Is Avoiding Meat Healthy?

Systematic & Meta-Analytical Reviews

Urska Dobersek, Ph.D., CMPC

Disclaimer

Why?

Meat Abstention & Mental Health

Photo: http://www.meandmydoctor.com/2014/10/mental-health-awareness-week-this-week.html

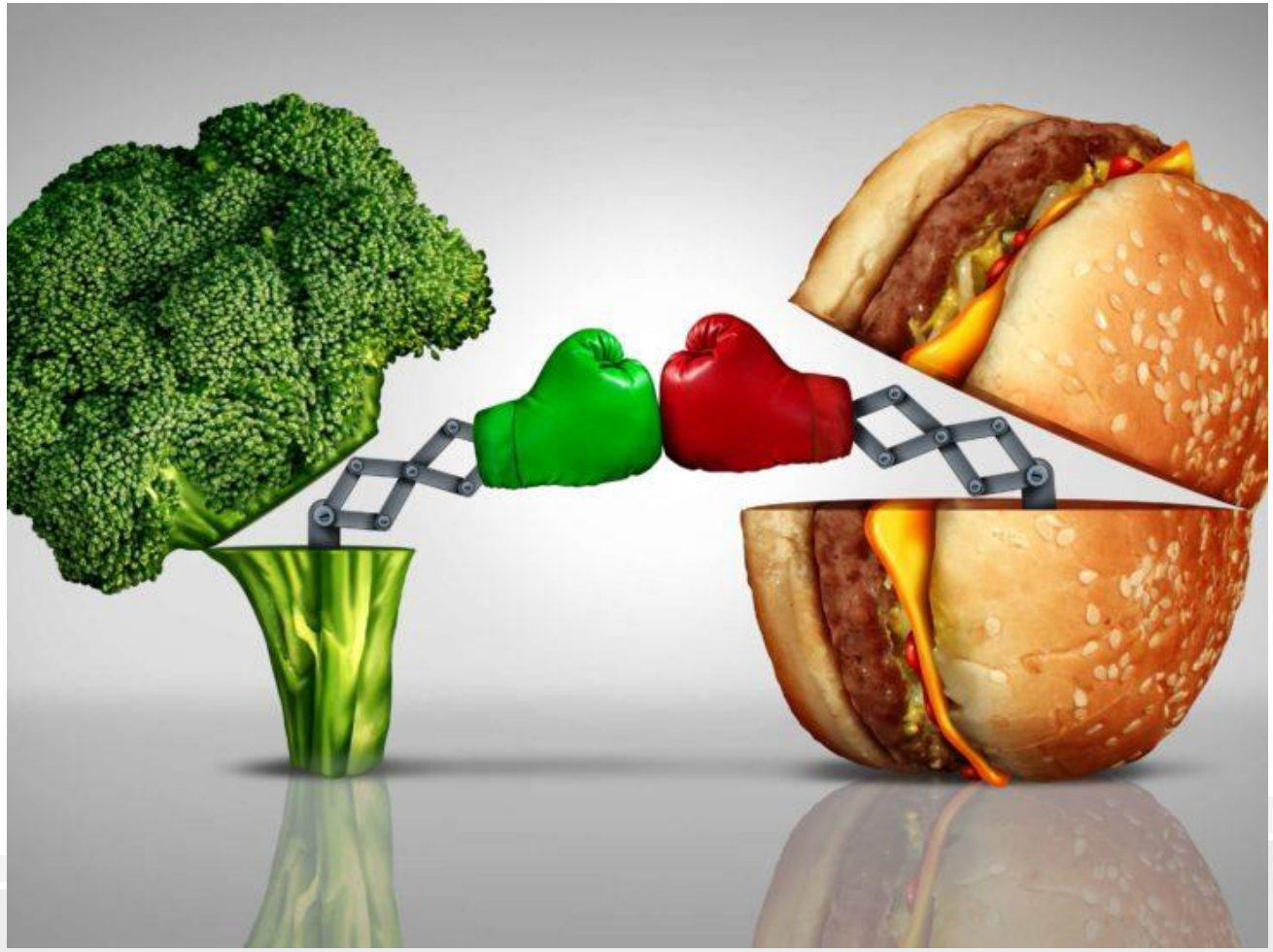
Meat Abstention

Photo: http://www.meandmydoctor.com/2014/10/mental-health-awareness-week-this-week.html

Mental Health

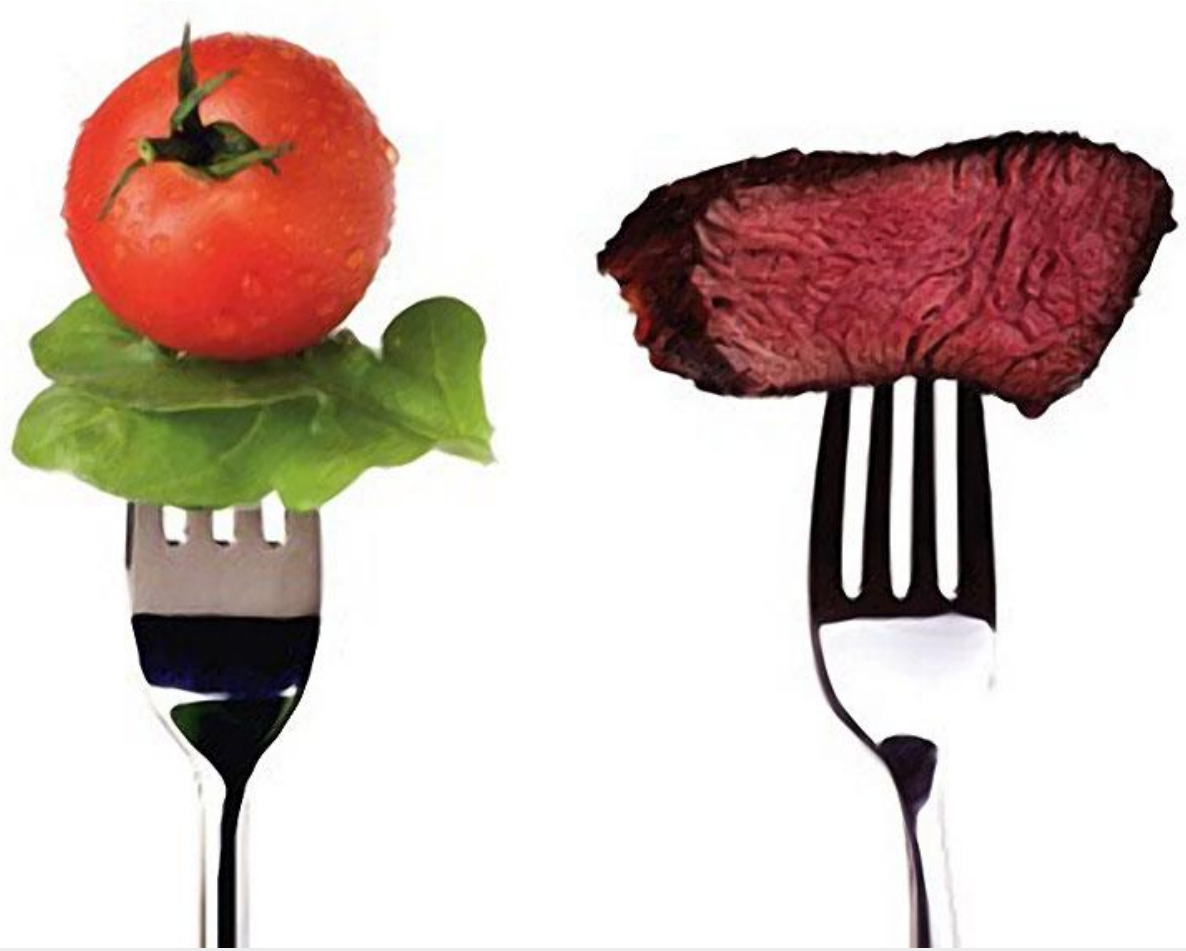
Photo: http://www.meandmydoctor.com/2014/10/mental-health-awareness-week-this-week.html

