

MEASURING PERCEIVED INEQUALITY THROUGH MULTILEVEL PSYCHOLOGICAL INSTRUMENTS

SHINKI KATYAYANI PANDEY¹, DR. PRIYA VIJ², SEEMA PANT³

¹ASSISTANT PROFESSOR, KALINGA UNIVERSITY, RAIPUR, INDIA.

e-mail: ku.shinkikatyayanipandey@kalingauniversity.ac.in ORCID: 0009-0009-9316-5093

²ASSISTANT PROFESSOR, KALINGA UNIVERSITY, RAIPUR, INDIA.

e-mail: ku.priyavij@kalingauniversity.ac.in, 0009-0005-4629-3413

³ASSISTANT PROFESSOR, NEW DELHI INSTITUTE OF MANAGEMENT, NEW DELHI, INDIA.,

e-mail: seema.pant@ndimdelhi.org, <https://orcid.org/0009-0000-9638-5619>

Abstract:

Perceived inequality how individuals and groups personally experience and judge disparities in resources, treatment, and chances has recently gained attention as a powerful psychological factor shaping everything from group solidarity to well-being and public participation. Scholarly emphasis has moved from cataloging established quantitative markers—most notably income Gini coefficients—to investigating the subjective horizons through which those markers are interpreted. This article advances a multilevel psychological framework specifically oriented to unpack perceived inequality as it unfolds through individuals, aggregate social segments, and the broader symbolic order. By integrating rigorously calibrated psychometric tools, standardized contextual controls, and sophisticated multilevel analytical frameworks, the present study clarifies how stable belief structures and transient situational triggers coactivate to shape perceptual modulation. Extensive cross-domain empirical triangulation, spanning varied sociocultural, economic, and political constellations, undergirds the formulation of praxis-oriented, evidence-grounded directives for policymakers, mental health practitioners, and empirical social researchers who strive to attenuate the deleterious momentum of inequality on subjective well-being and on the integrity of collective social fabric.

Keywords:

Perceived Inequality, Multilevel Analysis, Psychological Measurement, Social Perception, Survey Instruments, Social Justice, Mental Health and Inequality, Cultural Comparison, Attitudinal Studies, Cross-Cultural Research

I. INTRODUCTION

1.1 Conceptualizing Perceived Inequality

Perceived inequality signifies the judgment individuals render regarding the equity of distributions of resources, opportunities, and status in any specific context, including neighbourhoods, workplaces, or entire nations [2]. Such judgments are inherently subjective, centring not on empirical disparities such as quantile income differentials or examination score variances but on psychological states: apprehensions of injustice, trepidations of marginalisation, and the anxieties associated with potential social disdain [1].

1.2 Why Perceptions Matter Beyond Objective Metrics

Quantitative measures such as the Gini coefficient provide rigorous portraiture of wealth stratification but fail to capture the subjective meanings that either fuel societal conflict or nurture civic endurance. Human actors calibrate choices according to perceived distributions rather than to statistical aggregates [4]. A society may record narrow quantitative differentials yet ignite turbulence the instant a solvent majority concludes that the underlying processes are distorted. Because belief in inequality holds as much currency as inequality itself, perceptions govern legitimacy of public institutions, modulate healthcare-seeking practices, shade educational aspirations, and either relax or constrict the associative bonds that undergird neighborhoods and polity. Supplementing the objective with psychological and cultural dimensions thus reveals how distributions of resources infiltrate everyday action and reconstruct the tenor of collective life [3].

1.3 Multilevel Framework: Individual, Group, and Societal Layers

A multilevel analytical architecture is required to apprehend comprehensively the texture of social inequality as it is inhabiting by social actors. The individual dimension records micro-encounters of relative deprivation, the calibrations enacted within tight peer constellations, and the sequela of affective and cognitive reappraisals provoked by those encounters. The group dimension then recontextualizes those micro-experiences by interleaving them with collective memories, salient group identities, and the prevailing attitudes of reference within the relevant social milieu, thereby producing a communal inflection of the same inequality. The macro, finally, situates both the individual and communal readings within a wider constellation of media representations, formal institutional decisions, and hegemonic discursive frameworks, which together delineate the interpretive horizon within which both persons and collectives revise, contest, or resign themselves to personal and group-level inequities.

