What is a predatory journal? A scoping review

Potential characteristics of predatory journals.

DEFINITIONS

Theme	Definition
Category	
Journal Operations	Features related to how the journal conducts its business operations
Article	Features related to articles appearing in the journal
Editorial and Peer Review	Any aspect of the internal or external review of submitted articles and decisions on what to publish
Communication	How the journal interacts with (potential) authors, editors, and readers
Article Processing Charges	Fees taken in by journal as part of their business model
Dissemination, Indexing, and Archiving	Information on how the journal disseminates articles and use of indexing and archiving tools
Descriptor	
Deceptive or Lacking Transparency	Intentionally deceitful practice; Practices or processes that are not made clear to the reader; Missing information
Unethical Research or Publication Practices	Violations of accepted publication and research ethics standards (e.g., Committee on Publication Ethics guidelines)
Persuasive Language	Language that targets; Language that attempts to convince the author to do or believe something
Poor Quality Standards	Lack of rigour in journal operations; Lack of professional standards/ practices; missing information; Poor quality writing or presentation (e.g., grammatical or spelling errors)
High Quality Standards	Evidence of rigour in journal operations; Evidence that professional standards/practices are being met; Clear information
Not Applicable	Neutral or non-descriptive statement

TABLE

Characteristics	# Articles	Category	Descriptor
Article authors not listed with credentials/contact info	1	Article	Poor Quality Standards; Deceptive or Lacking Transparency
Articles follow Introduction, Methods, Results, and Discussion (IMRaD) structure for reporting	1	Article	NA
Articles have logical presentation and organization	1	Article	High Quality Standards
Items expected to be reported were reported most of the time (e.g. research question, sampling procedure)	1	Article	High Quality Standards
Many studies failed to report REB/ethics approval	1	Article	Unethical Research or Publication Practices
Wide range of lengths of articles	1	Article	NA
Wide range of reference styles used	1	Article	Poor Quality Standards
Articles contain statistical and methods errors	1	Article	Poor Quality Standards

Characteristics	# Articles	Category	Descriptor
Journals contain articles with plagiarized content	3	Article	Unethical Research or Publication Practices; Deceptive or Lacking Transparency
Grammatical errors in articles	4	Article	Poor Quality Standards
Quality of articles rated as poor	5	Article	Poor Quality Standards
Articles are poorly cited	5	Article	Poor Quality Standards
Journal offers discounts on the standard open access charges e.g. for specific members, a fee waiver to authors from low-income economies	1	Article Processing Charges	NA
Journals highlight easy methods of payment e.g. PayPal, credit card, debit card, net banking, cash card online 24/7.	1	Article Processing Charges	Persuasive Language
Journal APCs clearly stated	4	Article Processing Charges	High Quality Standards
Journal does not specify APCs	9	Article Processing Charges	Deceptive or Lacking Transparency
Journal has hidden APCs or hidden information on APCs	9	Article Processing Charges	Deceptive or Lacking Transparency; Poor Quality Standards; Unethical Research or Publication Practices
APCs are lower than at legitimate journals	9	Article Processing Charges	NA
E-mail invitations explicitly noted they were not spam	1	Communication	Persuasive Language
E-mail solicitations don't contain contact information	1	Communication	Poor Quality Standards; Deceptive or Lacking Transparency
E-mail solicitations note acceptance of all manuscript types	1	Communication	Persuasive Language
Journal preys on junior researchers	1	Communication	Deceptive or Lacking Transparency
Journal language targets authors	1	Communication	Persuasive Language
E-mail invitations addressed inappropriately	1	Communication	Poor Quality Standards
Journals use the same strategies as internet-based scams to identify their prey	1	Communication	Deceptive or Lacking Transparency
Journal or e-mail invitations stress ability to publish in a special issue	2	Communication	Persuasive Language
E-mails invitations specified a deadline to submit	2	Communication	Persuasive Language