Contradictory Evidence



https://www.medicalnewstoday.com/articles/320047

The Need for Clarity



https://www.yesvedanta.com/vegetarianism-purpose-vedic-culture/

Critical Reviews in Food Science and Nutrition

Meat and mental health: a systematic review of meat abstention and depression, anxiety, and related phenomena

Urska Dobersek, Gabrielle Wy, Joshua Adkins, Sydney Altmeyer, Kaitlin Krout, Carl J. Lavie & ...show all

Critical Reviews in Food Science and Nutrition, 61(4), 2020.

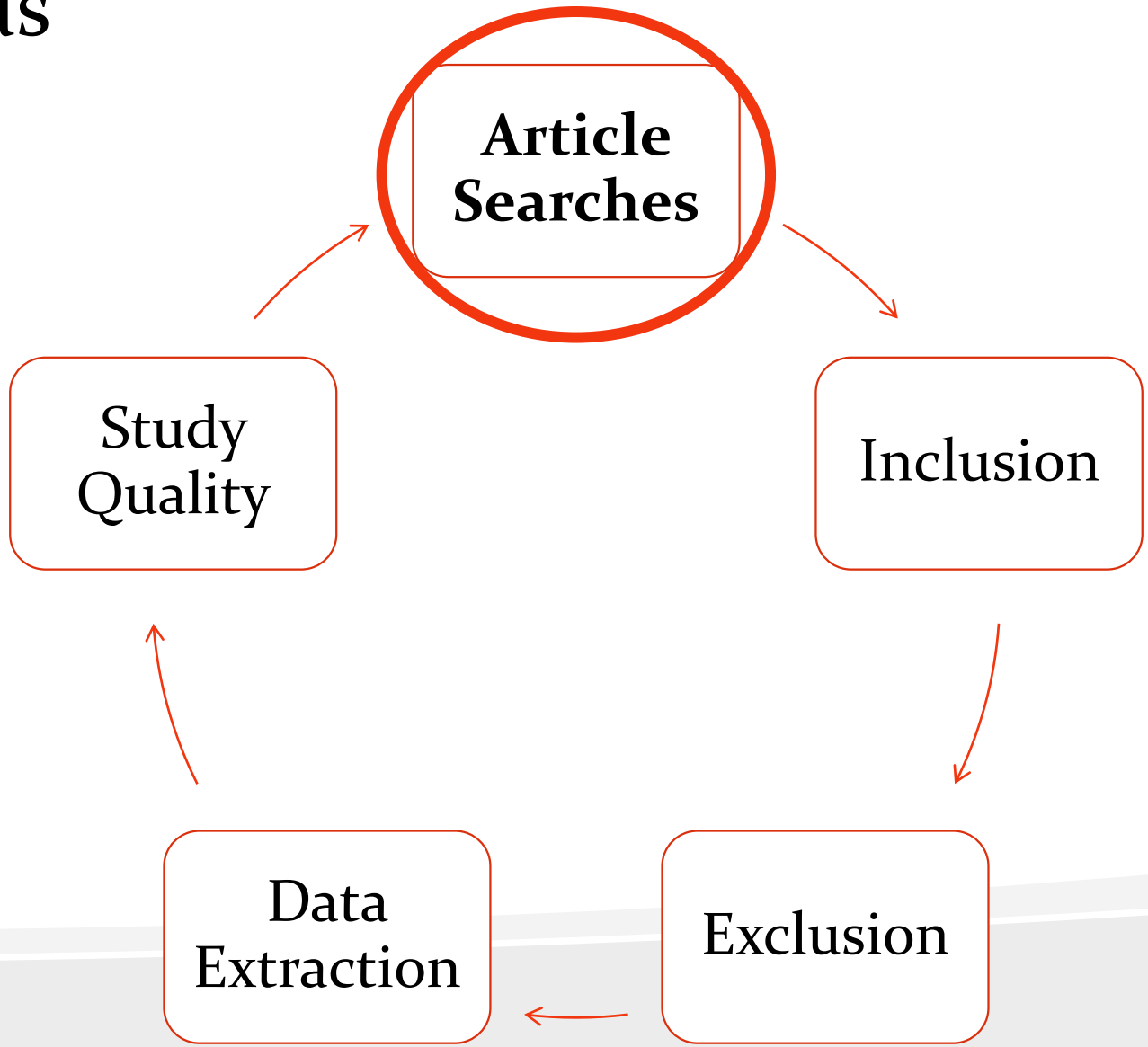
Critical Reviews in Food Science and Nutrition

Meat and mental health: A meta-analysis of meat consumption, depression, and anxiety

