysis on harm, accountability, and redress rather than whether a tool is technically "AI," a victim-centered framework is helpful. Whether the welfare system stays equitable, non-arbitrary, and humanly responsible when it depends on automated processing is the essential concern, not whether record linking is effective.

Rights-based AI criticism in India has advocated for rights like transparency, explanation, contestability, human review, and grievance resolution based on constitutional obligations, arguing that the country lacks enforceable legislative safeguards expressly designed to AI-driven choices. Algorithmic governance can circumvent natural justice, reason-giving, and the right to be heard, especially when

technologies are purchased from private companies and handled as "black boxes," according to administrative law studies.

These concerns become particularly urgent in welfare contexts. Amnesty International's explainer on Telangana's Samagra Vedika "entity resolution" system describes how cross-database linkage and computational analysis were used in welfare administration and reports claims of social protection disruption where individuals experienced exclusion linked to data attribution or matching issues.

The same explainer also describes how proprietary procurement and limited disclosure can obstruct meaningful scrutiny and contestation. This paper uses that case study as a lens to test constitutional standards: if entitlements can be altered through opaque automation and beneficiaries cannot obtain intelligible reasons or timely correction, the welfare governance model risks failing Articles 14 and 21 in practice.[2]

A. Research questions

This paper asks:

1. What forms of welfare exclusion qualify as algorithmic harm, and why do they produce victims?
2. How can Articles 14 and 21 be operationalized into enforceable safeguards for automated welfare administration?
3. What judicial remedies are realistically available and appropriate?
4. What institutional reforms can prevent mass exclusion and reduce reliance on litigation?

B. Research Paper and structure

The thesis is that welfare automation must satisfy a constitutional minimum of transparency, contestability, and accountable human review. Section 2 outlines methodology and scope. Section 3 defines algorithmic harm in welfare and identifies recurring failure patterns. Section 4 analyzes Article 14 and non-arbitrariness in

[2] Amnesty International. (2024). *Entity resolution in India's welfare digitalization*. https://www.amnesty.org/en/latest/research/2024/04/entity-resolution-in-indias-welfare-digitalization/amnesty

automated welfare administration. Section 5 analyzes Article 21 and dignity-linked procedural fairness. Section 6 proposes judicial remedies. Section 7 examines grievance redress and institutional design. Section 7A provides a case study of Samagra Vedika and entity resolution. Section 8 proposes a Victim Remedy Framework for welfare automation. Section 9 offers policy recommendations, and Section 10 concludes.

C. Methodology and scope

This is a doctrinal and reform-oriented paper. It applies constitutional and administrative-law principles non-arbitrariness, reasoned decision-making, fairness, and reviewability to automated welfare administration. It also relies on policy and research literature describing welfare exclusions, backend opacity, and grievance redress challenges

The paper's scope is welfare and social protection entitlements broadly, including cash transfers and scheme benefits administered through databases and backend processes. The paper uses the Samagra Vedika narrative and welfare grievance research illustratively, not as an exhaustive empirical account of all Indian welfare systems.[3]

IV. ALGORITHMIC HARM IN WELFARE DELIVERY

A. Why welfare automation is constitutionally high-risk

Welfare decisions are high impact because adverse outcomes can cause immediate deprivation. Delay in correction often defeats the purpose of the entitlement. Welfare systems also serve vulnerable populations people with limited literacy, limited digital access, and limited bargaining power making accessible redress and assisted correction essential.

[3] Dvara Research. (2024). *Delivery of social protection entitlements in India: Unpacking exclusion, grievance redress and the relevance of citizen assistance mechanisms*. https://dvararesearch.com/wp-content/uploads/2024/01/Delivery-of-Social-Protection-Entitlements-in-India-Unpacking-Exclusion-Grievance-Redress-and-the-Relevance-of-Citizen-Assistance-Mechanisms.pdfdvararesearch

Rights-based AI proposals treat high-impact public sectors as requiring enforceable rights such as transparency and human review). Welfare administration fits that description because it governs access to basic goods and survival-related support.

B. Common failure modes (welfare-specific)

Algorithmic harm in welfare delivery typically clusters around recurring failure modes documented in welfare entitlement research and visible in the entity-resolution narrative:[4]

1. **Data mismatch and record errors**

   Mismatches can be caused by little differences in names, dates of birth, residences, or household composition. It is the responsibility of eligible individuals to amend state data when backend rules treat mismatches as disqualifying triggers.

