

Supplementary Table 1. Delphi results by round, N (%)

Delphi Item		Round 1 Results				Round 2 Results				Round 3 Results			
Category 1: Definition of predatory journals													
Response categories (lateral thirds) as indicated here unless otherwise specified		Not important (1-3)	Neutral (4-6)	Very Important (7-9)	Total	Not important (1-3)	Neutral (4-6)	Very Important (7-9)	Total	Not important (1-3)	Neutral (4-6)	Very Important (7-9)	Total
1	How important is it to develop a consensus definition for predatory journals?	Not important 0 (0)	Neutral 2 (6)	Extremely important 31 (94)*	33								
2	We currently use the terms "predatory journal" and "predatory publisher" in research on this topic. Should the term "predatory" be changed?	No name change 10 (29)	Neutral 13 (37)	Alt name required 12 (34)	35	No name change 12 (40)	Neutral 9 (30)	Alt name required 9 (30)	30	No name change 19 (51)	Neutral 9 (24)	Alt name required 9 (24)	37
3	What alternative name(s) would you suggest?												
		Terrible name	Neutral	Excellent name		Terrible name	Neutral	Excellent name		Question not asked in round 3 as it was recommended that the name not be changed.			
3a	Dark journals / publishers	21 (64)	9 (27)	3 (9)	33	20 (67)	9 (30)	1 (3)	30				
3b	Deceptive journals / publishers	3 (9)	7 (20)	25 (71)	35	2 (7)	8 (27)	20 (67)	30				
3c	Illegitimate journals / publishers	6 (18)	10 (30)	17 (52)	33	7 (23)	10 (33)	13 (43)	30				
3d	Journals / publishers operating in bad faith	11 (32)	15 (44)	8 (24)	34	12 (40)	12 (40)	6 (20)	30				
4	The following characteristic ¹ may differentiate predatory and legitimate journals. Please rate the importance of this characteristic in identifying a journal as predatory on a scale of (1) least important to (9) most important?												
4a	The journal's operations are deceptive (i.e. misleading; not truthful)	0 (0)	2 (6)	33 (94)*	35								
4b	The journal's operations are not in keeping with best publication practices (e.g. no membership in COPE)	1 (3)	6 (17)	28 (80)*	35								
4c	Journal has low transparency regarding its operations	0 (0)	7 (20)	28 (80)*	35								

4d	Fake impact factors are promoted by the journal	0 (0)	2 (6)	33 (94)*	35								
5	What marker² or distinguishing features best differentiate predatory journals from legitimate high-quality open access ones?												
5a	The journal promises a very quick peer review and turn around	4 (11)	10 (29)	21 (60)	35	2 (7)	8 (27)	20 (67)	30	10 (29)	7 (20)	18 (51)	35
5b	The journal promises rapid publication	3 (9)	11 (31)	21 (60)	35	4 (13)	7 (23)	19 (63)	30	28 (78)	4 (11)	4 (11)	36
5c	The journal has no retraction policy	0 (0)	7 (21)	26 (79)	33	Not captured in round 2 because of error			2 (5)	0 (0)	36 (95)*	38	
5d	The journal is not a member of COPE	1 (3)	9 (26)	25 (71)	35	2 (7)	11 (37)	17 (57)	30	5 (15)	22 (67)	6 (18)	33
5e	The journal is not listed in DOAJ	0 (0)	11 (31)	24 (69)	35	0 (0)	14 (47)	16 (53)	30	7 (19)	12 (32)	18 (49)	37
5f	The journal solicits manuscripts through aggressive or persuasive emails	1 (3)	2 (6)	32 (91)*	35								
5g	The contact details of the publisher are not easily verifiable	0 (0)	1 (3)	34 (97)*	35								
6	What empirically derived data³ best differentiates predatory journals from what you perceive to be a real or legitimate open access journal?												
6a	The journal's APC is considerably lower than legitimate OA journals	5 (14)	16 (46)	14 (40)	35	4 (13)	17 (57)	9 (30)	30	21 (55)	9 (24)	8 (21)	38
6b	The journal does not mention a Creative Commons license	2 (6)	5 (14)	28 (80)*	35								
6c	The journal's homepage has a 'look and feel' of being unprofessional	0 (0)	5 (14)	30 (86)*	35								
6d	Editors and editorial board affiliations with the journal are not verifiable	0 (0)	0 (0)	35 (100)*	35								
6e	The journal is not a member of COPE	1 (3)	6 (17)	28 (80)*	35								