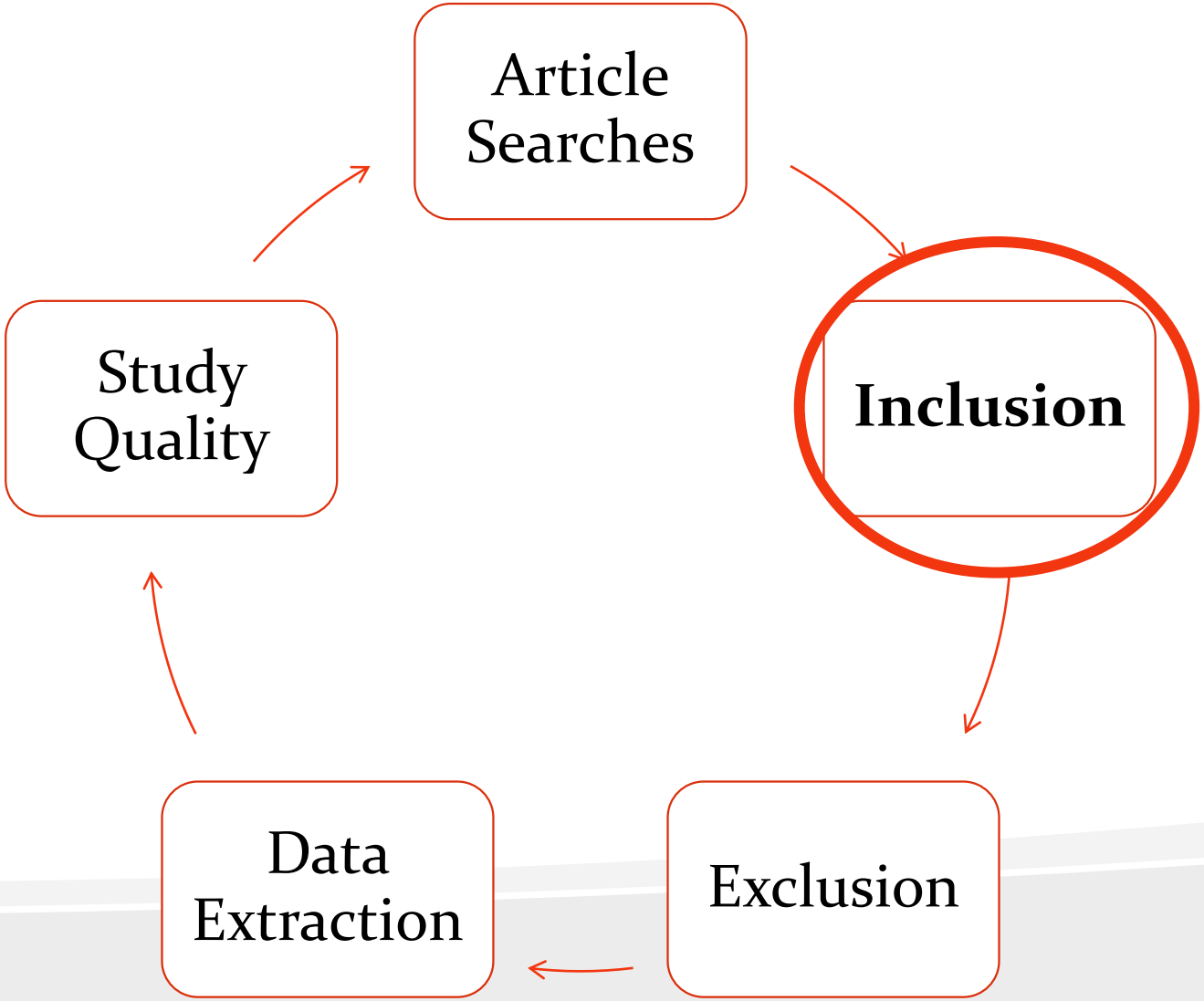
Urska Dobersek, Kelsey Teel, Sydney Altmeyer, Joshua Adkins, Gabrielle Wy & Jackson Peak

Critical Reviews in Food Science and Nutrition, 2021.

