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EAHIL'22 broaden the horizons

An emerging concern in the systematic review process

identifying articles published in predatory journals

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Predatory journals

"Predatory journals and publishers are entities that prioritize **self-interest** at the expense of scholarship and are characterized by **false or misleading information**, **deviation from best editorial and publication practices**, a **lack of transparency**, and/or the use of **aggressive and indiscriminate solicitation practices**."

(Grudniewicz et al., 2019)

Articles from predatory journals and systematic reviews

Threats of articles from predatory journals

- Potentially lower quality
- More likely to be impacted by fraud and error

A systematic review that includes these studies might therefore base its conclusions for guidance and policy on biased evidence.

No guidance on how to deal with articles from predatory journals, but some suggested actions.

(Munn et al., 2021 ; Rice et al., 2021)

Articles from predatory journals and systematic reviews

Our concern:

How can we help systematic review researchers to identify articles from predatory journals ?

Our approach:

Develop a tool to identify those articles in an automated fashion

Goal of the tool

For a set of articles (> 2001) considered for a systematic review, after the screening process:

- Automate verification of **indicators** commonly associated with predatory publishing
- Generate a report with confidence scores
- Use of the results left to the sole discretion of the researchers

Aim: **awareness** raised, and **quality assessment** improved, with an additional workload as **light** as possible for the researcher

Development of the tool

- Indicators limited to data sources which are:
  - accessible in an automated manner
  - freely accessible, or through subscriptions of our institution
- Confidence score
  - assigned weight per **indicator**, defined empirically

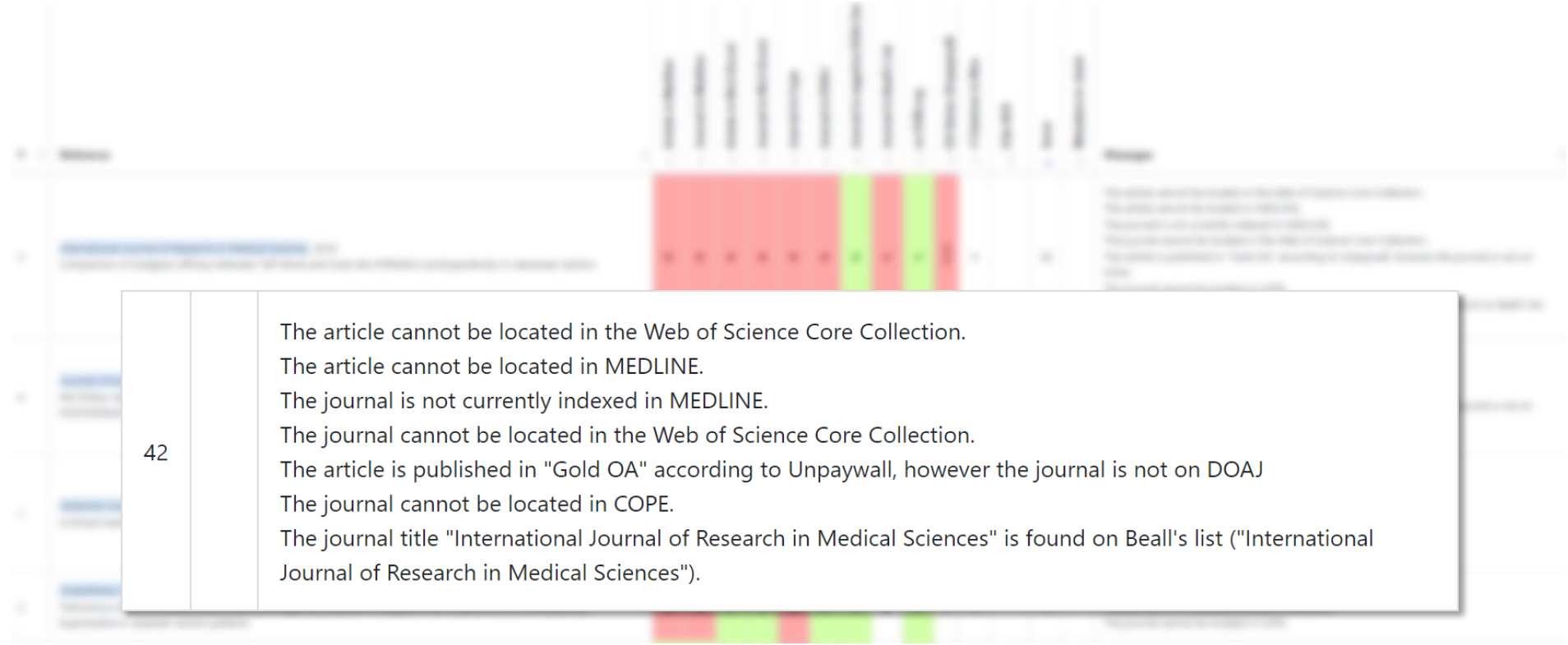
Indicators and scores

Indicator	Penalty
Article not in MEDLINE and not in WoS Core Collection	+ 5
Journal not in MEDLINE and not in WoS Core collection	+ 2
Journal in "negative" DOAJ	+ 10
Journal not member of COPE	+ 3
Journal not member of COPE and not in DOAJ	+ 2
Journal on Beall's list	+ 20
Journal is "Gold OA" on Unpaywall, and journal not in DOAJ	+ 10
Missing ISSN, or ISSN matching different journal	+ 8

