GUEST EDITORIAL

Beyond Publish or Perish: An Institutional Quality-Weighted Research Scoring Framework for Indian Medical Colleges

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ABSTRACT

Indian medical academia faces a structural conflict between the National Medical Commission (NMC) promotion mandates, which emphasize publication volume, and the National Institutional Ranking Framework (NIRF), which demands high-impact, globally indexed quality. This dichotomy has inadvertently incentivized a 'toxic triad' in academic publishing: volume padding (salami-slicing), gift authorship (exploitative chronologies), and the proliferation of predatory publishing. To resolve this, our institution designed and implemented the Research Commendation Programme (RCP). The RCP utilizes an 'Inclusive Merit' mathematical scoring matrix that standardizes digital identity (ORCID), explicitly penalizes distant co-authorships and predatory journals, and employs a volume saturation curve to decay the value of low-tier publications while rewarding Tier 1 (Scopus/WoS) excellence. In a retrospective pilot (2022-2024), the framework successfully evaluated 115 faculty members and processed 465 publications. It stratified researchers into objective categories without administrative friction, successfully shifting the institutional focus from quantity to verified quality. The RCP demonstrated proof-of-concept by successfully filtering volume-padding and stratifying faculty into objective quality tiers. It serves as a scalable administrative prototype for Indian medical colleges to internally realign faculty incentives and foster a culture of genuine academic impact.

Keywords: Bibliometrics, Publication Ethics, Faculty Promotion, Predatory Publishing, Research Quality Indicators, Medical Education

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INTRODUCTION

Medical research in India is currently navigating a precarious crossroads. For institutional administrators and faculty alike, the dual pressures of regulatory compliance and global academic excellence have created a fundamentally conflicting landscape.

For years, career progression in Indian medical colleges has been governed by the guidelines set forth by the National Medical Commission (NMC), spanning from the Teachers Eligibility Qualifications (TEQ) 2022 to the recently gazetted Medical Institutions (Qualifications of Faculty) Regulations, 2025 (NMC, 2025).[1-2] While well-intentioned-designed to stimulate research activity among clinicians-the criteria are inherently quantitative.[3] Faculty require a fixed number of publications to secure promotions (e.g., transitioning from Assistant to Associate Professor). This volume-centric 'publish or perish' environment often reduces the noble pursuit of medical research to a transactional administrative checklist.[3]

Concurrently, medical colleges are striving for national preeminence and global visibility, metrics primarily measured by the National Institutional Ranking Framework (NIRF) and international accreditation bodies. Unlike the NMC, these frameworks strictly prioritize quality over quantity. They heavily weigh citations, H-indices, and publications housed in top-tier indexing databases like Scopus and Web of Science (WoS).[4]

The Toxic Triad: The systemic clash between individual volume mandates (NMC) and institutional quality mandates (NIRF) has spawned a predictable academic crisis, characterized by a 'toxic triad':

1. **Volume Padding and Salami-Slicing:** To meet NMC quotas rapidly, researchers frequently slice robust, comprehensive studies into multiple fragmented papers of lower scientific value.[5]
2. **Gift Authorship and Academic Exploitation:** The rush for numbers normalizes hierarchical exploitation. Senior faculty or Heads of Departments are frequently appended as distant co-authors on resident or junior faculty research, a practice that heavily dilutes the credit of primary investigators.[6]
3. **Predatory Publishing:** The desperation for rapid publication feeds a booming industry of 'pay-to-publish' vanity journals. These platforms bypass rigorous peer review, offering quick acceptance letters that satisfy promotion committees but deeply damage the institution's credibility and the broader scientific record.[7,8,9,10]

Relying solely on top-down national policy reform to fix this dichotomy is a slow, iterative process. Medical colleges require an immediate, localized solution to protect their academic integrity. This paper presents the design, implementation, and proof-of-concept of an institutional intervention-the Research Commendation Programme (RCP). By mathematically filtering low-quality volume and objectively rewarding high-impact research, the RCP offers a scalable administrative prototype to realign faculty incentives and successfully bridge the NMC-NIRF divide.