Methods


Article Searches
Inclusion
Exclusion
Data Extraction
Study Quality

Methods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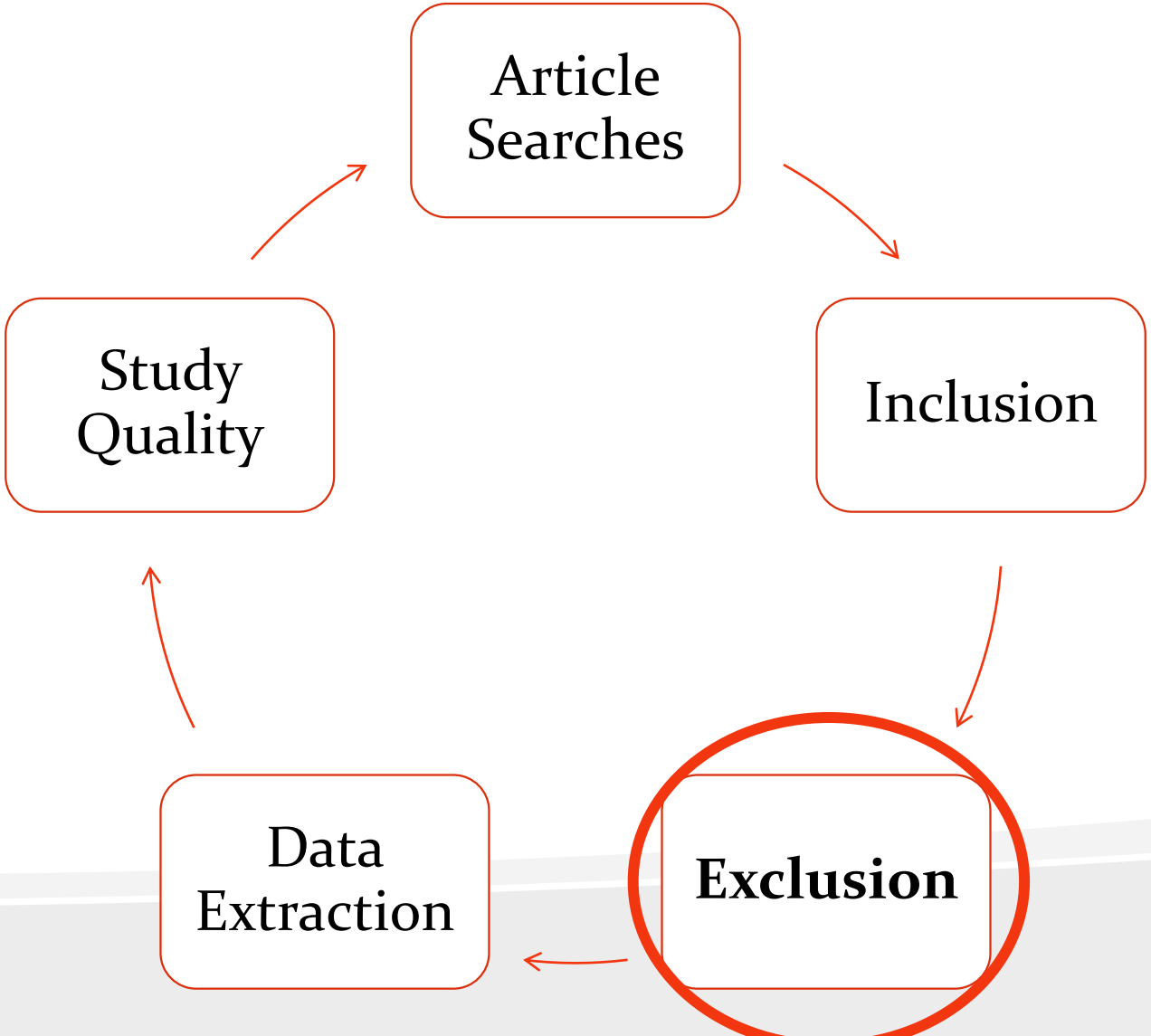
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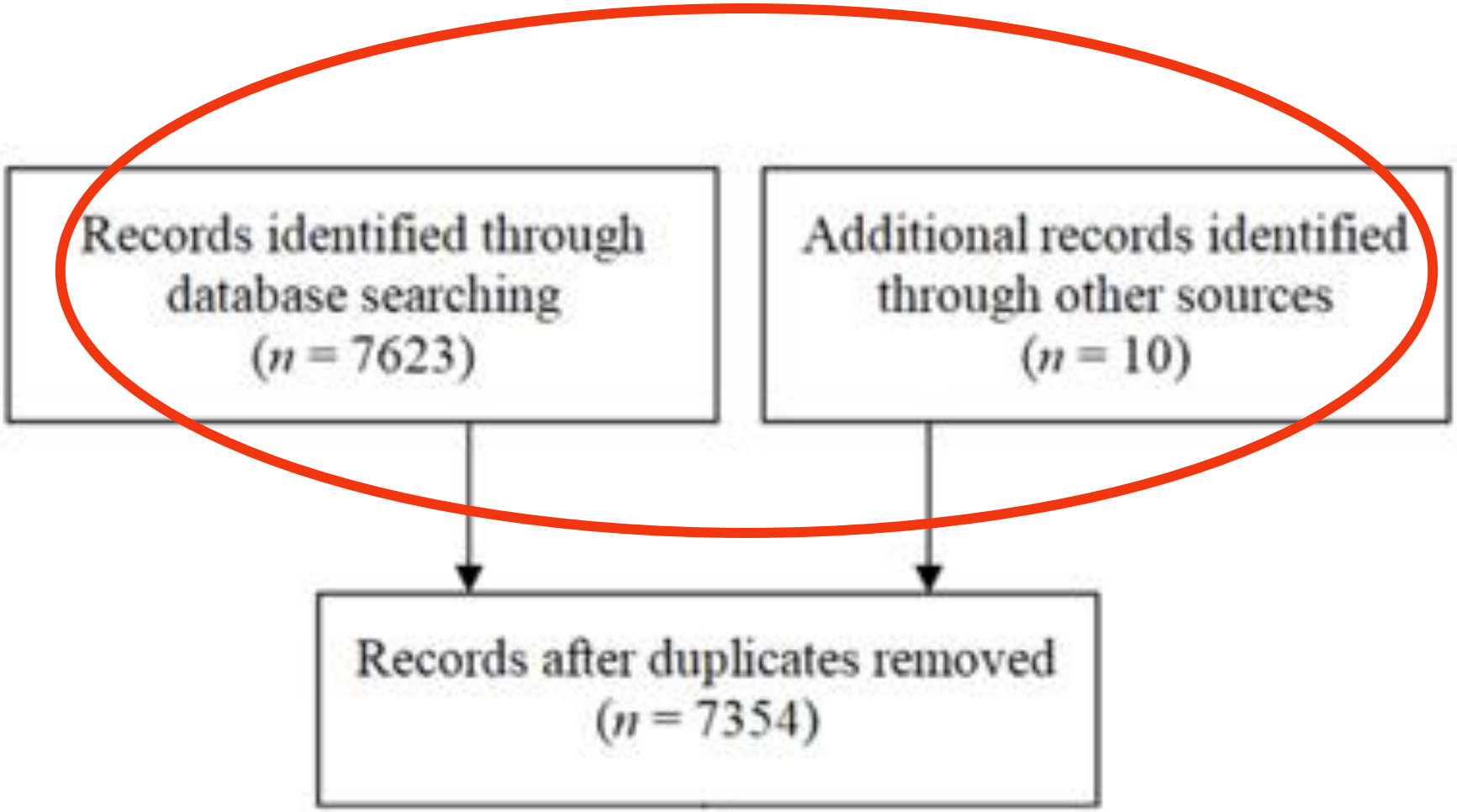