2. **Record linkage and entity-resolution false positives**

   Techniques for entity resolution connect records across datasets that are thought to pertain to the same individual. Probabilistic matching poses a welfare risk since it may produce false positives, which are data that are incorrectly merged or attributed and result in suspension, deduplication flags, or exclusion.

3. **Backend opacity in payment pipelines**

   According to research on social protection entitlements, a lot of complaints come up during backend processing and there is a lot of opacity in the welfare transfer pipeline, which makes it hard for recipients to comprehend why payments don't go through. Contestation and rectification are prevented by this opacity.

4. **Automation treated as final**

   A procedural injury occurs when officials treat the system output as unimpeachable. Amnesty describes patterns where algorithmic outputs are

[4] Drishti IAS. (2025, December 30). *Shaping responsible AI: India's evolving regulatory framework*. https://www.drishtiias.com/daily-updates/daily-news-editorials/shaping-responsible-ai-indias-evolving-regulatory-frameworkdrishtiias

difficult to override and where affected persons struggle to obtain meaningful explanation or reversal

5. **Grievance mechanisms that register complaints but do not correct the backend**

   Welfare research suggests that the design and authority of grievance systems matter: a helpline or portal that lacks backend correction power can become an acknowledgement mechanism rather than an effective remedy

C. Why these are constitutional harms

These failures implicate constitutional rights because they reflect design choices that determine whether vulnerable citizens can access entitlements. When exclusion occurs through opaque automation without reasons, hearing, or effective review, it resembles arbitrary state action. When exclusion threatens subsistence and dignity, it implicates Article 21's demands of fair procedure and effective remedy.

V. ARTICLE 14 AND AUTOMATED WELFARE ADMINISTRATION

Article 14 prohibits arbitrariness and demands equal treatment. In welfare automation, Article 14 supports enforceable requirements of intelligible reasons, justified criteria, and auditability.

A. Non-Arbitrariness requires intelligible reasons

In administrative law, reason-giving and speaking orders help ensure power is exercised rationally and can be reviewed. Algorithmic governance scholarship warns that automated administration can bypass reasoned decision-making and procedural safeguards when outputs are delivered without intelligible explanation ("Algorithmic governance and the future of administrative discretion in India," n.d.). In welfare, a "reason" must identify the decisive trigger and the correction pathway.

The entity-resolution narrative illustrates why: when exclusion results from hidden linkage or incorrect attribution, beneficiaries cannot contest the decision unless they know what data and logic produced it. A welfare-compatible Article 14 standard should require that any suspension/denial communicates:

1. A plain-language reason code.

2. The specific data field mismatch or linkage issue.
3. The steps to correct the record.
4. The timeline for review and restoration.

B. Equality and digital disadvantage

People with inadequate documentation, inconsistent records, or limited access to supported correction may suffer disproportionately from facially neutral systems. Similar eligible individuals may obtain varied results in welfare administration because to variations in grievance access and data quality. This results in a data-mediated structural inequity.

According to commentary on algorithmic bias, if automated systems are not monitored and managed, they have the potential to entrench discrimination and compromise egalitarian principles (Virtuosity Legal, 2025). Therefore, welfare automation must be assessed not only according to the stated norm but also according to its impact patterns and protections for those who might be excluded.

C. Auditability as a constitutional condition

Welfare decisions can change due to backend rule updates, deduplication cycles, and linkage thresholds. If the State cannot reconstruct why a benefit stopped, review becomes impossible. Auditability should therefore be treated as an Article 14 requirement.

Algorithmic governance scholarship supports this by stressing that automated decisions must remain reviewable and that administrative discretion does not disappear but can become hidden inside systems ("Algorithmic governance and the future of administrative discretion in India," n.d.). Auditability in welfare should include decision logs, change logs, reason codes, and documentation of rules and thresholds.

D. Justification: efficiency is not enough

Efficiency claims cannot by themselves justify rights-impacting automation. Under Article 14 scrutiny, the State should show:

1. Why automation is necessary for the welfare objective.

2. How error is minimized and monitored.
3. How false positives are detected and corrected.
4. How beneficiaries can appeal.
5. How officials can override system outputs.

If these safeguards are absent, automation risks becoming arbitrary governance disguised as efficiency.

VI. ARTICLE 21: WELFARE EXCLUSION, DIGNITY, AND FAIR PROCEDURE

Fair, equitable, and reasonable processes are required under Article 21. Procedural timeliness is essential to fairness in welfare contexts since exclusion might jeopardise health and sustenance.

