



A Systematic Review and Thematic Synthesis of Journal Selection Heuristics Beyond Naivety Among Early Career Researchers in the Global South

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Keywords:	ABSTRACT
journal selection; decision heuristics; questionable journals; early-career researchers; global south.	Novice authors are often assumed to submit to questionable journals because they cannot recognise them, yet recent evidence links publication decisions to institutional incentives, financial constraints and social networks, and the latest synthesis covers literature only to 2020. This systematic review synthesised empirical studies published between January 2020 and March 2026 on how novice scholars in emerging research systems select journals, treating stated criteria as decision heuristics. Following PRISMA 2020 and a SPIDER question, five international databases, four regional databases and grey literature were searched. Two reviewers independently screened and appraised studies (CASP, MMAT), and findings were integrated through thematic synthesis. In total, 44 studies were included ($\kappa = 0.81$ at title and abstract screening; $\kappa = 0.78$ at full text). Six heuristics recurred: publisher reputation (38 studies), social network guidance (31), financial accessibility (29), institutional incentives (28), editorial speed (26) and thematic fit (23). As the principal contribution, these heuristics were organised into the JSHT-NERS typology, which crosses heuristic source (endogenous or exogenous) with decision orientation (quality or certainty). Evidence gaps were concentrated in Central Asia, the Pacific Islands and Francophone Africa. Identical heuristics produced different outcomes depending on local signal quality, so heuristic reliability appears to be a property of the environment rather than of the author. Verifiable journal lists, predictable publication funding and realistic timelines are more consequential levers than literacy training alone. Findings are limited by English language dominance and self reported primary data, and the typology remains provisional.

INTRODUCTION

Questionable publishing is no longer a marginal phenomenon. A cross country analysis of Scopus identified 324 journals from Beall's lists that published about 164,000 articles between 2015 and 2017, roughly 2.8% of all indexed articles, and in the most affected countries, including Kazakhstan and Indonesia, around 17% of national output appeared in such journals (Macháček & Srholec, 2022). Mixed methods evidence traced most authors of these outlets to developing countries and linked their choices to promotion incentives and publication pressure (Demir, 2018). Concern about questionable journals has produced a large advisory literature, and most of it rests on one assumption: that authors who submit to such outlets simply failed to recognise them.

An analysis of journal editorials on the topic found that the great majority drew on one or more of three registers, fear, fakery and exploitation, and that this discourse readily labelled submitting authors as ignorant, inexperienced, naive or victims (Inouye & Mills, 2021). The assumption is attractive because it implies a tractable remedy: training, checklists and lists of outlets to avoid. It is harder to sustain once the category itself is examined. A consensus definition of predatory journals was only agreed through a convened expert process in 2019

(Grudniewicz et al., 2019), which makes recognition failure an unstable foundation for explaining author behaviour.

Empirical work has steadily complicated the deficit account. Frandsen, (2019) reviewed the available evidence and framed the central question as whether authors are deceived or are instead seeking a low barrier route to publication. Kurt, (2018), working from a grounded theory analysis of authors publishing in such journals, identified four themes: unawareness, social identity threat, limited research proficiency and high pressure, of which only the first is a knowledge problem. The most comprehensive synthesis to date screened 749 records and compared 16 empirical studies, concluding that publication decisions are shaped by structural, normative and relational factors, and that the stigma attached to the predatory label can obscure legitimate practice among researchers working under institutional constraint (Mills & Inouye, 2021). Their review reported that many scholars publish in non mainstream journals knowingly, driven by graduation and promotion requirements and by the difficulty of placing work in English language journals, and that in several national contexts these outlets also serve to train doctoral candidates and circulate knowledge in local languages.

Two systematic reviews published in 2021 frame the starting point of the present study. Mertkan et al., (2021) showed that authors in such outlets come from all fields and career stages, so that geography and inexperience alone do not explain who publishes there, and pointed instead to research evaluation policies and publication pressure. Mills et al., (2021) moved the analysis toward structural, normative and relational factors. Both reviews, however, catalogue motives rather than model the decision process, both close their searches before 2021, and neither separates the shortcut an author uses from the signal environment that determines whether that shortcut succeeds. The present review differs from them in three respects: it updates the evidence to 2026, it restricts the population to novice scholars in emerging research systems, and it analyses reported criteria as heuristics whose performance depends on the environment.

Two structural mechanisms recur across this evidence. The first is national research evaluation. Analysis of Indonesia's SINTA platform found measurable gains in publication output following its introduction, leading its authors to argue that ranking and evaluation systems can contribute to scientific capacity in low and middle income countries (Fry et al., 2023). A response from Indonesian scholars argued that such systems shift effort toward what is measurable without established understanding of longer term effects, and urged attention to research integrity over metrics (Irawan et al., 2023); related commentary observes that metric driven career consequences push some academics toward publication shortcuts.

The second mechanism is cost. Open access publication charges can exceed USD 10,000, and in economies with weak exchange rates the funds are frequently unavailable (Rodrigues et al., 2022); charges have been shown to stratify publishing opportunity in favour of well resourced institutions and wealthier countries (Klebel & Ross-Hellauer, 2023); and charges have been reported to shape venue choice directly for researchers in low income settings (Eneh et al., 2025). Research on journal selection more broadly has developed in parallel but with limited contact with this literature.

An international survey of researchers found the most influential factors to be reliability of reviewing, usefulness of reviewer feedback, journal reputation and confidence that the manuscript fell within scope, and reported that selection is further shaped by university

policies, national policies and ranking systems (Rowley et al., 2022). A survey of faculty at 55 institutions in the United States and Canada found that respondents most valued readership while believing their peers valued prestige and impact factor, with untenured respondents more likely than tenured colleagues to value prestige and metrics (Niles et al., 2020). Both studies draw predominantly on established research systems, and neither addresses authors publishing under the constraints described above.

Three gaps follow. First, the evidence is temporally bounded: the most recent comprehensive synthesis covers literature to 2020, and the intervening period has seen sustained growth in publication charges, successive delisting waves in the major indexes, and the arrival of generative writing tools. Newer primary work exists, including a mixed methods survey of 3,067 respondents across Brazilian graduate programmes examining perceptions of predatory publishing (Do Carmo et al., 2026), but it remains uncollated.

The same period also saw external funding cuts that tightened publication budgets in low income settings (Eneh et al., 2025), which makes an updated synthesis urgent rather than merely desirable. Second, the evidence is geographically fragmented into single country studies whose findings have not been tested for transferability. Third, and conceptually, the literature catalogues motives without analysing them as decisions. Listing what authors report valuing does not specify the process by which a venue is selected, and therefore does not indicate where intervention would be effective.