CONCEPTUALIZING THE 'INCLUSIVE MERIT' FRAMEWORK

To resolve the dichotomy between quantitative compliance and qualitative impact, the NIRF/ Institutional Research Cell designed the Research Commendation Programme (RCP). The RCP is operationalized through a mathematically robust Standard Operating Procedure (SOP) known as the 'Inclusive Merit' scoring matrix. Rather than relying on subjective peer review-which is resource-intensive and prone to bias-the matrix utilizes objective bibliometric parameters to score, weight, and ultimately tier faculty publications.

The entire scoring algorithm, visualizing a manuscript's journey from submission to final score, is mapped in Figure 1.

By relying on this automated framework, the institution successfully neutralized the primary drivers of low-quality research through specific strategic mechanisms:

The Zero-Error Gate: Standardizing Digital Identity: Administrative chaos is a significant barrier to institutional research tracking. Historically, variations in faculty names and inconsistent institutional affiliations resulted in lost citations and poor NIRF data integration. To counter this, the RCP established a 'Zero-Error Gate.' Faculty submissions are only processed if they include a verified ORCID iD and strictly adhere to the designated affiliation syntax (e.g., the complete, officially recognized institutional name). Data is captured via a centralized digital form, drastically reducing the administrative burden of manual data cleaning and ensuring absolute traceability of the institution's intellectual output.

NMC-Aligned Token Scoring: Defeating Gift Authorship: A pervasive side-effect of volume-based promotion criteria is 'gift authorship,' where senior faculty or Heads of Departments are inappropriately appended to resident or junior faculty papers. The RCP directly disincentivizes this through a tiered chronology multiplier.

Crucially, the framework scores the corresponding author at par with the first author. While this diverges from rigid historical promotion guidelines, it acts as an interpretative institutional policy decision aligned with global academic standards set by bodies like the International Committee of Medical Journal Editors (ICMJE), which correctly recognize the principal investigator's pivotal role.[11] Therefore, the first, second, third, and corresponding authors receive full base indexing points and quartile (Q-index) bonuses.