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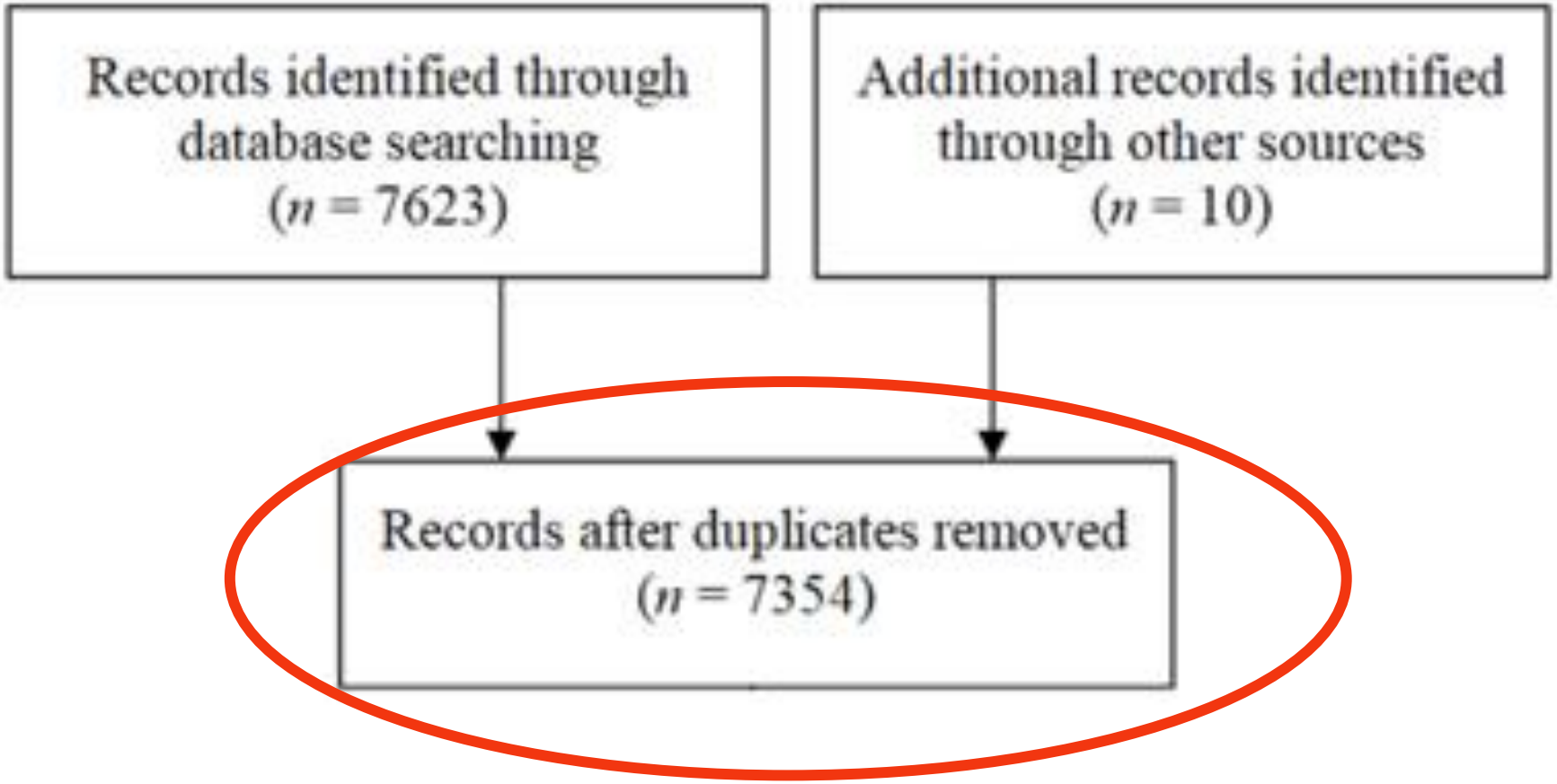
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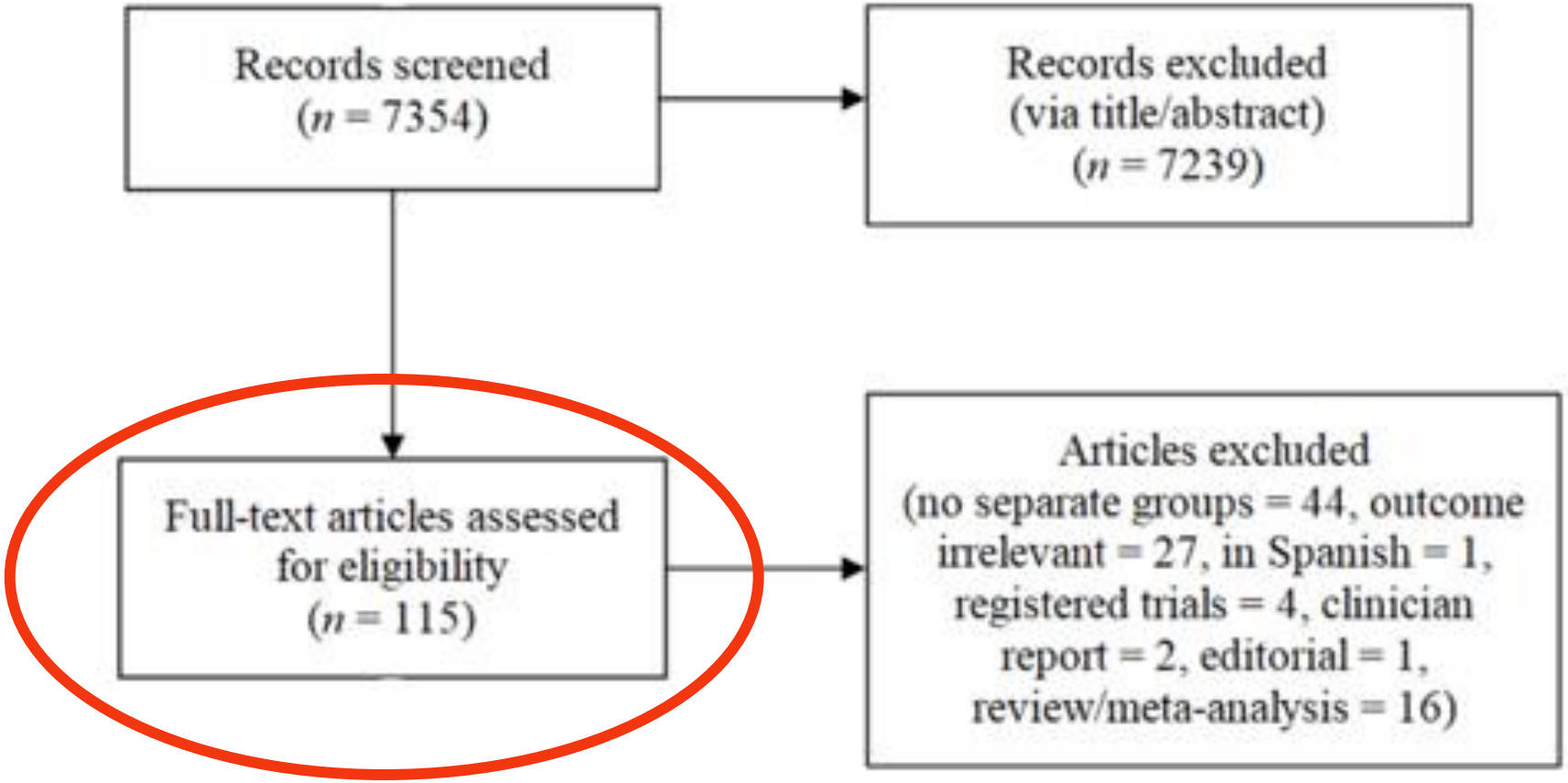
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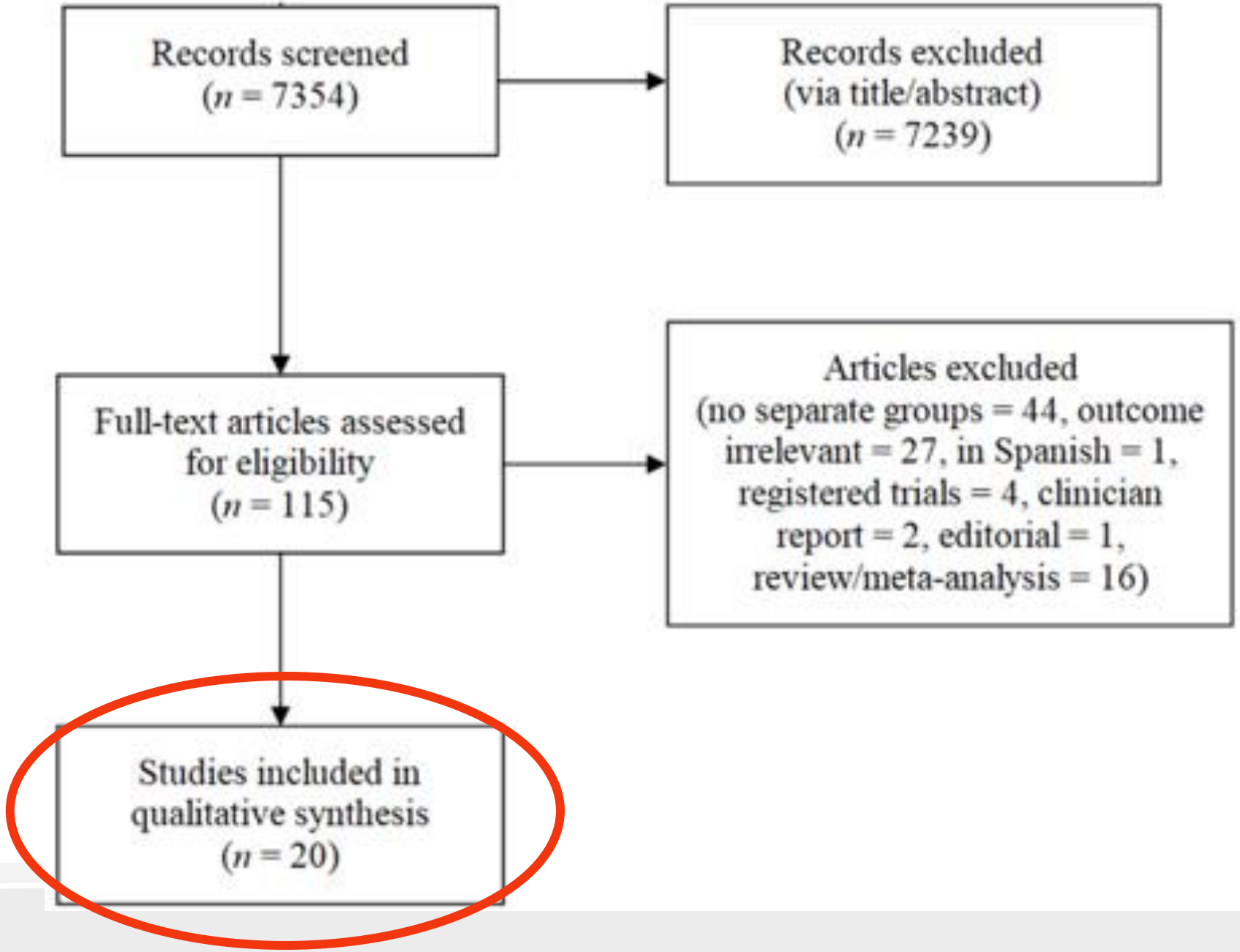
(n = 7239)
Full-text articles assessed
for eligibility
(n = 115)