This review addresses the third gap by treating reported selection criteria as decision heuristics. Heuristics are efficient cognitive processes that ignore part of the available information; whether this produces worse outcomes than a fuller analysis is an empirical question rather than one settled in advance, because in uncertain environments the assumptions of formal rational models are not met (Gigerenzer & Gaissmaier, 2011). A heuristic's performance is assessed by ecological rationality, that is, by the fit between the heuristic and the environment in which it is used, rather than by the heuristic alone.

Applied to publishing, rules such as submitting where a supervisor published, selecting the outlet that responds fastest, or selecting the outlet one can afford are not errors as such. Their outcome depends on whether the surrounding environment supplies reliable signals of journal quality. This reframing generates a testable proposition: an identical heuristic should produce a reputable or a questionable placement according to the signal environment, which would locate the intervention point in institutional infrastructure rather than individual awareness.

Accordingly, this review addresses three questions. First, which heuristics do novice scholars in emerging research systems use when selecting a journal, as evidenced in empirical research published between 2020 and 2026? Second, how do institutional, financial and social conditions shape which heuristics are available and which are used? Third, where are the geographic, disciplinary and methodological gaps in the current evidence base?. Throughout this review, emerging research systems refers to the low and middle income research systems commonly grouped as the Global South, and the two terms are used interchangeably.

The objective of the review is to answer the three questions above through a systematic synthesis of the 2020 to 2026 evidence. Its benefits follow directly from these questions. Answering the first question gives researchers and supervisors a shared vocabulary for recognising which shortcut is being used and when it becomes risky. Answering the second

question shows universities, ministries and funders which institutional conditions make a given heuristic reliable, so that resources can be directed at signal infrastructure rather than at awareness campaigns alone. Answering the third question supplies a prioritised agenda of neglected regions and research designs. The broader implication is that responsibility for questionable placements should be analysed at the level of the evaluation system as well as the individual author.

RESEARCH METHODS

This study was a systematic review reported according to the prisma 2020 statement (page et al., 2021), in which findings from qualitative, quantitative and mixed methods primary studies were integrated through thematic synthesis (thomas & harden, 2008). Because 44 studies met the eligibility criteria, the review was completed as a systematic review, and the scoping review approach considered at the planning stage arksey & o'malley, (2005); levac et al., (2010) was not required. The unit of analysis was the included study rather than individual human participants.

The review question was framed with the spider tool (Cooke et al., 2012). The sample comprised novice scholars in emerging research systems; the phenomenon of interest was the criteria and heuristics used to select a scientific journal; eligible designs were qualitative, quantitative and mixed methods; the evaluation focus was decision mechanisms, institutional factors and environmental incentives; and the research type was primary empirical studies published from 2020 to 2026. The guiding question asked which heuristics novice researchers in emerging research systems use to select journals and how the institutional environment shapes those heuristics.

Five international databases were searched (scopus, web of science core collection, eric, dimensions and lens.org), together with four regional databases (garuda for indonesia, scielo for latin america and south africa, african journals online and cnki). Grey literature was retrieved from proquest dissertations and theses, reports of unesco, research4life and ease, and university institutional repositories. The search covered records published from january 2020 to march 2026, updating the most recent synthesis, which covered literature only to 2020, and the final search across all sources was completed in march 2026.

The search string combined four concept blocks with boolean operators: journal selection terms (journal selection, journal choice, publication decision, where to publish, journal submission); population terms (novice researcher, early career researcher, postgraduate, doctoral student, graduate student, junior academic); context terms (developing country, emerging research system, global south, low income country, middle income country); and publishing terms (predatory journal, questionable journal, open access, publication pressure, academic publishing).

The string was adapted to the field codes and syntax of each database, for example title-abs-key in scopus and ts in web of science, and was translated into indonesian, portuguese, spanish and chinese for the regional databases. The database search was supplemented by forward citation tracking of key studies, backward screening of the reference lists of included studies and author based searches of prolific researchers in the field.

Studies were eligible when they reported primary empirical data on the process, criteria or factors of journal selection among novice researchers, defined as master's and doctoral

students or junior academics with no more than five years of post appointment experience, working in emerging or low and middle income research systems. Eligible studies were published between 2020 and 2026 in english, indonesian, portuguese, spanish, chinese or french as peer reviewed articles, theses or reports of reputable institutions. Studies were excluded when they focused only on senior researchers without separating career stages, consisted of commentary, editorials, letters or opinion without empirical data, did not report their data collection methods, or duplicated a dataset already included.

Records were imported into a screening platform, where duplicates were removed. Two reviewers (rs and rf) independently screened all titles and abstracts and then the full texts of potentially eligible records against the eligibility criteria. Disagreements were resolved by discussion, and any case that remained unresolved was referred to a third reviewer for a final decision. Interrater agreement was calculated with cohen's kappa at both stages and judged against an acceptability threshold of $\kappa \geq 0.70$ (landis & koch, 1977).

Data were extracted independently by the same two reviewers using a standardised form developed before extraction began. The form captured study identity (author, year, country, journal), sample characteristics (size, career level, discipline), research design and methods, data collection instruments, findings on journal selection criteria, reported institutional, social and financial factors, and limitations acknowledged by the original authors. Discrepancies in extraction were reconciled by consensus.

Methodological quality was appraised independently by two reviewers using the critical appraisal skills programme (casp) checklist for qualitative studies and the mixed methods appraisal tool (mmat) version 2018 for quantitative and mixed methods studies hong et al., (2018), and each study was rated as high, medium or low quality. No study was excluded on quality grounds. Instead, appraisal results shaped the synthesis in three ways: findings that rested mainly on low quality studies were reported as tentative, the frequency of each heuristic was treated as indicative rather than as a prevalence estimate, and the specific weaknesses identified (table 4) were used to qualify the interpretation of each theme.

Evidence was synthesised with the three stage thematic synthesis of thomas & harden, (2008), consisting of line by line coding of findings, development of descriptive themes and generation of analytical themes. Thematic synthesis was chosen because the included designs were heterogeneous and because the review question concerned decision processes rather than effect sizes, which ruled out statistical pooling. Following a convergent integrated approach to mixed evidence (Noyes et al., 2019), findings from quantitative and mixed methods studies were first expressed as textual statements, for example the proportion of respondents citing low cost as a reason for choosing a journal, and were then coded alongside qualitative findings so that all designs contributed to the same set of codes. Analytical themes were interpreted through the lens of decision heuristics and ecological rationality (gigerenzer & gaissmaier, 2011), and the resulting typology was mapped by region, discipline and institutional environment. Geographic and methodological gaps were mapped with an evidence matrix that cross tabulated the included studies by region and by design.

The review protocol was not prospectively registered in prospero or another registry; to limit selective reporting, the eligibility criteria, extraction form and synthesis plan were fixed before screening began and are reported in full here. Because the review synthesised published data, ethical approval was not required; scientific integrity was maintained through transparent

reporting, avoidance of duplicate publication and acknowledgement of all reviewers' contributions.