Characteristics	# Articles	Category	Descriptor
E-mail invitations had an unsubscribe option	2	Communication	High Quality standards
E-mail solicitations have grammar errors	2	Communication	Poor Quality Standards
E-mail solicitations referenced researchers previous work	2	Communication	Persuasive Language
Journal uses business advertisement terminology	2	Communication	Persuasive Language
Journals use positive emotions, linguistic qualifiers, or few casual words to accomplish their goal of selling the publication	2	Communication	Persuasive Language
Journals solicit editors via aggressive e-mail tactics	3	Communication	Persuasive Language
E-mail solicitations are not relevant to researcher expertise	3	Communication	Poor Quality Standards
E-mail invites were overly formal or used praise	3	Communication	Persuasive language
Journals solicit papers via aggressive e-mail tactics	13	Communication	Persuasive Language
E-mail solicitations don't mention APCs	3	Communication; Article Processing Charges	Deceptive or Lacking Transparency
E-mail solicitations or journal note special discounts	4	Communication; Article Processing Charges	Persuasive Language
Journals contain extreme variability in article quality	1	Dissemination, Indexing, Archiving	Poor Quality Standards
Journal notes fake abstracting and indexing	1	Dissemination, Indexing, Archiving	NA
Journals can be found on Google Scholar	1	Dissemination, Indexing, Archiving	NA
Journals have Digital Object Identifiers (DOIs)	1	Dissemination, Indexing, Archiving	High Quality Standards
Journals are not archived	2	Dissemination, Indexing, Archiving	Poor Quality Standards

Characteristics	# Articles	Category	Descriptor
Journals tend not to mention Committee of Publication Ethics (COPE)	2	Dissemination, Indexing, Archiving	Poor Quality Standards
Journals state they are open access but are not openly available	2	Dissemination, Indexing, Archiving	Unethical Research or Publication Practices; Deceptive or Lacking Transparency
Journals have a subscription based model	2	Dissemination, indexing, archiving	NA
Journals may have International Standard Serial Number (ISSN)	3	Dissemination, Indexing, Archiving	NA Articles may be in PubMed
Journals may not be in the Directory of Open Access Journals	5	Dissemination, Indexing, Archiving	Poor Quality Standards
Journals are not indexed	7	Dissemination, Indexing, Archiving	Poor Quality Standards
Journal may be listed in Directory of Open Access Journals	8	Dissemination, Indexing, Archiving	NA
Journals state they are open access	11	Dissemination, Indexing, Archiving	NA
Journals entice big name scientists to lend name (only) to editorial board	1	Editorial/Peer Review	Persuasive Language; Unethical Research or Publication Practices
Journal describes peer review process clearly	1	Editorial/Peer Review	High Quality Standards
Journal conducts fake reviews or editorial review	2	Editorial/Peer Review	Deceptive or Lacking Transparency; Poor Quality Standards; Unethical Research or Publication Practices
Editorial board has an agenda to publish certain articles (from certain authors)	2	Editorial/Peer Review	Deceptive or Lacking Transparency; Unethical Research or Publication Practices

Characteristics	# Articles	Category	Descriptor
Journals have poor editorial oversight/review	2	Editorial/Peer Review	Poor Quality Standards
Editorial board repeats in multiple journals	3	Editorial/Peer Review	Unethical Research or Publication Practices
Journal conducts peer review	6	Editorial/Peer Review	High Quality Standards
Editorial board is not stated or incomplete	7	Editorial/Peer Review	Deceptive or Lacking Transparency
Journals have short peer review times	7	Editorial/Peer Review	NA
Journals conduct poor quality peer review	8	Editorial/Peer Review	Poor Quality Standards
Authors more likely to come from second-tier academic institutes	1	Editorial/Peer Review; Article	NA
Editor inserts plagiarized content into article	1	Editorial/Peer Review; Article	Deceptive or Lacking Transparency; Unethical Research or Publication Practices
Editors or websites listed on page may not even be affiliated to journal	1	Editorial/Peer Review; Journal Operations	Deceptive or Lacking Transparency
Journal does not look at all submitting authors fairly	1	Editorial/Peer Review; Journal Operations	Deceptive or Lacking Transparency; Unethical Research or Publication Practices
Journal requests fees to sit on editorial board	1	Editorial/Peer Review; Journal Operations	Poor Quality Standards; Unethical Research or Publication Practices
Editorial board lacks legitimacy (appointed without knowledge, wrong skillset)	7	Editorial/Peer Review; Journal Operations	Deceptive or Lacking Transparency; Poor Quality Standards; Unethical Research or Publication Practices
Journal has no article preparation instructions	1	Journal Operations	Poor Quality Standards
A journal that collects information for less-than-honorable purposes	1	Journal Operations	Deceptive or Lacking Transparency
A journal that commercially encroaches on existing journals	1	Journal Operations	Deceptive or Lacking Transparency
A journal that seeks to discredit another journal	1	Journal Operations	Deceptive or Lacking Transparency
Journal actively seeks manuscripts to prevent other journals from publishing	1	Journal Operations	Deceptive or Lacking Transparency;