6f	The journal is not listed in the DOAJ	0 (0)	11 (31)	24 (69)	35	1 (3)	10 (33)	19 (63)	30	10 (29)	12 (35)	12 (35)	34
Category 2: Educational outreach and policy initiatives on predatory publishing													
7	Should public funders fund research about predatory publishing?	Never fund 1 (3)	Neutral 6 (17)	Funding essential 28 (80)*	35								
8	Should the results of research published in predatory journals be included in systematic reviews and meta-analysis?	Never include 20 (57)	Neutral 8 (23)	Always include 7 (20)	35	Question removed from survey based on comments from respondents who are not experts in systematic reviews.							
9	Several groups have developed checklists to help authors identify and avoid predatory publishers. Do multiple checklists available for assessing predatory journals confuse prospective authors?	Serious problem 9 (26)	Neutral 10 (29)	Not a problem 15 (44)	34	Serious problem 12 (40)	Neutral 12 (40)	Not a problem 6 (20)	30	Serious problem 22 (65)	Neutral 9 (26)	Not a problem 3 (9)	34
10	Should a single, coherent checklist be developed to replace existing checklists?	2 (6)	6 (17)	27 (77)	35	3 (10)	2 (7)	25 (83)*	30				
11	Blacklists and paywalled whitelists have been published to alert and educate prospective authors. How important is it that each list be referenced and promoted?												
11a	Blacklists (i.e. journals and/or publishers considered problematic)?	5 (15)	12 (35)	17 (50)	34	4 (13)	10 (33)	16 (53)	30	6 (17)	9 (25)	21 (58)	36
11b	Paywalled whitelists (i.e. journals and/or publishers approved)?	5 (15)	12 (35)	17 (50)	34	3 (10)	13 (43)	14 (47)	30	16 (52)	8 (26)	7 (23)	31
12	Various collaborators can have a role in helping solve the problem of predatory journals. Please rank which collaborator is most responsible (1) to least responsible (6) for helping solve the problems of predatory journals	Ranked in order of importance (1) Academic institutions (2) Funders (3) Libraries (4) COPE (5) Journals / publishers (6) DOAJ				Ranked in order of importance (1) Academic institutions (2) Researchers (3) Journals / publishers (4) Funders (5) Libraries (6) Academic societies (7) COPE (8) DOAJ				Consensus not required for this question and so it was not included in round 3.			
13	Is there merit in developing resources or educational materials regarding predatory journals /	Waste of time 0 (0)	Neutral 8 (23)	Excellent idea 27 (77)	35	Waste of time 1 (3)	Neutral 6 (20)	Excellent idea 23 (77)	30	Waste of time 0 (0)	Neutral 4 (13)	Excellent idea 26 (87)*	30

	publishers in languages other than English?												
14	Research on predatory journals to date suggests that individuals in low and middle income countries (LMIC) are often targeted by predatory journals. Which of the following strategies would be best suited to solve this challenge facing researchers in LMIC? Check all that apply.				Consensus not required for this question and so it was not included in round 3.								
14a	A checklist to help detect predatory journals?	26 (72)	35	To minimize # of questions, strategies with high responses not included in round 2									
14b	Promotion of blacklists that name predatory journals/publishers?	11 (31)	35	13 (43)	30								
14c	Paywalled whitelists that name predatory journals/publishers?	5 (14)	35	6 (20)	30								
14d	“One stop shop” website that consolidates information, training, and education about predatory journals / publishers?	30 (83)	35	To minimize # of questions, strategies with high responses not included in round 2									
14e	Journal authenticator?	21 (58)	35	23 (77)	30								
14f	Other?	12 (33)	35	8 (27)	30								
15	There is ongoing debate about the difference between predatory journals/publishers and journals of very low quality ⁴ . Should efforts be made to differentiate predatory journals from very low quality journals?	No effort 1 (3)	Neutral 4 (11)	Important efforts 30 (86)*	35								

Category 3: Developing technological solutions to stop submissions to predatory journals and other low-quality journals.