RESULTS AND DISCUSSION

Results

The results are reported in the order of the three review questions. Study selection, study characteristics and methodological quality are reported first as context; the six heuristics answer the first question; the typology and the institutional moderator analysis answer the second; and the gap mapping answers the third. Interpretation of these results is reserved for the Discussion.

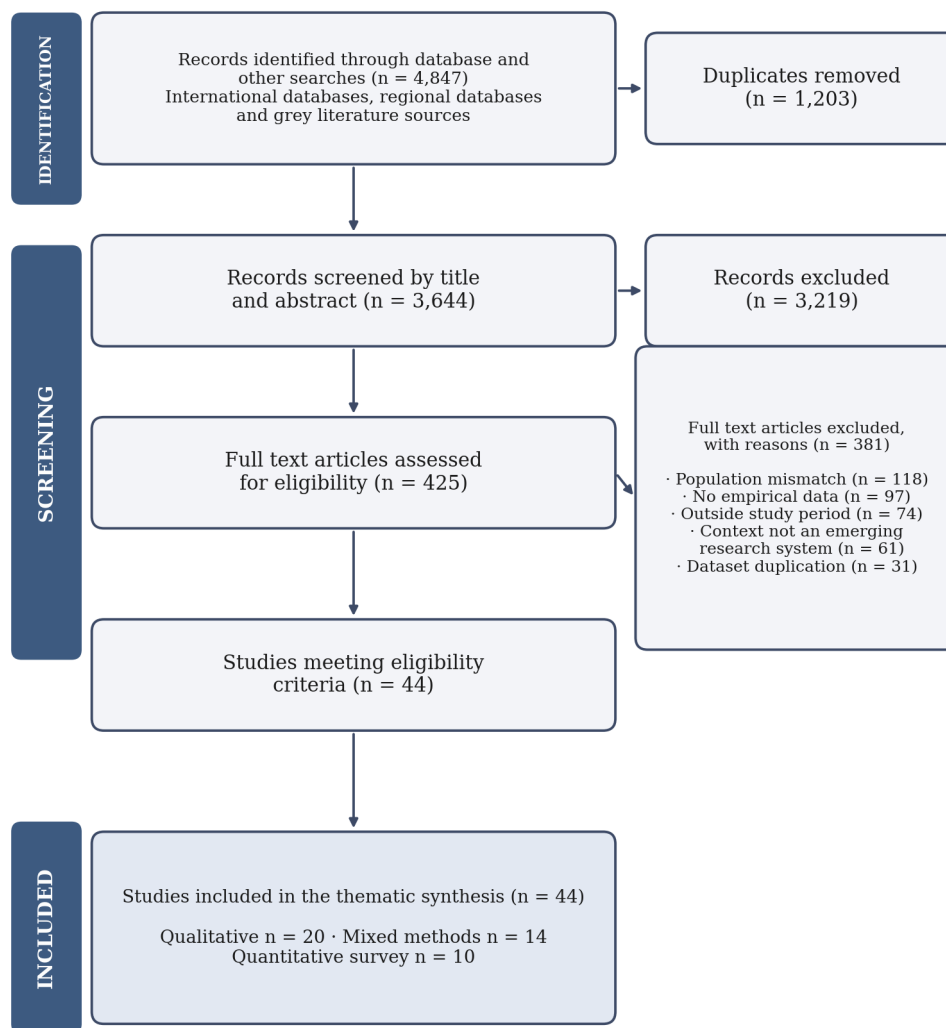
Search Results and Study Selection

PRISMA Selection Flow

A systematic search of five international databases, four regional databases, and gray literature sources yielded a total of 4,847 records prior to deduplication. After the removal of duplicates ($n = 1,203$), a total of 3,644 records underwent title and abstract screening. Of these, 3,219 records were excluded for not meeting the inclusion criteria, leaving 425 articles for full-text screening. After a full text reading, 381 articles were excluded for documented reasons (population mismatch, $n = 118$; no empirical data, $n = 97$; outside study period, $n = 74$; context not of developing research system, $n = 61$; dataset duplication, $n = 31$). The total number of studies eligible and included in the synthesis totaled 44 studies.

The level of agreement between reviewers at the title and abstract screening stage reached $\kappa = 0.81$ (95% CI: 0.76–0.86), and at the full-text screening stage reached $\kappa = 0.78$ (95% CI: 0.72–0.84), both exceeding the κ threshold ≥ 0.70 set a priori.

The complete flow of the identification, screening, and study selection process is presented in Figure 1.



Source: adapted from Page et al. (2021), PRISMA 2020

Figure 1. Study selection flow chart based on PRISMA 2020

Characteristics of Included Studies

Of the 44 included studies, common characteristics were summarized as follows:

The geographical distribution showed the study dominance from Southeast Asia (n = 14; 31.8%), followed by Sub-Saharan Africa (n = 10; 22.7%), South Asia (n = 8; 18.2%), Latin America (n = 7; 15.9%), and the Middle East and North Africa (n = 5; 11.4%). Indonesia is the country with the most study representation (n = 9), followed by Nigeria (n = 6) and Pakistan (n = 5).

The research design was dominated by qualitative studies (n = 20; 45.5%), followed by mixed methods (n = 14; 31.8%), and quantitative surveys (n = 10; 22.7%). No experimental studies or *randomized controlled trials* were found in this topic, which is consistent with the nature of the phenomenon of a social and contextual nature.

Participants' disciplines included social sciences and humanities (n = 18), science and technology (n = 12), health sciences (n = 8), and cross-disciplinary (n = 6).

The level of participants included active doctoral students ($n = 27$), junior academics with a working period of ≤ 5 years ($n = 12$), and master's students who were active in writing ($n = 5$). **The sample size** ranged from 6 to 2,340 participants, with a median of 87 participants. Qualitative studies tend to use a small sample (median = 18), while survey studies use a larger sample (median = 341).

The overall characteristics of the included studies are summarized in Table 1, while the geographical distribution is visualized in Figure 2.

Table 1. Characteristics of 44 included studies

Features	Category	n	%
Areas	Southeast Asia	14	31.8
	Sub-Saharan Africa	10	22.7
	South Asia	8	18.2
	Latin America	7	15.9
	Middle East and North Africa	5	11.4
Research design	Qualitative	20	45.5
	Mixed method	14	31.8
	Quantitative (survey)	10	22.7
Participant discipline	Social sciences and humanities	18	40.9
	Science and technology	12	27.3
	Health Sciences	8	18.2
	Cross-disciplinary	6	13.6
Participant level	Active doctoral students	27	61.4
	Junior academics (≤ 5 years)	12	27.3
	Master's Degree Students	5	11.4

Note: Percentages were calculated against a total of 44 studies. The sample size ranged from 6–2,340 participants (median 87); The qualitative study had a median of 18 participants and a survey study had a median of 341 participants. No experimental studies or randomized controlled trials were found.