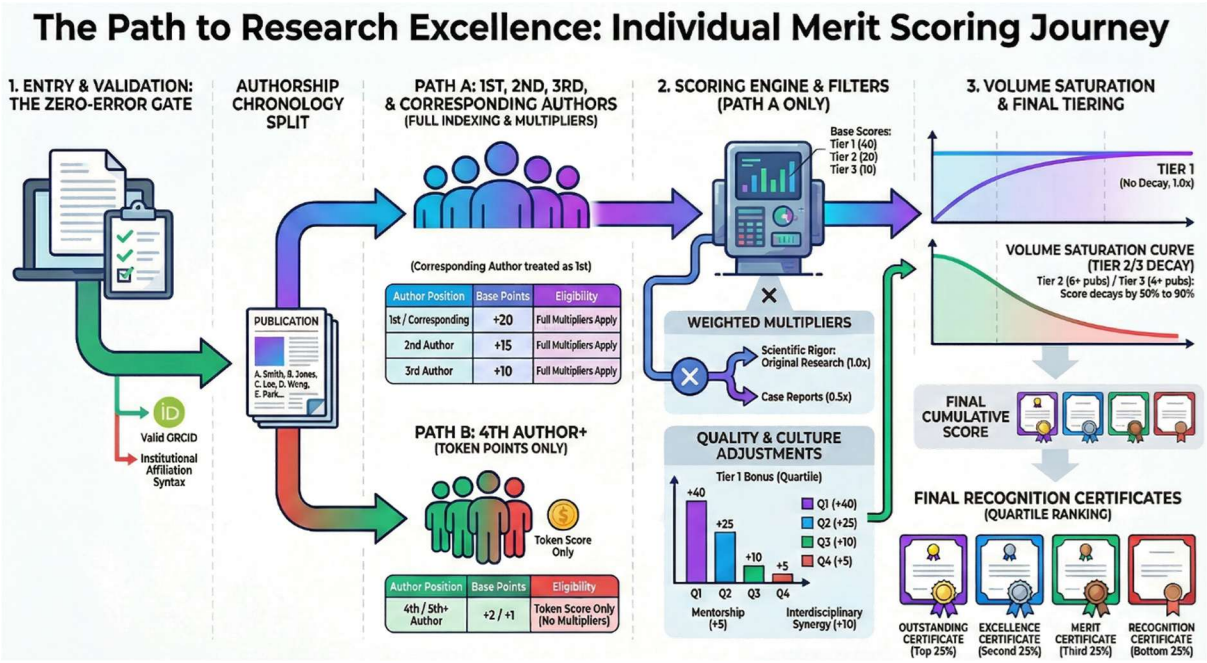

Figure 1: The 'Inclusive Merit' Scoring Matrix

Figure 1 Legend: The flowchart illustrates the conceptual manuscript evaluation process, starting with digital identity verification, followed by weighted scoring based on authorship chronology, journal tiering, and volume saturation, culminating in the final faculty categorization.

Under our SOP, the first and corresponding authors receive equal base multiplier points (+20). Conversely, faculty claiming the 4th position receive a nominal +2 points, and 5th author onward receive +1 point, maintaining baseline regulatory compliance but rendering them ineligible for base indexing and quartile bonuses.

The Volume Saturation Curve: Defeating Salami-Slicing: 'Salami-slicing'-the practice of dividing a single robust study into multiple minor papers to inflate publication counts-thrives when all publications are weighted equally. The RCP introduces a mathematical 'Volume Saturation Curve' to extinguish this practice.

Operationally, the framework triggers a 50% score decay (0.5x multiplier) for Tier 2 journals starting at the 6th publication in an evaluation cycle, dropping to 0.25x for the 11th. For Tier 3 journals, a steeper 50% decay begins at the 4th publication, dropping to a 90% decay (0.1x multiplier) from the 6th publication onwards. For example, a faculty member's sixth paper in a low-tier journal yields dramatically diminishing returns, while Tier 1 publications (indexed in Scopus, PubMed, or Web of Science) remain immunized against this decay. This explicitly signals that the institution values limitless excellence but will not reward artificially inflated mediocrity.

The Predatory Publishing Penalty: Any publication flagged as predatory immediately attracts a negative score penalty. To eliminate subjective bias, the framework utilizes an objective, two-step verification method to identify predatory journals: (1) positive identification on standard administrative exclusion criteria, such as the UGC-CARE list of cloned/predatory journals, and (2) verification of the journal's absence from recognized academic whitelists, specifically the Directory of Open Access Journals (DOAJ), PubMed, or Scopus.[12] This punitive measure ensures that faculty prioritize authentic peer-reviewed platforms over quick, paid publications, thereby protecting the institution's academic integrity and global reputation.

Strategic Add-ons for Academic Culture: Beyond penalizing poor practices, the matrix actively engineers a healthier academic culture through strategic bonus points:

- **Mentorship Bonus:** A **distinctive** feature of the RCP is the awarding of **+5 bonus points** for publications co-authored with undergraduate students or interns. This aligns with the new Competency-Based Medical Education (CBME) curriculum's push for early research exposure.
- **Interdisciplinary Bonus:** To break traditional academic silos, additional **+10 synergy points** are awarded for cross-departmental collaborations, fostering comprehensive, multi-centric public health and clinical research.

Implementation Insights: A Proof of Concept (2022 - March 2026): To validate the framework, the NIRF/Institutional Research Cell executed a retrospective 'backlog clearance' cycle covering publications from 2022 to March 2026. The implementation yielded highly encouraging administrative and cultural outcomes.