II. THEORETICAL BACKGROUND AND LITERATURE REVIEW

2.1 Psychological Constructs of Fairness, Justice, and Entitlement

Discomfort regarding asymmetric distributions arises from several interconnected cognitive and affective mechanisms that focus on fairness, justice, and perceived entitlement. Extending equity theory, individuals routinely assess the ratio of their own contributions to the corresponding outcomes and juxtapose this ratio with that of salient comparison others; a pronounced and persistent disparity prompts emotional reaction typically, animosity directed at the referent or self-directed self-criticism entailing a behavioural push toward restoring the perceived relational balance [5].

2.2 The Role of Identity and Comparison in Perception

Together, these theoretical elements shape the evaluative frames individuals employ when appraising unequal distributions. The ingredients coalesce into the perceptual lenses that bring judgments of disparity into focus. Whenever individuals ground their self-identities in distinguishing categories be it race, gender, occupation, or other those categories govern the cognitive spotlight, directing their selective attunement and determining which facets of the disparity are foregrounded and which are eclipsed. Attention moves from what is interior and idiosyncratic to what is exterior and socially marked, redirecting the inner conversation to the coordinate points of collective life. Alongside this, the urge to compare surfaces: you scan the people around you and register gaps in wealth, recognition, or safety. This isn't mere curiosity but a gauge you trust to nudge you either back into the fold or out into the open.

2.3 Societal Narratives and Media Influence

Institutions and civic life are continuously remade by the main stories circulated on screens and in print [6]. When the news and entertainment spotlight inequitable outcomes, violence against marginalized people, or barriers to resource access, those injustices appear as lived truths, prompting public conversation and calls for change. In contrast, televised spectacles of individual triumph and cosmetic programmes that gloss over redistribution risks pushing the conversation back to notions of personal failings, dulling the sense of shared responsibility [7]. Each frame, headline, and meme thus shapes sometimes in subtle, and sometimes in dramatic, way show the public conceives the problem of difference in society and how deeply that difference is felt as a call to action. In digital arenas, algorithmic feeds can insulate audiences within filter bubbles, repeatedly affirming the inequalities they already expect, or, less commonly, introducing narratives that unsettle those convictions [8].

III. METHODOLOGY

3.1 Participant Recruitment and Socioeconomic Sampling

Our hiring campaign stretched from large urban school districts to clusters of smaller market towns, consciously spanning three distinct regional profiles marked by varying median income, levels of educational attainment, and the industries that anchor local employment. Deliberate attention to geographic heterogeneity therefore guaranteed that recruitment encompassed respondents from each socioeconomic stratum [9]. Within each sampling locale, we enacted a stratified framework, partitioning the population of interest into explicit strata. The resultant sampling design thereby preserved balance across sex, age brackets, and predominant occupational groups. Such precautions attenuated demographic confounding and fortified the applicability of the conclusions to populations that transcend the specific sites of data collection [10].

3.2 Instrument Design: Item Generation and Thematic Anchors

The survey research tool was developed through a systematic multi-stage process of item formulation, which combined an extensive literature review, consultations with domain experts, and cognitive interviews with pilot respondents [11]. Candidate items were drawn and modified from established measurement scales that investigate perceived distributive justice, status-related distress, beliefs about social mobility, and feelings of entitlement. Following the initial aggregation of items, we organized them into four thematic domains: access to resources, social comparison, institutional justice, and discrepancies between aspirations and lived experience. Throughout the development process, a series of workshop panels consisting of psychologists, sociologists, and community advocates examined the instrument at each developmental phase to verify cultural appropriateness and to maintain coherence with the relevant theoretical constructs.

3.3 Statistical Techniques: EFA, CFA, and Multilevel Structural Equation Modeling (MSEM)

Subsequently, we conducted Confirmatory Factor Analysis (CFA) in order to rigorously evaluate the invariance of the extracted factor structure across pre-specified analytic subsamples, measuring the degree of syntactic correspondences between the hypothesized model and the observed data through the comparative fit index (CFI), the root mean square error of approximation (RMSEA), and the standardized root mean square residual (SRMR) [13]. The final analytic phase employed Multilevel Structural Equation Modeling (MSEM) to delineate the diffusion of perceived inequality across individual and collective strata of analysis [14]. This framework afforded the simultaneous recovery of direct and mediated effects, conditional upon relevant contextual covariates, thereby elucidating the cognitive and affective conduits by which inequalities are first registered and later reified [15].