A. Welfare exclusion as dignity harm

When recipients must continually demonstrate their eligibility due to faulty, poorly integrated, or unreliable governmental mechanisms, their dignity is compromised. When officials refuse to admit mistakes and provide a hearing, the humiliation is exacerbated. A rights-based AI approach highlights the need for impacted individuals to have enforceable channels for contesting and obtaining rectification, rather than being viewed as passive objects of automated categorisation).

B. Algorithmic due process: notice, correction, contestation

A rights-based framework should incorporate contestability and a right to human review for automated choices, including timely notification, access to the personal data utilised, and the capacity to contest judgements made exclusively by automated systems, according to rights-based AI recommendations). This results in a constitutional minimum when translated into welfare administration:[5]

1. Notice: the beneficiary must be informed when an automated action suspends or denies entitlement and what triggered it.

[5] LiveLaw. (2025, July 27). *Towards rights-based AI framework in India: Bridging global models & constitutional duties*. https://www.livelaw.in/lawschool/articles/towards-rights-based-ai-framework-india-bridging-global-models-constitutional-duties-298896livelaw

2. Access and correction: the beneficiary must access the relevant personal data used and have a feasible correction pathway.
3. Hearing: where exclusion persists or facts are disputed, the beneficiary must be heard by a human authority.
4. Meaningful human review: an officer must have power to override the system output and must provide reasons.
5. Time-bound remedy: delay defeats welfare rights; review must occur quickly.

C. Interim relief as part of fairness

Welfare harms are time sensitive. Research on exclusion and grievance redress highlights how backend opacity and delays can block timely resolution. Article 21 supports interim relief as a component of fair procedure where deprivation is immediate temporary restoration, emergency support, or alternative disbursal pending review.

VII. JUDICIAL REMEDIES FOR WELFARE ALGORITHMIC HARMS

Courts should focus on remedies that restore entitlements, enforce procedural standards, and create accountability without requiring judges to become technical auditors.

A. Individual remedies

1. Disclosure directions: order the authority to provide intelligible reasons, relevant data fields used, and the basis of exclusion
2. Reconsideration orders: a spoken order, hearing, and direct review by a designated officer
3. Interim restoration: when deprivation is acute and urgent, benefits are temporarily restored.

B. Systemic remedies

1. Standardized reason codes: require welfare systems to generate standardized reason codes understandable to beneficiaries.
2. Audit and reporting: require regular, anonymous reporting on grievance resolution delays, reversal rates, and exclusion numbers.

3. Impact assessments: in line with responsible AI governance arguments that emphasise protections and human supervision, impact assessments should be required for high-impact welfare systems.
4. Procurement safeguards: require vendor contracts to include audit rights, documentation, and transparency obligations to prevent black-box outsourcing.

C. Compensation (limited but important)

In cases of persistent unlawful deprivation, obvious system design fault, or measurable loss, compensation may be justified. Enforceable restitution procedures are a key component of rights-based AI concepts). Compensation also deters irresponsible automation in welfare.

VIII. GRIEVANCE REDRESS: FROM COMPLAINT COLLECTION TO CORRECTION

Although grievance procedures are sometimes used as evidence of accountability, its true test is whether or not backend repair is achieved. The opacity of the transfer pipeline and the fact that many DBT-related complaints occur during backend processing are highlighted in Dvara's study on social protection delivery. This implies that unless grievance mechanisms have power and access to backend decision data, beneficiaries are able to detect harm but are unable to track causation or achieve remedy.

A. What a welfare grievance system must do

A constitutionally adequate welfare grievance system should:

1. Accept complaints through multiple channels (offline, phone, assisted digital).
2. Provide receipt and tracking.
3. Disclose the reason for failure/exclusion.
4. Escalate unresolved issues.
5. Resolve within fixed timelines with a speaking order.
6. Enable override and restoration when the system is wrong.

B. Assisted access

Beneficiaries may lack digital capacity. Welfare research emphasizes the importance of citizen assistance mechanisms to make remedies real. Without assisted access, grievance routes become another barrier.

C. Oversight

Grievance systems should report to an oversight body that monitors patterns of exclusion, reversal, and delay, and can mandate systemic corrections.