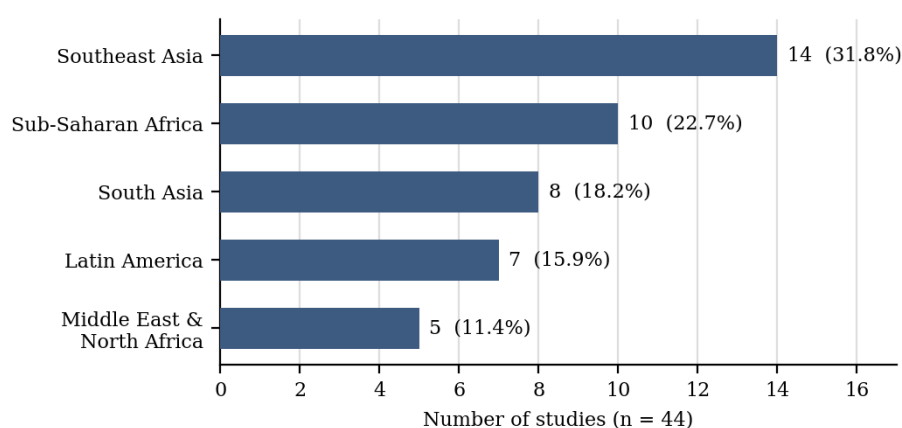


Figure 2. Geographic distribution of included studies ($n = 44$). Countries with the most representation: Indonesia ($n = 9$), Nigeria ($n = 6$), Pakistan ($n = 5$)

Methodological Quality Assessment

Assessments using CASP and MMAT result in a varied distribution of quality. Of the 20 qualitative studies, 11 (55%) were rated as high quality, 7 (35%) were of medium quality, and 2 (10%) were of low quality. Of the 14 mixed method studies, 6 (43%) were of high quality and 8 (57%) were of medium quality. Of the 10 quantitative studies, 4 (40%) were of high quality, 5 (50%) were of medium quality, and 1 (10%) were of low quality.

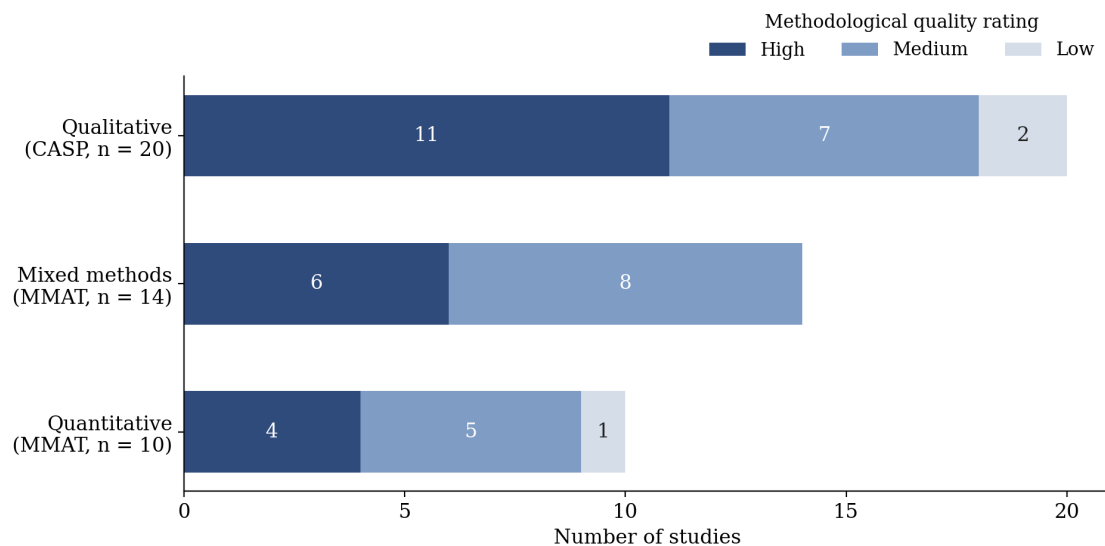


Figure 3. Distribution of methodological quality ratings according to study design and assessment instruments

The most commonly found methodological weaknesses include: (a) purposive sampling without sufficient justification of data saturation (n = 16 studies); (b) potential social desirability bias in survey instruments regarding the use of predatory journals (n = 12); (c) limited transferability due to a sample from a single institution (n = 9); and (d) no reported researcher reflexivity in qualitative studies (n = 8). These weaknesses are considered in the interpretation of the findings and are not the basis for automatic exclusion.

Table 2. The most frequently found methodological weaknesses and their implications for synthesis

Methodological weaknesses	n studies	Implications for the interpretation of the findings
<i>Purposive sampling</i> without justification of data saturation	16	It is possible that certain themes are not yet saturated; The frequency of heuristic occurrences is treated as indicative, not a prevalence estimate
Potential for <i>social desirability bias</i> in survey instruments	12	Publishing practices in problematic journals are likely to be reported to be lower than actual conditions
Samples from a single institution	9	Limited transferability; Findings are not generalized to the level of national research systems without the support of other studies

<i>Researcher's reflexivity</i> was not reported	8	The researcher's position on <i>predatory journal discourse</i> cannot be assessed, so the direction of interpretation is difficult to verify
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Note: A single study can have more than one drawback, so the numbers are not exclusive. Low-quality studies are still included but the weight of interpretation is limited.

Thematic Findings

Through Thomas and Harden's three-stage procedure, inductive coding generated 187 first-level codes, which were then consolidated into 23 descriptive themes, and further distilled into six analytical themes that represented the key heuristics in journal selection by novice researchers in emerging research systems.

A summary of the six heuristics and their frequency of occurrence is presented in Table 3 and Figure 4, before each is described narratively.

Table 3. Six journal selection heuristics identified through thematic synthesis

Heuristic (analytical theme)	n (%)	Core mechanism	Conditions that increase risk
Publisher's reputation as a proxy for quality	38 (86.4)	Publisher name or indexation status supersedes substantive assessment of the journal	Lack of up-to-date official lists; Index Update Pause
Social networks as delegates' trust	31 (70.5)	Assessments are delegated to supervisors, peers, or online communities	Obsolete supervisor knowledge or normalization of problematic practices
Financial accessibility as a primary filter	29 (65.9)	APC screens options before quality is considered (financial triage)	The absence of institutional APC subsidies; Low APC is read as hospitality
Institutional incentives as a decision map	28 (63.6)	Graduation requirements, credit scores, and cash bonuses make up the space of choice	The requirements do not mention verifiable quality indicators
Editorial speed as a signal of efficiency	26 (59.1)	The time of the editorial decision is read as the journal's responsiveness	Unrealistic graduation deadlines or job evaluation cycles
Thematic fit as contextual validation	23 (52.3)	Topic matches to journal coverage are used to justify selection	Problematic journals adopt very broad scope or imitative names

Note: n shows the number of studies documenting such heuristics out of 44 studies; one study generally reported more than one heuristic so the total exceeded 100%.