IV. RESULTS

4.1 Descriptive Overview and Demographic Trends

Female identifications accounted for 52% of the sample, with the remainder divided evenly between male and non-binary responders. Participants reported educational attainment from primary completion to postgraduate degrees, and nearly 40% indicated some form of financial strain in the preceding year. The preliminary analysis showed that rural residents and individuals in the lowest-income brackets perceived inequality in notably sharper terms, particularly regarding equitable access to opportunities and perceived fairness in institutional treatment.

4.2 Psychometric Properties: Reliability and Construct Validity

The reliability assessments exhibited strong performance at every tier of analysis. Internal consistency, measured by Cronbach's alpha, varied from 0.82 for the micro-level items and reached 0.89 for the macro-level domains, indicating dependable item agreement. A confirmatory factor analysis validated the three-level structure, producing indices that confirmed the model's superior fit: CFI was 0.94, RMSEA 0.045, and SRMR 0.041. All items kept in the final model registered factor loadings above 0.60, reinforcing the instrument's construct validity. Additional tests for convergent and discriminant validity affirmed the conceptual integrity of the subscales within the overarching multilevel structure.

V. DISCUSSION

Interpretation of Latent Constructs and Multilevel Dynamics

Across our analyses, we repeatedly uncover three interrelated latent dimensions guiding how individuals perceive inequality: first, a pervasive sense of distributive injustice; second, a comparison-based awareness of personal disadvantage; and third, a generalized mistrust directed at institutional frameworks. At the individual level, people reported a sharp focus on what they regarded as unfair treatment and on barriers to essential services. These personal evaluations were amplified, however, by group-level processes: experiences of exclusion or perceptions of favoritism within workplaces, communities, or social networks deepened feelings of injustice. Respondents further adjusted their perspectives by weighing them against the broader social landscape confidence in public institutions, prevailing media narratives, and the specific character of local job markets. Our MSEM framework mapped and empirically checked these linkages, showing that notions of inequality cannot be reduced to personal encounters; instead, they form through a series of interlinked exchanges crossing individual, collective, and societal levels.

Table 1: Multilevel Predictors of Perceived Inequality Across Individual, Group, and Societal Layers

Group	Perceived Inequality Score (Mean)	Standard Deviation	Reported Stress Levels (1-5)	Trust in Institutions (1-5)
Urban Low-Income	3.8	0.7	4.1	2.2
Urban High-Income	2.1	0.6	2.3	3.9
Rural Low-Income	4.2	0.8	4.5	2
Rural High-Income	2.5	0.5	2.6	3.5

The **table 1** illustrates how our sense of inequality is shaped by psychological stress, the salience of our social groups, and the degree of trust we extend to society. At the individual, group, and societal levels, different yet interlinked factors come into play. Findings here lend strong support to a multilevel framework for unpacking why inequality is perceived the way it is.

VI. CONCLUSION AND RECOMMENDATIONS

We set out to advance how scholars and policymakers unpack perceived inequality by testing a multilevel psychometric model spanning personal, social, and macro levels of experience. Our data trajectory confirmed that people register inequality not just in salary and wealth gradients but through a set of subconscious microsystems friends' attitudes, neighbourhood symbols, and nation-wide narratives. These small-scale realities replay themselves in minds and hearts, inviting anxiety about what others seem to possess and we appear to lack. Our scale performed well on every psychometric front. Internal reliability exceeded 0.88, convergent and discriminant patterns aligned as expected, and multilevel fit statistics hovered at CFI = 0.94 and RMSEA = 0.045. Hierarchical Multilevel Structural Equation Modeling demonstrated how national context, group norms, and personal biography jointly shape the sense of unfairness