Articles excluded
(no separate groups = 44, outcome
irrelevant = 27, in Spanish = 1,
registered trials = 4, clinician
report = 2, editorial = 1,
review/meta-analysis = 16)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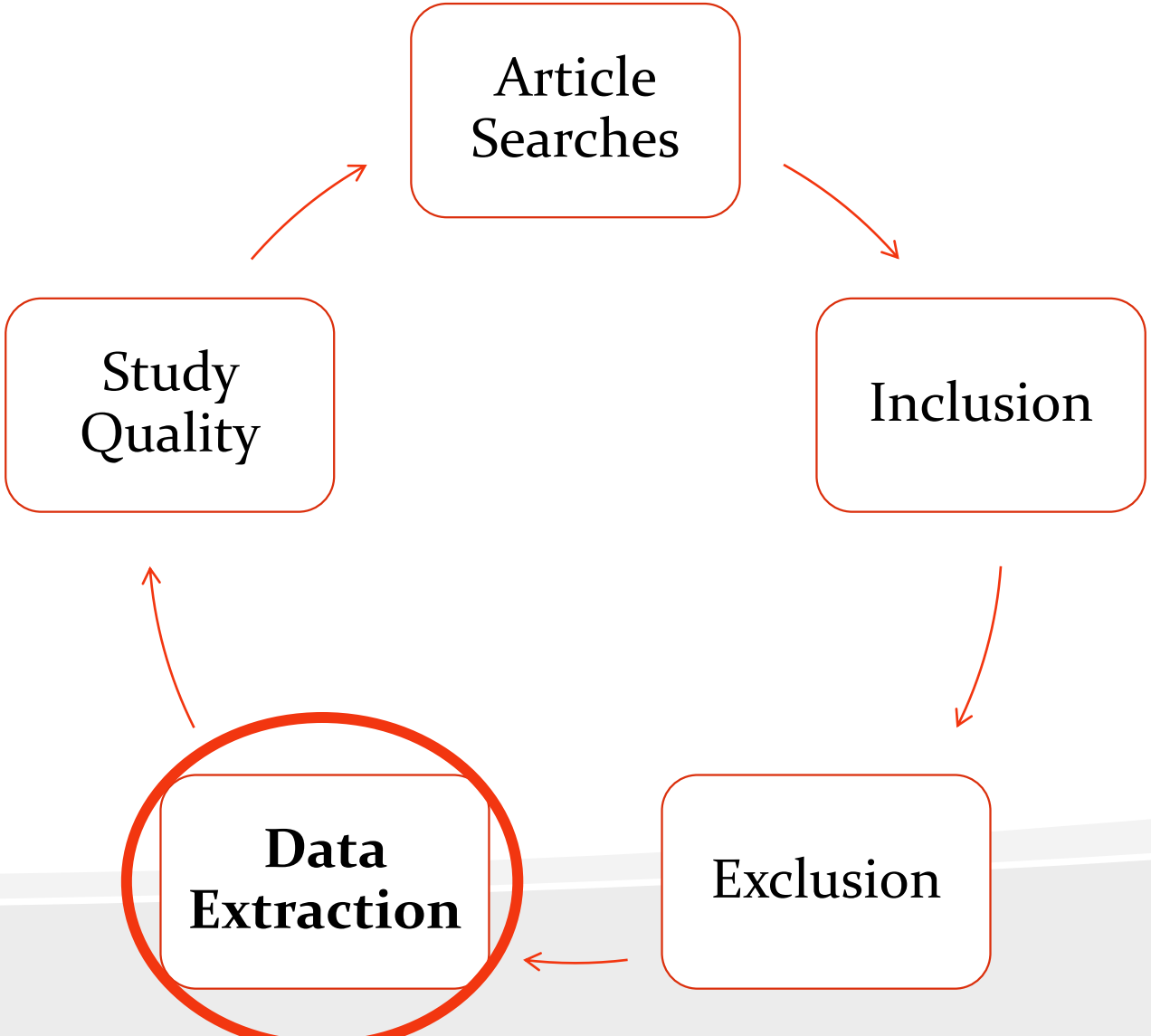
Studies included in
qualitative synthesis
(n = 20)