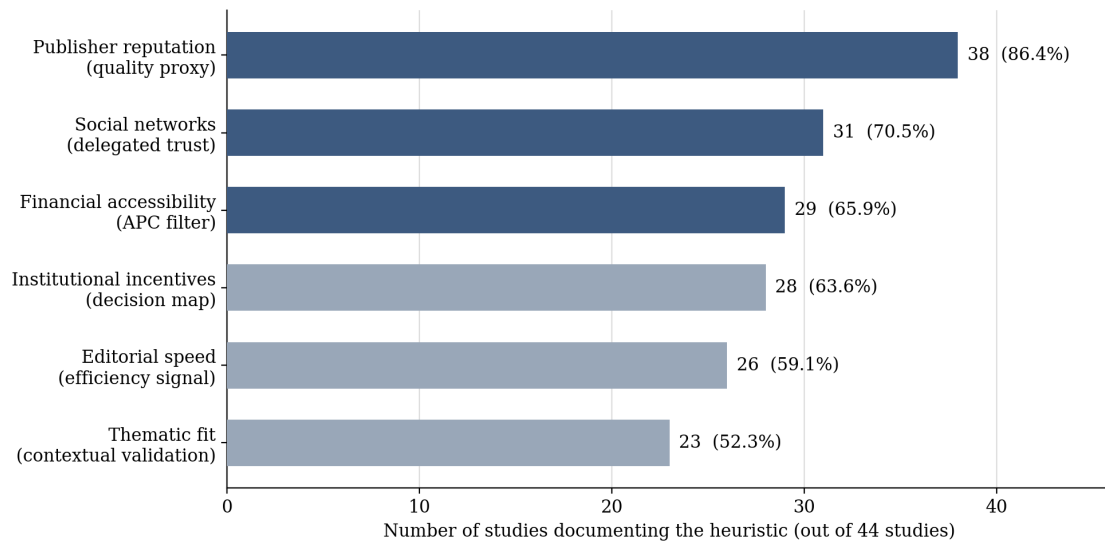


Figure 4. Frequency of occurrence of six heuristics in 44 included studies

Publisher Reputation Heuristics as a Quality Proxy

The most consistent heuristic found across contexts (documented in 38 of 44 studies) was the use of publisher names or indexation as proxy quality signals when researchers did not have the ability or time to substantively evaluate journal quality. However, the meaning of "reputation" varies systematically between contexts. In countries with standardized research evaluation systems (such as South Africa with a DHET-accredited list and some Latin American countries with Qualis) novice researchers use the official list as a reliable primary heuristic.

In a national survey of Brazilian graduate programmes, concern with institutional metrics such as Qualis and the impact factor appeared in more than 90% of the submission routines described at every career stage (Do Carmo et al., 2026). In contrast, in contexts without similar official lists (the majority of Sub-Saharan African countries and Southeast Asia in this sample), "reputation" is more often operationalized through the existence of the names of major publishers (Elsevier, Springer, Wiley) or Scopus/WoS indexation, although researchers often do not understand the difference between indexed and predatory.

An important finding is that the use of Scopus and WoS as heuristics contains a dangerous ambiguity: some predatory journals manage to get into the index before they are released, so researchers who rely on these heuristics exclusively remain vulnerable. Country level evidence confirms this risk: once suspected predatory journals indexed in Scopus were identified, coverage of 71% of the flagged titles was discontinued, while the articles they had already published remained in the database (Macháček & Srholec, 2022).

In Indonesia specifically, reputation heuristics are distorted through the SINTA (Science and Technology Index) mechanism. Novice researchers tend to choose journals based on SINTA rankings without verifying whether the rankings are still valid, because SINTA updates are periodic and are not always followed by institutional databases used as a reference for promotions.

Financial Accessibility Heuristics as a Primary Filter

Twenty-nine studies (65.9%) reported that Article Processing Charge (APC) served as an initial heuristic that filtered journal selection even before quality was considered. This mechanism operates in two opposite directions and both have the potential to direct researchers to problematic journals. First direction exclusion due to high cost: Researchers from institutions without APC subsidies systematically exclude high-reputable journals because they cannot afford to pay. In Sub-Saharan Africa, seven out of ten studies reported that the APC between USD 500–3,000 prevalent in reputable DOAJ (Directory of Open Access Journals) journals was well above the personal reach of researchers. This condition encourages migration to journals with very low or no APC, which is often a hallmark of predatory journals.

The second direction attraction by low cost as a positive signal: A number of studies ($n = 12$) found a paradoxical pattern in which very low APCs were interpreted as a researcher-friendly accessibility indicator, rather than as a sign of low quality. This interpretation is reinforced by the experience of colleagues who have successfully published in similar journals without short-term visual problems. Interview evidence from authors in six developing countries shows a similar ordering: insufficient research budgets and institutional demands for fast publication led authors to low cost journals that guaranteed quick publication, ahead of considerations of journal standing (Hosain, 2023).

Complicating the financial heuristics is the double pressure experienced by researchers in some countries: on the one hand they are required to publish in reputable international journals to qualify for promotion or graduation, on the other hand they do not receive financial support from institutions. The gap between institutional demands and available resources was associated with risk taking in journal selection.

Social Network Heuristics A Guide for Mentors and Peers

Thirty-one studies (70.5%) identified recommendations from supervisors or peers as the most influential heuristics in contexts where the researcher had no prior experience. This heuristic operates through a delegated trust mechanism: rather than evaluating journals independently, researchers delegate assessments to figures who are considered more experienced. The effectiveness of this heuristic depends heavily on the quality of the supervisor's own knowledge. Three different patterns were identified:

Pattern A — Accurate knowledge transmission: Supervisors with an extensive international publication network provide reliable and standard-compliant journal recommendations. This pattern is more commonly found in leading research institutions in the sample country (e.g. leading research universities in Indonesia, South Africa, and Brazil).

Pattern B — Transmission of outdated knowledge: Supervisors recommend journals based on their own long-standing publication experience, while those journals may have changed policies, changed owners, or declined in quality. This phenomenon — called knowledge lag by some primary researchers — is particularly relevant given the rapid expansion of the predatory publishing industry since 2018.

Pattern C — Transmission of systemic error: Supervisors who themselves have limited experience or are exposed to problematic publishing norms inadvertently normalize publishing practices in problematic journals. Seven studies from contexts where mass publishing pressure is high (including three studies from Indonesia) documented situations in which supervisors

actively recommend journals with a very fast review process (less than two weeks) without questioning the integrity of the process.

In addition to mentors, online communities of practice — especially Facebook, Telegram, and WhatsApp groups specifically for scientific publications — emerged as an increasingly significant source of recommendations in 14 studies, mainly from Indonesia and Anglophone African countries. These communities serve as informal marketplaces for journal information, where positive experiences (manuscripts received and published quickly) are more often shared than negative experiences, creating selective bias in the flow of information.

