

# Citation lags for articles referenced in public policy documents: an exploratory study

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**First, some semantics.**

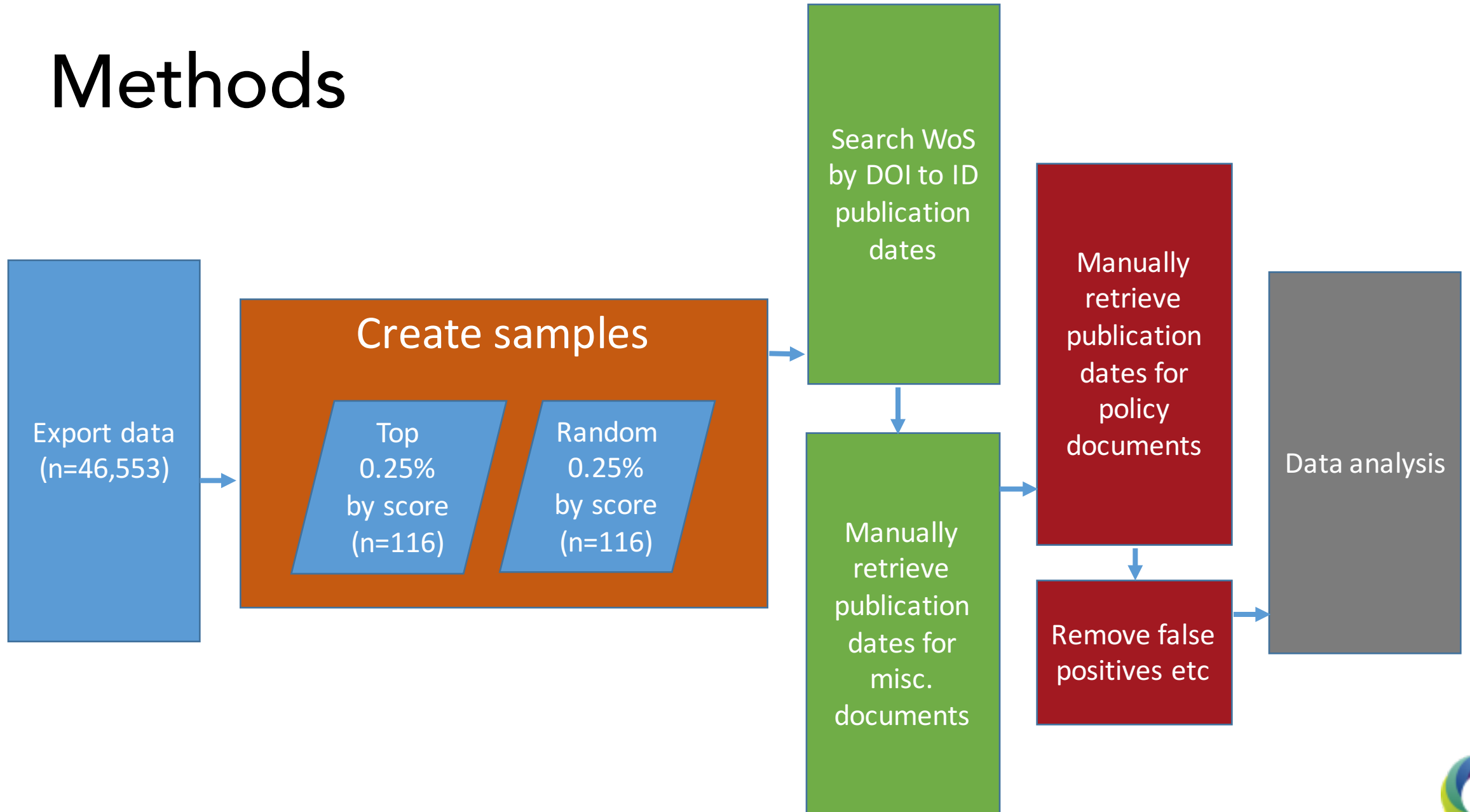


# Citations to research in policy docs

- Occur to:
  - provide data
  - justify an argument
  - introduce new ideas  
(Haynes *et al* 2011)
- Growing importance for researchers
- New tools to easily track citations in policy docs
- How long is the citation lag?



# Methods



# Data analysis

- Data characteristics
  - WoS Research domain
  - Identifiers
  - Publication years (most common and oldest)
  - Output type
  - Average metrics for each sample, incl. non-score dependent metrics
- Citation lags
  - *Earliest policy doc citation less WoS publication year*

# Characteristics of articles

For each sample, n=116

	Max cites in policy	PubMed identifier	Most common PY	Oldest article PY	WoS classification: Science & Technology*	WoS classification: Social Science*	WoK classification: Arts & humanities*
Highest- score articles	5	97	2013 (n=29)	2000	152	66	5
Other articles	3	67	2008 (n=17)	2000	86	52	0

\* Web of Science returned < 116 articles with research domain classifications for high-scoring articles, due to multiple products being associated with a single DOI. (I think.) Classifications not mutually exclusive.



# Characteristics of articles

For each sample,  $n=116$

Highest-attention articles (n=155)	Other articles with scores < 0 (n=109)
Article (111)	Article (98)
Other (75)	Other (41)
Dataset (28)	Review (19)
Clinical trial (19)	Clinical trial (7)
Review (18)	Meeting (7)
Misc (18)	Misc (16)

\* Web of Science returned < 116 articles with research domain classifications for high-scoring articles, due to multiple products being associated with a single DOI. (I think.) Document types not mutually exclusive.



# Citation lags

	Highest-score articles (n=116)	Other articles (n=116)
Mean years to citation in policy	1.7 years	3.4 years
Standard deviation	1.9	2.8
Most common citation lag	1 year	1 year
Longest citation lag	10 years	14 years
# articles cited same-year	23	9
Mean # citations in policy, per article	1.18 citations per article	1.09 citations per article
Standard deviation	0.63	0.34
# articles with inconclusive policy document citation dates	4	7





# Comparison to other metrics

	Highest Attention Articles			Other articles with scores < 0		
Altmetric data source	Max	Mean	$\sigma$	Max	Mean	$\sigma$
Bloggers	208	14.48	21.76	6	0.22	0.73
Twitter users	2604	350.01	365.45	70	2.81	9.16
News articles	70	14.73	13.20	3	0.08	0.37
Google+ posts	114	9.59	17.24	4	0.08	0.46
Facebook posts	2376	70.88	235.75	1	0.35	1.75
Wikipedia	63	2.44	6.22	2	0.09	0.34
<b>Mendeley</b>	1982	<b>222.23</b>	343.95	466	<b>41.5</b>	74.25



# Future work

- Addressing limitations
  - Publication year source
  - Find more granular citation lags
- Larger representative study
- Citation lag differences depending upon articles' OA status, discipline, etc
- Correlations between various metrics and citation lags: can we find leading indicators?
- Qualitative analysis of citations in policy docs



# Thank you!

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