Methods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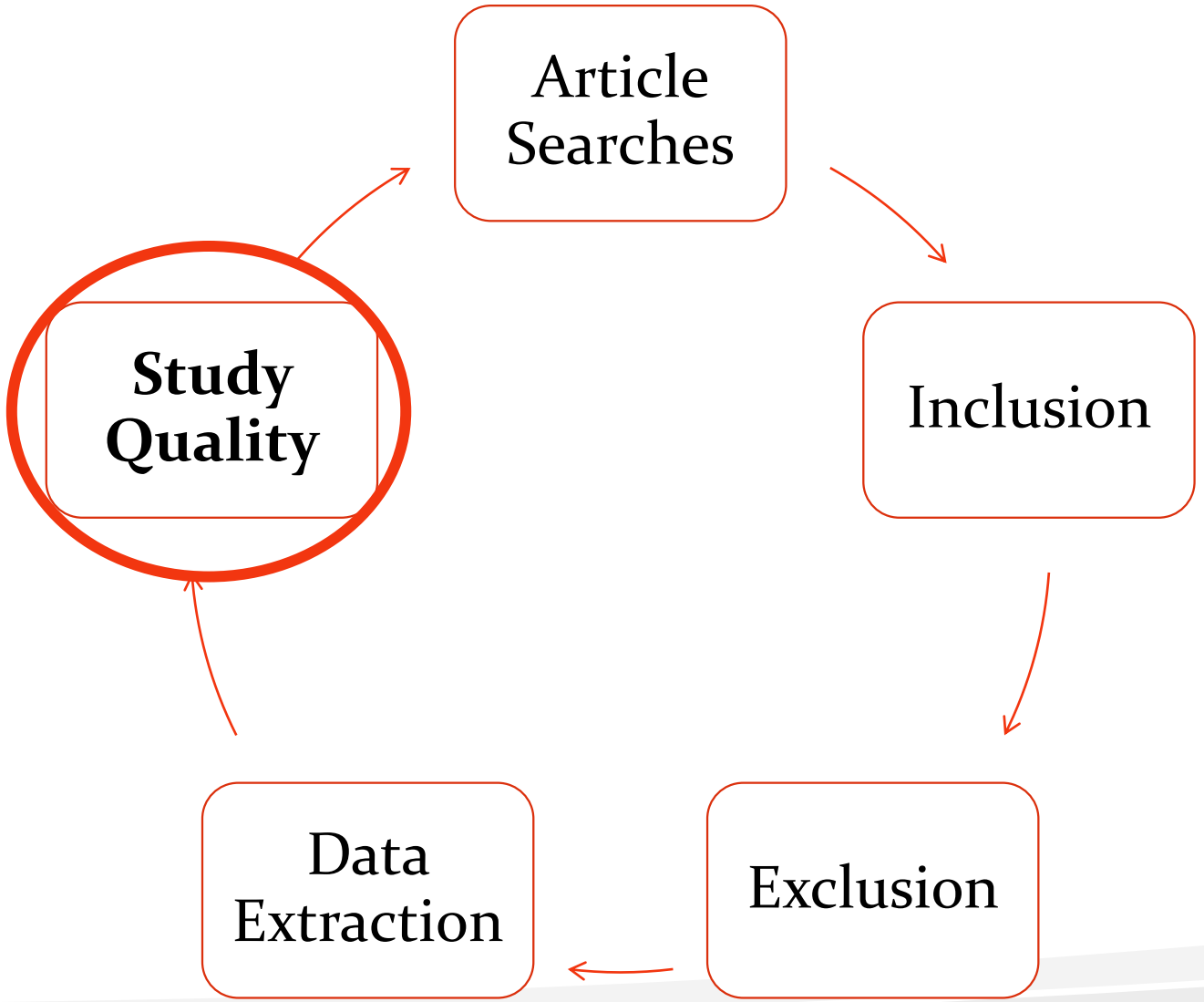
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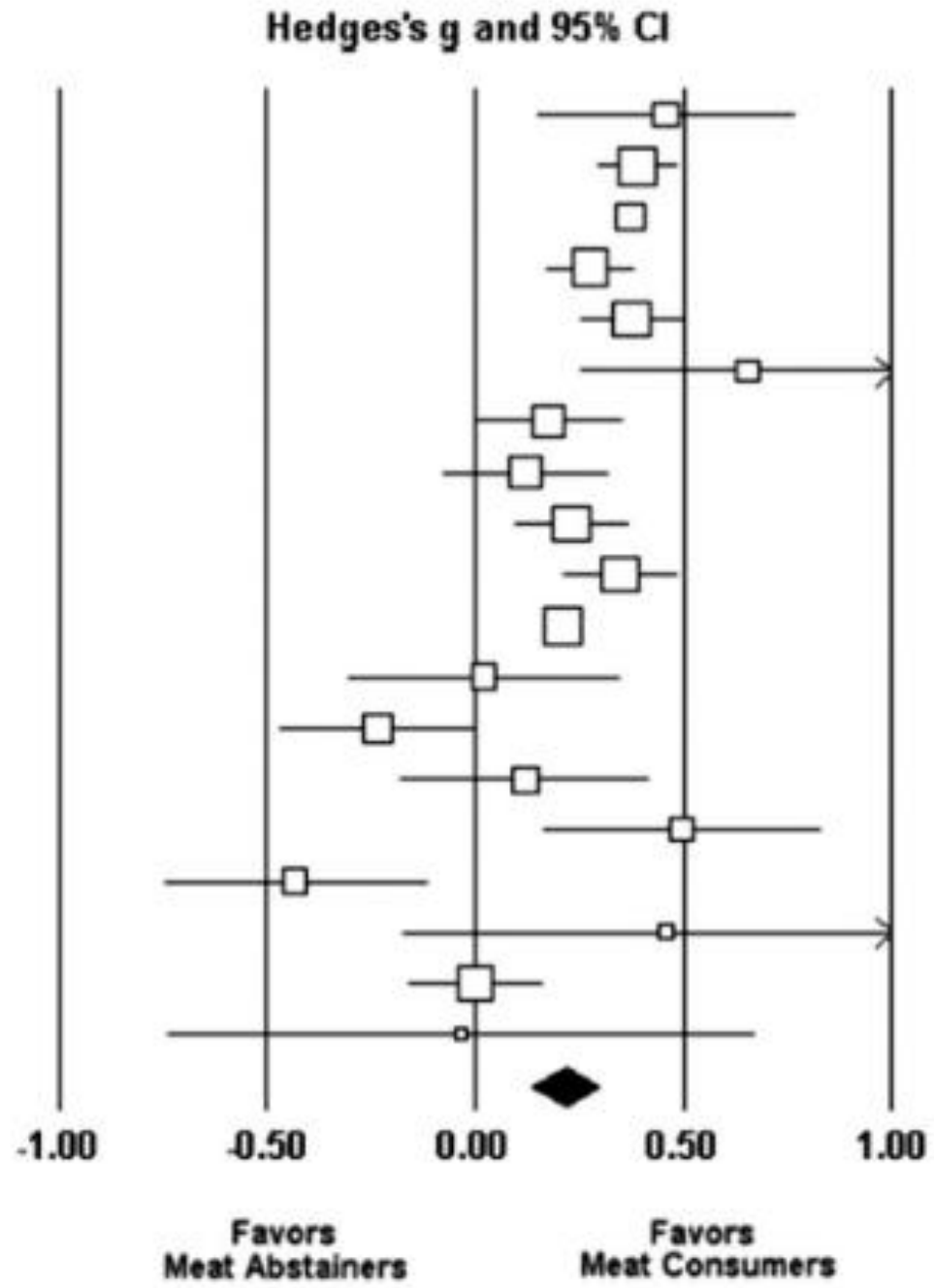
Results