Editorial Speed Heuristics as a Signal of Efficiency

Twenty-six studies (59.1%) reported that the time between submission and editorial decisions was used as a heuristic indicating journal efficiency and responsiveness. However, this interpretation of speed relies heavily on the context of the pressure the researcher is facing. In contexts where institutional deadlines are tight for example, a S3 graduation requirement that requires a published article, not just an accepted, or an annual job evaluation cycle editorial speed shifts from a preference to a necessity. Twelve studies explicitly documented cases in which researchers knew or suspected that a journal's peer review process was not credible, but chose the journal anyway because there was no alternative that could result in publication within the required time frame.

Comparable pressures are documented in external evidence, where publication pressure was significantly associated with experience of predatory publishing among Brazilian graduate researchers (Do Carmo et al., 2026) and interviewed authors from developing countries named faster publication requirements set by their institutions as a main reason for their choice (Hosain, 2023). Interestingly, three studies found that researchers did not interpret the very high review speed (less than three days) as a warning sign, even after being told that a valid peer review process takes at least a few weeks. This indicates that the velocity heuristic has been internalized so strongly that the resistance to revision of the heuristic is quite high.

Thematic Fit Heuristics as Contextual Validation

Twenty-three studies (52.3%) identified the fit between the topic of the manuscript and the focus of the journal as a heuristic used to validate the choice, although the way in which "fit" was operationalized varied substantially. Researchers with limited access to reputable journals in their field tend to interpret thematic suitability more loosely accepting generic multidisciplinary journals as "appropriate" for very specific manuscripts while researchers with greater exposure to disciplinary norms are more selective in matching manuscripts to journals that have a relevant community of readers.

A significant finding is that predatory journals strategically exploit this heuristic by adopting very broad scope names and descriptions or that mimic the terminology of reputable journals. Eight studies documented cases of researchers who were interested in predatory journals precisely because their names or descriptions of their coverage seemed highly relevant to their topic, while the journals in question had no real scientific community.

Institutional Incentive Heuristics as Decision Maps

Twenty-eight studies (63.6%) showed that institutional incentive and punishment systems form the framework within which all other heuristics operate. This heuristic differs from others because it is not individual cognitive but is embedded in the organizational structure. Five specific institutional mechanisms were identified:

Mechanism I — Publication-based graduation requirements: In 22 of the 44 studies, the journal requirements for S2/S3 graduation (e.g., mandatory publication in Sinta 2 or Scopus journals in Indonesia, or reputable international journals in Pakistan) directly shaped the choice of publication channels. When the requirements are not specific regarding quality, the researcher rationally chooses the path with the highest probability of success in the time available.

Mechanism II — Cumulative numerical credit system: In contexts where publishing generates points that can be accumulated for promotion, researchers behave according to the logic of point optimization rather than scientific impact optimization. This may help explain why some researchers prefer to publish many articles in lower-middle-class journals rather than a few articles in featured journals.

Mechanism III — Direct financial incentives: Seven studies from Indonesia, Vietnam, and several African countries reported a cash bonus system for Scopus or WoS publications, which paradoxically encourages competition to obtain "Scopus certificates" from journals that are actually at risk or in the queue for removal from the index.

Mechanism IV — Absence of sanctions for low quality: In 19 studies, no institutional mechanisms were found that actively sanctioned publications in problematic journals as long as there was no formal retraction. The absence of this sanction effectively neutralizes the potential preventive effect of the literature on the dangers of predatory journals.

Mechanism V — Isolation from the international scientific community: Six studies from contexts with limited access to international conferences, global collaboration networks, and paid literature report that this isolation reinforces reliance on local network-based heuristics, which may be less reliable.

Typology of Heuristic Journal Selection

Based on the six analytical themes above, this study proposes the Journal Selection Heuristics Typology for Novice Scholars in Emerging Research Systems (JSHT-NERS) which consists of two orthogonal dimensions:

Dimension I — Heuristic sources of information, which are distinguished between endogenous heuristics (sourced from personal experience and networks: perceived reputation, thematic suitability) and exogenous (sourced from structural signals: indexation, official lists, APCs, editorial velocity).

Dimension II — Heuristic decision orientation, which is differentiated between quality orientation (looking for the best affordable journals) and certainty orientation (looking for journals that are most likely to receive manuscripts within the available time frame and budget).

This two-dimensional crossing results in four typological quadrants:

Quadrant 1 — Endogenous Quality Heuristics (Reputation Navigator): Researchers use personal networks and experiential reputation assessments to search for quality. It is found mainly in researchers with experienced mentors and international collaboration networks.

Quadrant 2 — Exogenous Quality Heuristic (Index Follower): The researcher uses the official index list (Scopus, SINTA, Qualis) as a proxy for quality. Found in context with a reliable standardized evaluation system.

Quadrant 3 — Endogenous Certainty Heuristic (Network Shortcutter): The researcher delegates the decision to a supervisor or colleague with the aim of ensuring manuscript acceptance. Susceptible to transmission of systemic errors (Pattern C in Theme 3).

Quadrant 4 — Exogenous Certainty Heuristic (Signal Gambler): The researcher used low APC and high editorial speed as acceptance certainty signals. This quadrant has the highest risk of leading to predatory journals.

Table 4. JSHT-NERS typology matrix: four heuristic quadrants of journal selection

Quadrant	Source × orientation	Dominant signal used	Context of emergence	Risk profile
K1 <i>Reputation Navigator</i>	Endogenous × quality	Experiential reputation assessment and personal network	Experienced mentors; Active international collaboration network	Low
K2 <i>Index Follower</i>	Exogenous × quality	Official index list: Scopus, WoS, SINTA, Qualis, DHET	Standardized and periodically updated national evaluation system	Low–medium
K3 <i>Network Shortcutter</i>	Endogenous × certainty	Recommendation of supervisor or peer to ensure acceptance	High deadline pressure; Dependence on local authorities	Medium–high
K4 <i>Signal Gambler</i>	Exogenous × certainty	Low APC and promise quick editorial results	There are no publication subsidies; The Ecology of Local Information Is Weak	High