D. Case study: Samagra Vedika (Telangana) and entity-resolution driven exclusion

1. Why this case matters

Samagra Vedika is useful as a case study because it illustrates how welfare entitlements can be affected through large-scale data linkage and computational analysis and how beneficiaries can face transparency and contestation barriers when adverse outcomes occur

Amnesty's explainer describes Samagra Vedika as a system used in welfare administration to consolidate data from multiple government datasets and apply analysis to support eligibility and error/fraud identification. The explainer also reports that an investigation documented instances of social protection disruption after the system's introduction, including cases where assets were reportedly wrongly attributed, contributing to adverse outcomes.

2. What "entity resolution" is and why it is risky in welfare

Entity resolution links records believed to correspond to the same individual across datasets even when identifiers vary The governance promise is to improve targeting and reduce duplication, but welfare risk arises because linkage is error-prone at scale, particularly where records are inconsistent False positives can wrongly merge individuals or attach assets/records to the wrong person, and the cost of such errors is immediate deprivation for vulnerable households.

3. Opacity and responsibility diffusion

According to Amnesty International (2024), there is a trend in which impacted individuals find it difficult to comprehend how records were connected and why the system resulted in a negative conclusion. Victims are left without a meaningful recourse as a result of this opacity barrier (no understandable causes) and responsibility barrier (no effective human override).

4. Proprietary procurement and RTI barriers

According to Amnesty International's explanation, proprietary claims were exploited to prevent disclosure, even under RTI, and the entity resolution technology was acquired from a commercial business. This emphasises a point about constitutional governance: where welfare rights are involved, the State cannot depend on procurement agreements to weaken transparency and reviewability duties.

5. Mapping to Articles 14 and 21

According to Article 14, the administration must preserve reviewability and auditability while offering understandable justifications where welfare results rely on record linkage and automated categorisation. Welfare exclusion that jeopardises sustenance is subject to Article 21, which requires prompt notification, a meaningful hearing, and prompt rectification since a delayed remedy may amount to denial.

6. Remedy lessons

The case study backs up workable solutions:

- No rejection or suspension without clear explanation codes and a path to rehabilitation.
- Speaking instructions that require human assessment and override power.
- Record-keeping and auditability requirements, including version control, decision logs, linkage justification, and thresholds.
- Procurement protections that guarantee suppliers cannot obstruct the transparency required for adherence to the constitution.
- Independent monitoring to identify trends of systemic exclusion [6]

[6] "Algorithmic governance and the future of administrative discretion in India." (n.d.). *VUPune Law Journal* (PDF). https://vulj.vupune.ac.in/archives8/ALGORITHMIC%20GOVERNANCE%20AND%20THE%

IX. VICTIM REMEDY FRAMEWORK FOR WELFARE AUTOMATION (VRF-W)

This paper proposes VRF-W, a welfare-specific framework to convert constitutional standards into implementable mechanisms.

A. Tier 1: Immediate relief (0–7 days)

1. Automated notice with plain-language reason code.
2. Assisted correction support at the local level.
3. Interim continuation/restoration for vulnerable households pending rapid review.

B. Tier 2: Administrative justice (7–30 days)

1. Human review by a designated officer with authority to override.
2. Speaking order communicated to the beneficiary.
3. Backend correction confirmed and propagated across linked systems.

C. Tier 3: Systemic accountability (30–180 days)

1. Independent evaluations of systems with high exclusion.
2. Anonymised public dashboards on grievance timeframes and exclusion/reversal.
3. Procurement reforms: paperwork requirements and audit privileges.
4. Rules for long-term wrongful deprivation compensation.

This paradigm is consistent with administrative-law concerns on rational choices and natural justice, as well as rights-based AI ideas that emphasise transparency, contestability, and human review; "Algorithmic governance and the future of administrative discretion in India," n.d.).[7]

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[7] NITI Aayog. (2021). *Principles for responsible AI*. https://www.niti.gov.in/sites/default/files/2021-02/Responsible-AI-22022021.pdfniti

X. CONCLUSION

Welfare automation can improve delivery, but it can also produce mass exclusion when backend systems are opaque and treated as final. Victims of algorithmic harm in welfare contexts suffer deprivation and procedural voicelessness no intelligible reasons, no hearing, no effective correction. Articles 14 and 21 can discipline this landscape by converting constitutional values into operational safeguards: intelligible reasons, auditability, non-arbitrariness, notice, meaningful human review, and effective remedy. Rights-based AI proposals and algorithmic governance scholarship reinforce transparency, contestability, and grievance redress as minimum conditions for legitimate automation in high-impact welfare settings; "Algorithmic governance and the future of administrative discretion in India,".

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