Characteristics	# Articles	Category	Descriptor
			Unethical Research or Publication Practices
Journal shuts down ideas and results of submitted articles	1	Journal Operations	NA
Journal will publish non-academic research	1	Journal Operations	Poor Quality Standards; Unethical Research or Publication Practices
Grammatical errors on journal webpage	1	Journal Operations	Poor Quality Standards
Journal uses distorted or unauthorized images	1	Journal Operations	Deceptive or Lacking Transparency; Unethical Research or Publication practices
Journals indicate they retain copyright in spite of stating journal was OA	1	Journal Operations	Unethical research or publication practices; Deceptive or Lacking Transparency
Journal contains articles that should be combined into one (e.g., salami publishing)	1	Journal Operations	Unethical Research or Publication Practices
Journals tend to publish in high quantity without regard for quality to earn profit	1	Journal Operations	Unethical Research or Publication Practices; Poor Quality Standards
Journals may publish work funded by national governments	1	Journal Operations	NA
Journal names change with trends	1	Journal Operations	Poor Quality Standards
Journal is not very readable	1	Journal Operations	Poor Quality Standards
Journal has no authorship policy	2	Journal Operations	Unethical Research or Publication Practices
Journal offer authors incentives to publish	2	Journal Operations	Persuasive Language
Article submission occurs via email	2	Journal Operations	Poor Quality Standards
Journal has hidden publishing contract information	2	Journal Operations	Deceptive or Lacking Transparency
Journals have the goal to make money without regard for quality	2	Journal Operations	Deceptive or Lacking Transparency; Poor Quality Standards
Journals solicit papers under false pretenses	2	Journal Operations	Deceptive or Lacking Transparency
Journal contains duplicate publications	2	Journal Operations	Unethical Research or Publication Practices
Journals do not mention reporting guidelines	2	Journal Operations	Poor Quality Standards
Journals tend not to have legitimate impact factor	2	Journal Operations	Deceptive or Lacking Transparency

Characteristics	# Articles	Category	Descriptor
Description of the manuscript handling process is lacking	2	Journal Operations	Deceptive or Lacking Transparency; Poor Quality Standards
Journal has no plagiarism policy/duplicate publication policy	3	Journal Operations	Unethical Research or Publication Practices
Journals do not have retraction/correction policies	3	Journal Operations	Unethical research or publication practices
Journal publishes studies without authors' agreement	4	Journal Operations	Unethical Research or PublicationPractices
Journal names specify 'worldly' or 'global' nature of journal	4	Journal Operations	Persuasive Language
Journals contact information is not professional (e.g., Gmail accounts)	4	Journal Operations	Poor Quality Standards
Journals display fake metrics	4	Journal Operations	Deceptive or Lacking Transparency
Present content unrelated to the journal readership/scope/journal title	5	Journal Operations	Poor Quality Standards
Journal contains broken links/domain for sale	5	Journal Operations	Poor Quality Standards
Journals have short/rapid publication times	7	Journal Operations	NA
Journals do not contain any articles	8	Journal Operations	Poor Quality Standards
Journal lists few articles	8	Journal Operations	NA
Journals closely copy/plagiarize names or websites of legitimate journals/publishers	8	Journal Operations	Deceptive or Lacking Transparency
Journals display deceptive information or misleading claims about their practices	8	Journal Operations	Deceptive or Lacking Transparency
Contact details of publisher absent or not easily verified	11	Journal Operations	Deceptive or Lacking Transparency
Journals display low levels of transparency, integrity, poor quality practices of journal operations	14	Journal Operations	Poor Quality Standards; Deceptive or Lacking Transparency
Journals are published by/in predominantly by authors from specific countries	10	Journal Operations; Article	NA

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