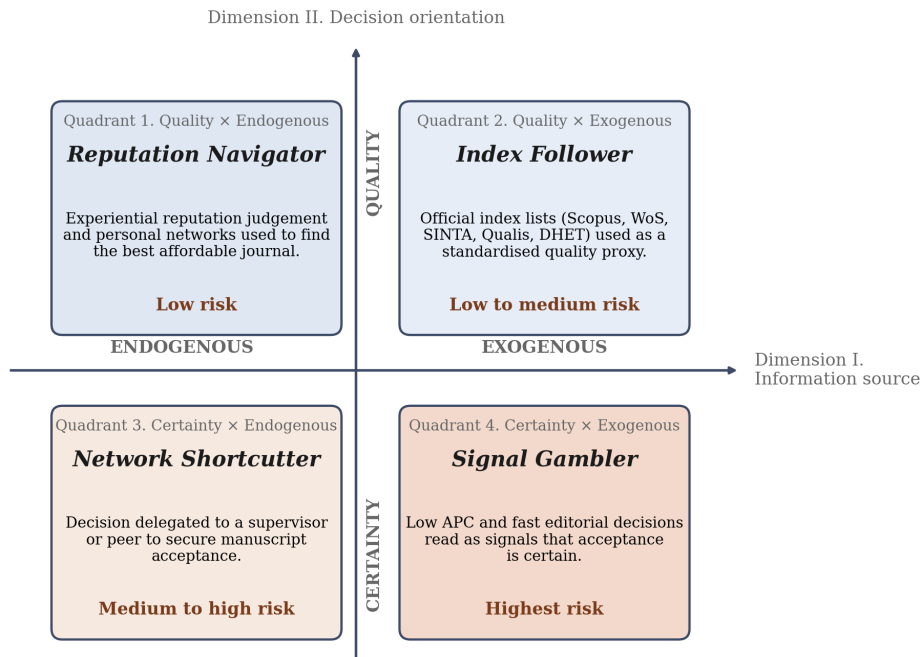


Figure 5. JSHT-NERS typology on two orthogonal dimensions: heuristic information sources and decision orientation

The distribution of researchers into these quadrants is not static but depends on the institutional context, temporal pressures, and availability of resources. The same researcher can move between quadrants depending on the situation of the publication at hand.

Institutional Environment as a Heuristic Reliability Moderator

Cross-study findings consistently show that identical heuristics result in publication decisions that differ in quality depending on the quality of the signals available in the institutional environment. Three institutional environmental conditions that are associated with more reliable heuristic use in the included studies are:

Condition I — The existence of a list of official journals that is regularly updated and can be easily verified. In South Africa, the existence of an annual DHET-accredited list that is updated annually and freely available online empirically correlates with a more reliable heuristic pattern than a similar non-official list.

Condition II — Adequate and accessible availability of institutional publication funds. Institutions that provide APC subsidies — even in limited amounts — effectively free researchers from high-risk cost-based heuristics. Three studies from universities in Brazil and South Africa that provided access to publication funding reported more quality-oriented heuristic patterns than similar universities without such facilities.

Condition III — Formal and continuous integration of publication literacy in the postgraduate curriculum. Four studies compared doctoral students who received formal publication literacy training with those who did not, finding that formal training correlated with better ability to recognize predatory journal warning signs, although it did not necessarily change actual decisions when temporal and financial pressures remained.

Table 5. The condition of the institutional environment as a moderator of heuristic reliability

Institutional environmental conditions	Evidence in synthesis	Effects on heuristic reliability
Condition I — A list of official journals that is regularly updated and easily verified	South Africa (<i>DHET-accredited list</i> , annual renewal, free online access)	Transferring researchers from Quadrant 4 to Quadrant 2; Quality signals become cheap to obtain
Condition II — Adequate and accessible institutional publication funds	Three studies at universities in Brazil and South Africa with the APC subsidy scheme	Disable financial filters as the first filter; Heuristic patterns shift to quality orientation
Condition III — Integrated publication literacy in the postgraduate curriculum	Four comparative studies between trained and untrained doctoral students	Improves the ability to recognize warning signs, but does not change actual decisions when time and cost pressures persist

Mapping of Geographical and Methodological Gaps

Geographic Gap

The evidence matrix identifies regions with very low representation in the existing literature:

1. Central Asia (Uzbekistan, Kazakhstan, Tajikistan, Kyrgyzstan): zero studies that met the inclusion criteria, although the region experienced significant pressure for the internationalization of post-Soviet publications
2. Pacific Islands: zero studies, although researchers from small Pacific countries face unique challenges due to geographic isolation and very small academic community sizes
3. Francophone Africa (including French-speaking West African countries): two studies, far below the proportions they should be represented
4. The Caribbean and Central America: one study, although these regions have a significant population of active researchers

Table 8. Geographic gap matrix in the available evidence base

Areas	Number of studies	Reasons for urgency	Research priorities
Central Asia (Uzbekistan, Kazakhstan, Tajikistan, Kyrgyzstan)	0	The pressure of intensive internationalization of post-Soviet publications	Very high
Pacific Islands	0	Geographical isolation and very small academic community	Very high
Francophone Africa	2	An ecosystem of non-UK publications that is rarely represented in the main index	High
Caribbean and Central America	1	The active research population is significant but almost without empirical evidence	High

Methodological Gaps

Five key methodological gaps were identified:

Gap I — Longitudinal studies: None of the studies in the sample followed novice researchers in the course of their publication decisions from inception to final decision longitudinally. Almost all studies are *cross-sectional* or retrospective, which limits the ability to understand how heuristics develop with experience.

Gap II — Triangulation between statements and actual behavior: The majority of studies relied on *self-reports* on journal selection criteria. Only three studies verified the statement with actual publication data, finding significant gaps between the stated criteria and observable behaviors.

Gap III — Editors and publisher perspectives: No included study took the perspective of journal editors or publishers to understand how the dynamics of demand from researchers in the evolving research system shape the publishing ecosystem.

Gap IV — Discipline-level analysis: Most studies treat "novice researchers" as a homogeneous category without distinguishing substantial differences in publishing norms between disciplines. Publishing norms in the health sciences (with an emphasis on PubMed-indexed clinical journals) are very different from those of the social sciences (with a stronger tradition of books and proceedings), yet these differences are rarely explicitly analyzed.

Gap V — Cross-country comparative studies: Only four studies explicitly designed cross-country or institutional comparisons, limiting the ability to make causal inferences regarding the role of specific institutional factors.

Table 9. Methodological gaps and derived research agendas

Gap	Current state of evidence	Further research agenda
I — Longitudinal studies	All studies were <i>cross-sectional</i> or retrospective	A cohort of novice researchers followed from manuscript planning to publishing decisions
II — Triangulation of statements with behavior	The majority rely on self-reports; only three studies verified with actual publication data	Linkage of survey data with a track record of verified publications (Scopus, Crossref, institutional archives)
III — Editor's and publisher's perspective	No included study took the supply side	Editor interviews and publisher policy analysis to map demand–supply interactions
IV — Analysis of the level of discipline	"Novice researchers" are generally treated as a homogeneous category	Comparison of publishing norms between health sciences, science, and social sciences in one design
V — Cross-country comparative studies	Only four studies designed explicit comparisons	Comparative design of two or more national evaluation systems to test the role of signal infrastructure

Discussion

Theoretical Contributions: From Knowledge Deficit to Limited Rationality

The findings of this synthesis consistently support the proposed conceptual reframing: viewing the journal selection criteria not as indicators of knowledge or ignorance, but rather as a heuristic a rational decision strategy in conditions of incomplete information and limited resources.