Implementation Rollout and Data Processing: The

operational rollout was initiated through a faculty-wide sensitization workshop. During this session, the nodal committee walked the faculty through the newly designed 'Inclusive Merit' SOP and its objective scoring logic. Following the workshop, faculty were provided a designated time frame to submit their bibliometric data via a matrix-specific centralized digital form.

Consequently, the central committee received and processed 465 distinct publication submissions across all clinical, para-clinical, and pre-clinical departments. By applying the SOP, the raw data was systematically cleaned, verified, and scored. The framework successfully evaluated 115 faculty members, stratifying them into four objective, tiered certificate categories based on their cumulative mathematical scores:

1. **Outstanding Excellence** (The top percentile of researchers driving high-impact, Tier 1 publications).
2. **Excellence**
3. **Merit**
4. **Recognition** (Faculty meeting basic compliance and foundational research activity).

Cultural Shift and Institutional Reception: A major concern when introducing stringent quality metrics is the risk of faculty alienation or administrative revolt. However, the transparency and objective mathematical nature of the RCP mitigated this entirely. The rollout culminated in a felicitation ceremony where the Dean formally recognized the top 25% of the faculty.

The RCP successfully filtered out low-quality volume padding without friction. Faculty members who submitted numerous Tier 3 papers visually understood why their final scores were lower than peers who published a single, high-impact Tier 1 paper. Qualitative observations suggested an institutional shift toward prioritizing journal indexing and authorship ethics over mere publication volume.

An Open-Source Prototype for India: The conflict between minimum volume mandates for career progression and the demand for global quality metrics places Indian medical colleges in a precarious position. While broader national policy reform is required, institutions cannot afford to wait.[10] Unlike traditional volume-focused appraisal systems,[2] our framework aligns with recent calls for quality-centric and ethically grounded research evaluations.[10]

This institutional RCP proves the efficacy of building an 'institutional firewall'. By implementing a localized, mathematically grounded framework, medical colleges can internally realign faculty incentives. The beauty of the RCP lies in its scalability. (A summary of the core evaluation parameters and implementation results are provided in Annexures 1 and 2, allowing for direct institutional replication). Because the SOP relies on standard bibliometric data (Indexing, Quartile, Chronology), it does not require expensive software. Any medical college can replicate this framework using basic spreadsheet algorithms and centralized data-capture forms, making it highly adaptable for low-resource settings.

Limitations and Unintended Consequences

As a proof-of-concept, this framework is limited by its single-institution implementation. Furthermore, while the matrix curbs salami-slicing, any bibliometric system may inadvertently induce strategic behavior, such as 'authorship bartering'. To counter this, the SOP employs strict precedence rules preventing the additive stacking of authorship scores. Additionally, at an institutional level, individual scores are aggregated into a Departmental 'Composite Index' that explicitly measures 'quality density' and wide participation, actively preventing 'siloed excellence' where a single researcher's high output masks departmental inactivity. Continuous auditing remains vital.

As the framework matures, future iterations of the RCP will explore the integration of Artificial Intelligence (AI). AI-driven tools could be utilized to automatically verify ORCID profiles, cross-reference DOI numbers with Scopus/WoS databases, and instantly calculate indexing quartiles, further reducing the manual verification burden on nodal committees. Additionally, continuous statistical review of the 'Saturation Curves' will ensure the threshold metrics remain responsive to evolving national publication trends.

Conclusion

For Indian medical research to transition from a culture of administrative compliance to one of genuine clinical and public health impact, institutional incentive structures must be re-evaluated. The Research Commendation Programme (RCP) suggests that it is possible to mathematically reward verified quality, penalize predatory and exploitative publishing practices, and foster a culture of mentorship all while maintaining base regulatory compliance. By open-sourcing this administrative prototype, we invite other medical institutions to adopt and adapt the 'Inclusive Merit' framework, ultimately elevating the standard of medical academia nationwide.

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Declaration of Non-use of Generative AI Tools: This article was prepared without the use of generative AI tools for content creation, analysis, or data generation. All findings and interpretations are based solely on the authors' independent work and expertise.

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