16	Is there merit in developing a ‘one stop shop’ website to consolidate information, training and educational materials about predatory journals?	Very bad idea 0 (0)	Neutral 7 (20)	Excellent idea 28 (80)*	35								
17	Is there merit in developing a journal authenticator ⁵ ?	Strongly oppose 1 (3)	Neutral 8 (23)	Strongly support 26 (74)	35	Strongly oppose 0 (0)	Neutral 7 (23)	Strongly support 23 (77)	30	Strongly oppose 0 (0)	Neutral 7 (21)	Strongly support 27 (79)	34

18	Is there merit in establishing a predatory journal research observatory ⁶ ?	Strongly oppose	Neutral	Strongly support		Strongly oppose	Neutral	Strongly support	
		1 (3)	8 (23)	26 (74)	35	0 (0)	6 (20)	24 (80)	30

* = reached 80% consensus in one of the lateral thirds of the scale

¹Characteristic: distinct features of all predatory journals. These characteristics are unique to predatory journals and generally do not occur at legitimate high-quality open access journals.

²Markers: features that are common among predatory journals. Not all markers are present in all predatory journals. Markers may be considered “red flags” of poor journal quality.

³Empirically derived data: data from experiments or statistical analysis that indicate differences between predatory journals and legitimate open access journals/publishers in various characteristics.

⁴Journals of very low quality: established to fill a specific niche, such as serving as a medical school’s journal. However, their practices are still well below accepted publication science standards.

⁵Journal authenticator: a usable (e.g., responsive) browser plug-in for commonly used browsers and a backend server conceptually similar to electronic ‘doughnuts’ already in existence (e.g., Altmetrics). The data used in the journal authenticator doughnut will be based on publication standards (e.g., member of COPE) and can be used to authenticate a journal as less likely to be predatory or not.

⁶Predatory journal research observatory: a data rich resource to identify ongoing research and analysis about predatory journals/publishers.

Supplementary Table 2. Differences in consensus results for round one between authors identified in scoping review by Cobey et al., (2018) (n = 72) (group 1) and Summit invitees and participants (n = 45) (group 2).

Question Numbers (correspond with question numbers in Supp. Table 1)	Reached Consensus to Include Question (round 1) ✓ = reached consensus x = did not reach consensus		Question details for results that differ between groups 1 and 2
	Group 1 (Authors)	Group 2 (Summit invitees and participants)	
1	✓	✓	
2	x	x	
3a	x	x	
3b	x	x	
3c	x	x	
3d	x	x	
4a	✓	✓	
4b	x	✓	The following characteristic may differentiate predatory and legitimate journals: The journal's operations are not in keeping with best publication practices (e.g. no membership in COPE). Group 1 (authors): n = 48, 67% - <i>a very important characteristic</i> Group 2 (Summit): n = 28, 80% - <i>a very important characteristic</i>
4c	✓	✓	
4d	✓	✓	
5a	x	x	
5b	x	x	
5c	x	x	
5d	x	x	
5e	x	x	
5f	✓	✓	
5g	✓	✓	
6a	x	x	
6b	x	✓	What empirically derived data best differentiates predatory journals from what you perceive to be a real or legitimate open access journal? The journal does not mention a Creative Commons license. Group 1 (authors): n = 31, 43% - <i>a very important characteristic</i> Group 2 (Summit): n = 28, 80% - <i>a very important characteristic</i>
6c	✓	✓	
6d	✓	✓	
6e	x	✓	
6f	x	x	
7	x	✓	Should public funders fund research about predatory publishing ? Group 1 (authors): n = 52, 72% - <i>funding is essential</i> Group 2 (Summit): n = 28, 80% - <i>funding is essential</i>
8	x	x	
9	x	x	
10	x	x	
11a	x	x	
11b	x	x	
12	Rank order – same top 3 out of 6		
13	x	x	
14a-e	Same top 2 strategies		
15	x	✓	There is ongoing debate about the difference between predatory journals/publishers and journals of very low quality ⁴ . Should efforts be made to differentiate predatory journals from very low quality journals? Group 1 (authors): n = 55, 77% - <i>important efforts</i> Group 2 (Summit): n = 30, 86% - <i>important efforts</i>
16	x	✓	Is there merit in developing a 'one stop shop' website to consolidate information, training and educational materials about predatory journals? Group 1 (authors): n = 54, 76% - <i>excellent idea</i> Group 2 (Summit): n = 28, 80% - <i>excellent idea</i>
17	x	x	
18	x	x	