Generated report

#	Reference	Article in Medline	Journal in Medline	Article in WoS (Core)	Journal in WoS (Core)	Journal in Cope	Journal in DOAJ	Journal in negative DOAJ list	Journal in Beall's List	on ISSN.org	OA Status (Unpaywall)	# Citations in Wos	iCite RCR	Score	Metadata to check	Messages
3	International Journal of Research in Medical Sciences, 2018 Comparison of analgesic efficacy between TAP block and local site infiltration postoperatively in caesarean section	✗	✗	✗	✗	✗	✗	✗	✓	✓	Gold	0		42		The article cannot be located in the Web of Science Core Collection. The article cannot be located in MEDLINE. The journal is not currently indexed in MEDLINE. The journal cannot be located in the Web of Science Core Collection. The article is published in "Gold OA" according to Unpaywall, however the journal is not on DOAJ The journal cannot be located in COPE. The journal title "International Journal of Research in Medical Sciences" is found on Beall's list ("International Journal of Research in Medical Sciences").
4	Journal of Evolution of Medical and Dental Sciences-Jemds, 2017 PECTORAL NERVE BLOCK VERSUS THORACIC PARAVERTEBRAL BLOCK- COMPARISON OF ANALGESIC EFFICACY FOR POSTOPERATIVE PAIN RELIEF IN MODIFIED RADICAL MASTECTOMY SURGERIES	✗	✗	✓	✓	✗	✗	✓	✗	✓	Gold	8		25		The article cannot be located in MEDLINE. The journal is not currently indexed in MEDLINE. The ISSN of the journal is on the DOAJ negative list. The article is published in "Gold OA" according to Unpaywall, however the journal is not on DOAJ The journal cannot be located in COPE.
1	American Journal of Biomedical Engineering, 2013 Contrast medium volume optimization in abdominal CT on basis of lean body weight	✗	✗	✗	✗	✗	✗	✓	✗	✓	?	0		12	☑	The DOI of the reference cannot be resolved: 10.5923/s.ajbe.201310.04. The article cannot be located in the Web of Science Core Collection. The article cannot be located in MEDLINE. The journal is not currently indexed in MEDLINE. The journal cannot be located in the Web of Science Core Collection. The journal cannot be located in COPE.
2	Anaesthesia, Pain and Intensive Care, 2017 Transversus abdominis plane block offers prolonged postoperative analgesia than surgical incision infiltration by bupivacaine in cesarean section patients	✗	✗	✓	✓	✗	✓	✓	✗	✓	?	2		3		The article cannot be located in MEDLINE. The journal is not currently indexed in MEDLINE. The journal cannot be located in COPE.

Generated report



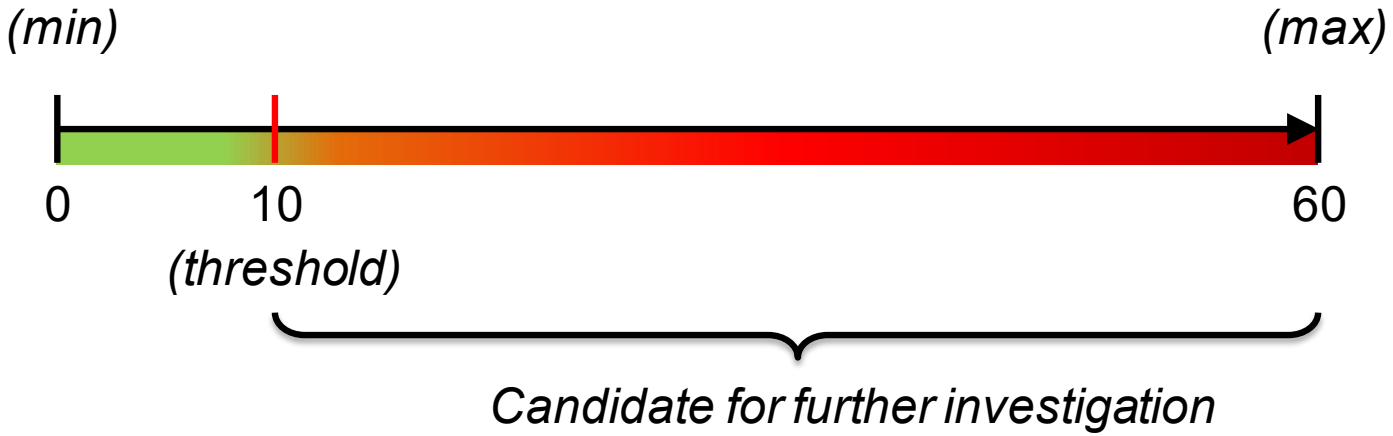
42		The article cannot be located in the Web of Science Core Collection. The article cannot be located in MEDLINE. The journal is not currently indexed in MEDLINE. The journal cannot be located in the Web of Science Core Collection. The article is published in "Gold OA" according to Unpaywall, however the journal is not on DOAJ The journal cannot be located in COPE. The journal title "International Journal of Research in Medical Sciences" is found on Beall's list ("International Journal of Research in Medical Sciences").