The deficit perspective which dominated the literature before 2020 and is still present in some of the more recent studies assumes that researchers publishing in predatory journals do so because they don't know any better. The study's findings empirically challenge this assumption: twelve of the 44 studies (27.3%) explicitly reported that at least some participants were aware of concerns about a particular journal but continued to submit manuscripts because there were no viable alternatives in their context.

These findings confirm, extend and in part depart from previous research. They confirm the conclusion of Mertkan et al., (2021); Mills & Inouye, (2021) that awareness alone does not explain where authors publish, and they agree with mixed methods evidence that promotion incentives and publication pressure drive submissions to questionable outlets (Demir, 2018). Interview evidence from authors in developing countries who named faster publication requirements and insufficient research budgets as their main reasons points in the same direction (Hosain, 2023).

The synthesis extends this work by showing that the same small set of shortcuts recurs across regions and by locating the difference between good and poor outcomes in the signal environment rather than in the shortcut itself. It departs from survey evidence in established research systems, where readership, reputation and scope fit dominate journal choice (Niles et al., 2020; Rowley et al., 2022), because in the included studies cost and deadlines frequently filtered the options before quality was considered.

A large Brazilian survey published after the search closed identified the same cluster of criteria, namely editorial speed, cost, advisor and peer guidance, publisher reputation and scope fit, in the submission routines of graduate researchers, which offers independent support for the heuristics reported here (Do Carmo et al., 2026). Simon, (1955) framework of bounded rationality and its development in the heuristic and cognitive bias literature Gigerenzer & Gaissmaier, (2011) provide a more coherent explanation: researchers are not irrational or uninformed actors, but rather actors who optimize within real boundaries which are shaped by temporal pressures, financial limitations, and local information ecology.

The heuristics they use are functional adaptations to the actual decision environment they are facing, not a reflection of intellectual ability or academic integrity. This theoretical implication shifts the research question from "why do novice researchers make bad decisions?" to "what environmental conditions make a particular heuristic a more or less reliable option?" a shift that has major consequences for intervention design.

The Interaction between Heuristic and Local Information Ecology

The proposed JSHT-NERS typology emphasizes that heuristic sources and orientations interact with the local information ecology to determine the reliability of decisions. A heuristic that works well in one context can become dysfunctional in another. The most obvious example is the indexation heuristic (Quadrant 2). In contexts where index lists are reliable, regularly updated, and easily verifiable, this heuristic results in generally good decisions. But in a context where index journal listings aren't updated quickly enough to keep up with the dynamics of the publishing industry, the same heuristics result in worse decisions. This suggests that the signal quality infrastructure not solely the researchers' knowledge is a critical variable that determines the quality of publication decisions.

This interpretation is consistent with country level evidence that suspected predatory journals entered Scopus in sufficient numbers to account for a substantial share of national output in several middle income research systems (Macháček & Srholec, 2022), and with analyses of the African research ecosystem showing that journals are often judged by their citation index status rather than by their editorial practice (Mills et al., 2021). Index status is therefore a reliable signal only where the index itself is curated quickly enough to keep pace with the market.

Empirical Findings and Theoretical Interpretation

Two levels of claim should be kept apart. The empirical findings of this review are the six heuristics, their frequencies and the contexts in which they were reported. The JSHT-NERS typology, and the proposition that heuristic reliability is a property of the environment, are the authors' theoretical interpretation of those findings. Because the included studies were cross sectional and largely based on self report, the associations between institutional conditions and heuristic patterns should not be read as causal effects. The typology is therefore offered as a provisional model that requires empirical validation, for example by measuring quadrant membership in a survey and linking it to verified publication records.

Practical Implications for Institutional Policy

Based on the synthesis findings, three evidence-based policy recommendations were proposed:

Recommendation I — Reform of the evaluation system towards aligned incentives: Publication requirements for graduation and promotion should explicitly define verifiable quality indicators (not simply "Scopus-indexed"), complemented by clear verification mechanisms and without exposing researchers to unrealistic temporal pressures. A system that requires publication without providing structurally adequate support encourages shortcuts.

Recommendation II — Provision of quality signal infrastructure that can be accessed and updated in real-time: National research management institutions and bodies need to invest resources in the creation and maintenance of a list of recommendation journals that are discipline-specific, regularly updated (at least semi-annually), and accessible without barrier not just promote predatory journal literacy in the abstract.

Recommendation III — Subsidize APCs as a structural intervention, not just literacy: Given that financial heuristics are one of the earliest filters in the decision-making process, providing access to publication funds even in limited but predictable amounts appears, on the available evidence, more likely than literacy training alone to change journal selection patterns.

Research Limitations

Some important limitations need to be acknowledged. First, the dominance of English-language studies in international databases likely leads to an underrepresentation of contexts that produce scholarly literature primarily in non-English languages, even though search efforts have been made in five languages. Second, social desirability bias in primary studies regarding predatory journal use is difficult to completely eliminate in secondary synthesis, so the actual rate of this practice may be higher than documented. Third, the proposed JSHT-NERS typology is conceptual-empirical and has not been quantitatively tested in studies designed for that purpose further validation is needed. Fourth, the relatively short temporal coverage of 2020–2026 limits the ability to track long-term trends. Fifth, the review protocol was not prospectively registered, which weakens protection against selective reporting even though the eligibility criteria and synthesis plan were fixed before screening.

Summary of Findings

A synthesis of 44 studies from 2020 to 2026 identifies six key heuristics in journal selection by novice researchers in emerging research systems: the publisher's reputation as a proxy for quality, financial accessibility as the primary filter, social networks as a source of

delegation of trust, editorial speed as a signal of efficiency, thematic suitability as contextual validation, and institutional incentives as an overarching decision-making framework. These heuristics do not operate independently but interact with each other and are colored by the institutional information ecology of each researcher.

CONCLUSION

The study synthesizes 44 empirical studies published between 2020 and 2026 to answer how novice researchers in emerging research systems choose journals, treating the criteria they state as decision heuristics and not as indicators of knowledge level. The thematic synthesis identifies six heuristics: the publisher's reputation as a proxy for quality, social networks as delegates' trust, financial accessibility as a primary filter, institutional incentives as a decision map, editorial speed as a signal of efficiency, and thematic fit as contextual validation.

Identical heuristics produce outputs that differ in quality depending on whether the environment provides verifiable signals. The proposed JSHT-NERS typology operationalizes this relationship through heuristic information sources and decision orientation. Central Asia and the Pacific Islands are unrepresented. The typology of JSHT-NERS is conceptual-empirical and has not been tested through a quantitative design, while the dominance of the English-language literature limits the completeness of the picture presented. Subsequent research.

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