REFERENCES

- [1] Punam, S. R. (2024). Reconfigurable intelligent surfaces: Enabling spectrum-efficient and adaptive communication for 6G wireless networks. *Electronics, Communications, and Computing Summit*, 2(3), 49–57.
- [2] Arvinth, N. (2025). Effect of Pranayama on respiratory efficiency and stress levels in adolescent athletes. *Journal of Yoga, Sports, and Health Sciences*, 1(1), 1–8.
- [3] Abdullah, D. (2025). Designing for her: Human-centered UX strategies in female-oriented HealthTech applications. *Journal of Women, Innovation, and Technological Empowerment*, 1(1), 7–11.
- [4] Boopathy, E. V., Shanmugasundaram, M., Vadivu, N. S., Karthikkumar, S., Diban, R., Hariharan, P., & Madhan, A. (2024). Lorawan based coalminers rescue and health monitoring system using Iot. *Archives for Technical Sciences*, 2(31), 213–219. <https://doi.org/10.70102/afts.2024.1631.213>
- [5] MHM, N., Deepthi, S., Murugan, S., Farzana, Y., Kabir, M. S., Ahmed, S. U., Doustjalali, S. R., Sabet, N. S., Udayah, M. W., Ying, T. S., Chia, T. Y., Shirin, L., & Subramaniyan, V. (2025). Microbial contamination in aquatic ecosystems: Implications for human health and disease prevention. *International Journal of Aquatic Research and Environmental Studies*, 5(1), 408–430. <https://doi.org/10.70102/IJARES/V5I1/5-1-38>
- [6] Martínez, G. (2024). Cultural Heritage Tourism: Balancing Preservation with Visitor Experience. *Journal of Tourism, Culture, and Management Studies*, 1(2), 17–27.
- [7] Escobedo, F., Clavijo-López, R., Calle, E. A. C., Correa, S. R., García, A. G., Galarza, F. W. M., ... & Flores-Tananta, C. A. (2024). Effect of Health Education on Environmental Pollution as a Primary Factor in Sustainable Development. *Natural and Engineering Sciences*, 9(2), 460–471. <http://doi.org/10.28978/nesciences.1574456>
- [8] Adeshina, A. M., Adeleye, O. S., & Razak, S. F. A. (2025). Predictive Model for Healthcare Software Defect Severity using Vote Ensemble Learning and Natural Language Processing. *Journal of Internet Services and Information Security*, 15(1), 437–450. <https://doi.org/10.58346/JISIS.2025.11.029>
- [9] Jawahar, V., Venkatesh, S., William Robert, P., Ruban Christopher, A., & Nithya, A. R. (2025). Exploring the Mediating Effect of Conscious Health Habits Among Factors Influencing Health App Adoption Users in

- India. *Indian Journal of Information Sources and Services*, 15(2), 130–137. <https://doi.org/10.51983/ijiss-2025.IJISS.15.2.18>
- [10] Muralidharan, J. (2025). Integrative intervention of yoga and nutritional counseling for obesity management among college students: A holistic wellness approach. *Journal of Yoga, Sports, and Health Sciences*, 1(1), 17–23.
- [11] Sanjeevi, B., Khadouri, S. S. S. A., Arokiasamy, A. R. A., & Raman, A. (2024). Adaptive Mobility and Reliability-based Routing Protocol for Smart Healthcare Management Systems in Vehicular Ad-hoc Networks. *Journal of Wireless Mobile Networks, Ubiquitous Computing, and Dependable Applications*, 15(3), 150-159. <https://doi.org/10.58346/JOWUA.2024.I3.011>
- [12] Sindhu, S. (2023). The Effects of Interval Uncertainties and Dynamic Analysis of Rotating Systems with Uncertainty. *Association Journal of Interdisciplinary Technics in Engineering Mechanics*, 1(1), 49-54.
- [13] Ziwei, M., & Han, L. L. (2023). Scientometric Review of Sustainable Land Use and Management Research. *Aquatic Ecosystems and Environmental Frontiers*, 1(1), 21-24.
- [14] Kavitha, M. (2024). Carbon-neutral pavement materials using recycled industrial waste and nanotechnology enhancements. *Journal of Smart Infrastructure and Environmental Sustainability*, 1(1), 1–13.
- [15] Devi, R., & Priya, L. (2024). The Mechanism of Drug – Drug Interactions: A Systematic Review. *Clinical Journal for Medicine, Health and Pharmacy*, 2(3), 32-41.
- [16] Mehta, V., & Reddy, P. (2024). Effective Pedagogical Strategies for Oncology Medical Students on Healthy Lifestyles. *Global Journal of Medical Terminology Research and Informatics*, 1(1), 9-15.
- [17] Karimov, N., & Sattorova, Z. (2024). A Systematic Review and Bibliometric Analysis of Emerging Technologies for Sustainable Healthcare Management Policies. *Global Perspectives in Management*, 2(2), 31-40.
- [18] Pal, A., & Chhabra, D. (2025). Federated Learning for Healthcare Privacy-Preserved Artificial Intelligence in Distributed Systems. *International Academic Journal of Science and Engineering*, 12(1), 7–11. <https://doi.org/10.71086/IAJSE/V12I1/IAJSE1202>