Evaluation

We retrospectively analysed systematic or scoping reviews published in 2020-2021 in which our library was involved:

- 19 systematic/scoping reviews
- only references published after 2001
  - 634 references in total

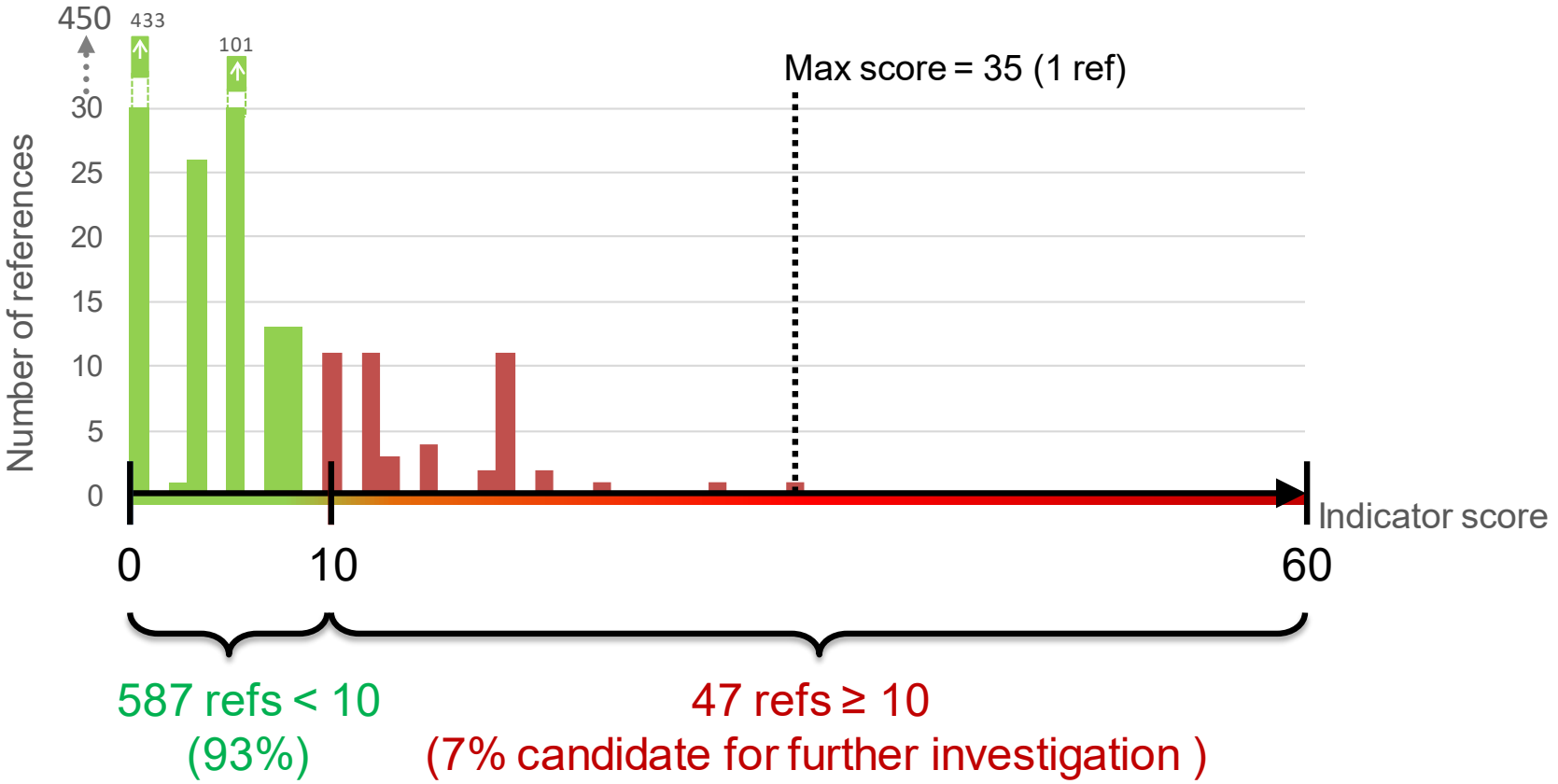
Score scale



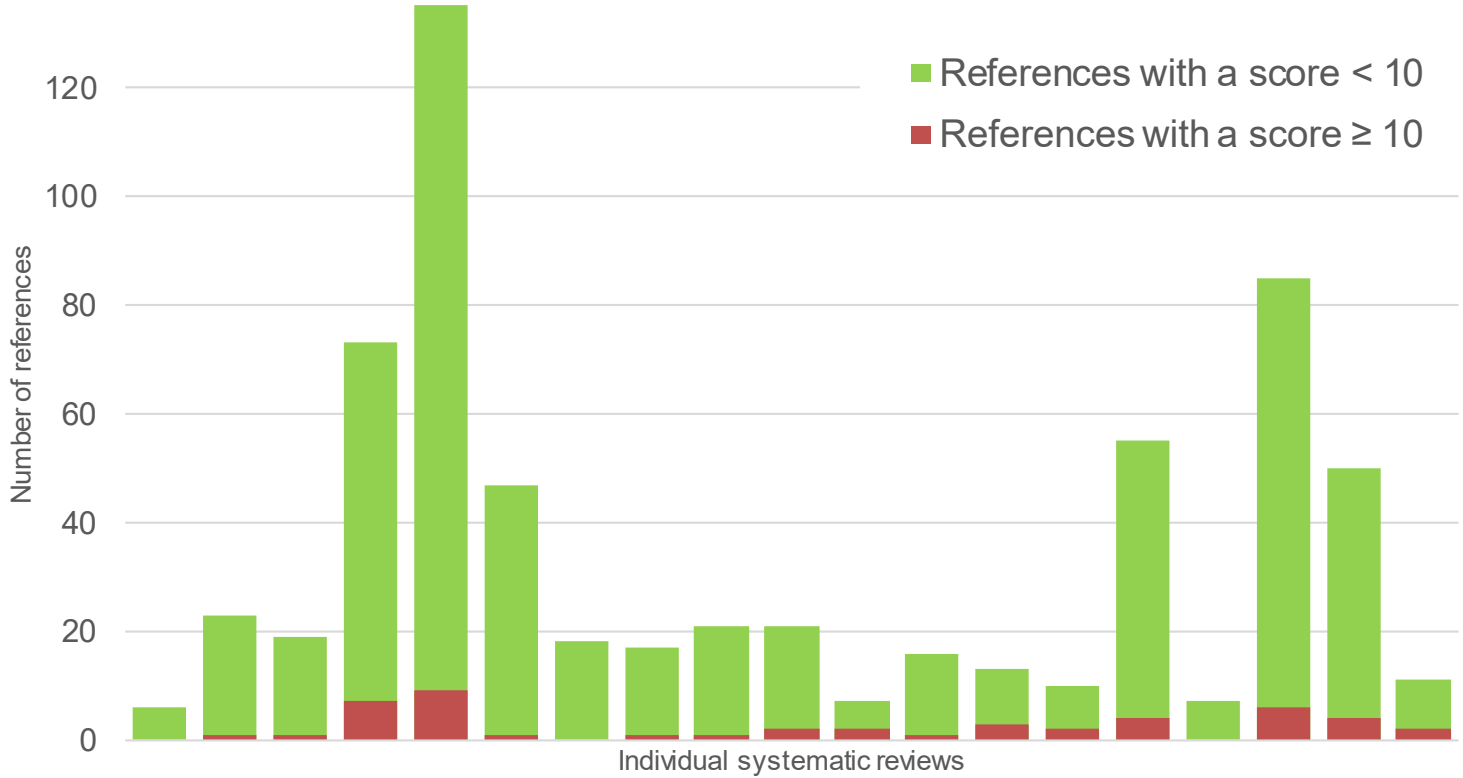
→ Penalties defined empirically

→ Threshold decided at 10

Indicator score distribution



Distribution of candidates for verification per systematic review



Results

Further analysis is still necessary to validate the results

- We observed that highlighted candidates (score ≥ 10) fit the profile of predatory journals
- We need solid metadata from the references
- Light additional workload expected for the researcher
  - Only 7% references have to be checked
  - Filtering out 93% of the references saves time

Conclusion

- Generated reports help raising awareness regarding issues with predatory publishing
- Light additional workload for the librarian and the researcher
- All high-scoring journals from the 2020-2021 test warranted further verification, despite:
  - the tool is still a work in progress
  - the use of a limited set of data sources

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