	Favored Meat Eaters	Favored Vegans/ Vegetarians
Primary Outcomes	*n* = 143,760	*n* = 758
	9 studies	2 studies

Results

	Favored Meat Eaters	Favored Vegans/ Vegetarians
Secondary Outcomes	*n* = 36,597	*n* = 797
	4 studies	3 studies

Study	Hedges's g	Lower limit	Upper limit	p-Value
Michalak et al. (2012)	0.459	0.148	0.770	0.004
Matta et al. (2018)	0.390	0.295	0.485	0.000
Bains et al. (2007)	0.373	0.115	0.632	0.005
Hibbeln et al. (2018)	0.276	0.169	0.383	0.000
Velten et al. (2018)	0.377	0.252	0.502	0.000
Kapoor et al. (2017)	0.655	0.250	1.060	0.002
Paslakis et al. (2020)	0.177	0.000	0.355	0.050
Timko et al. (2012)	0.121	-0.081	0.323	0.240
Perry et al. (2001)	0.231	0.092	0.371	0.001
Forestell et al. (2018)	0.349	0.214	0.484	0.000
Lavalee et al. (2019)	0.212	0.167	0.257	0.000
Goh et al. (2019)	0.022	-0.304	0.347	0.897
Jin et al. (2019)	-0.236	-0.473	0.001	0.051
Hessler-Kaufmann et al. (2020)	0.119	-0.179	0.417	0.434
Lindeman (2002)	0.498	0.163	0.833	0.004
Beezhold et al. (2010)	-0.432	-0.749	-0.114	0.008
Stokes et al. (2011)	0.458	-0.176	1.093	0.157
Beezhold et al. (2015)	0.000	-0.163	0.163	1.000
Beezhold et al. (2012)	-0.035	-0.741	0.672	0.924
	0.216	0.135	0.297	0.000



Depression

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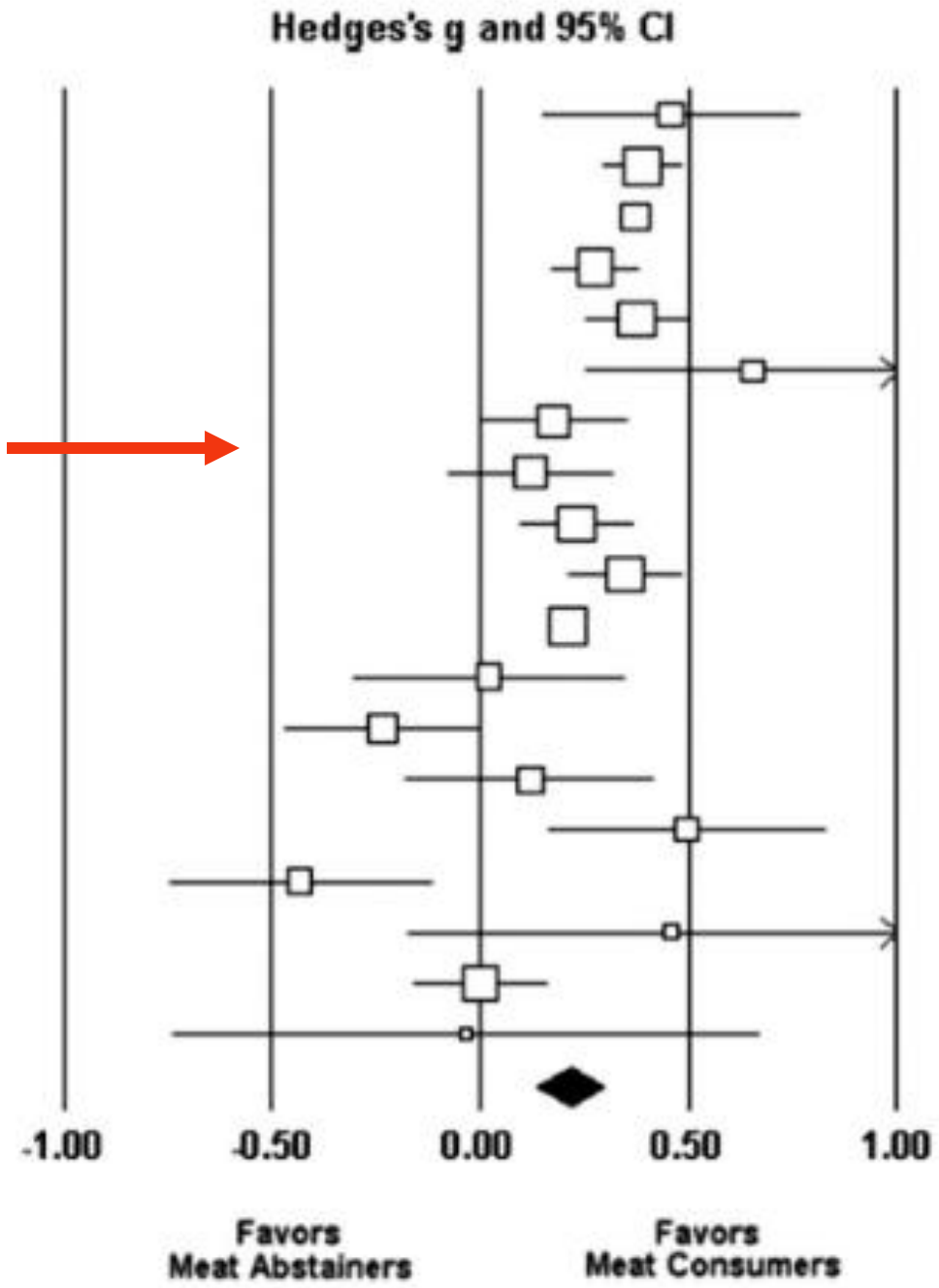

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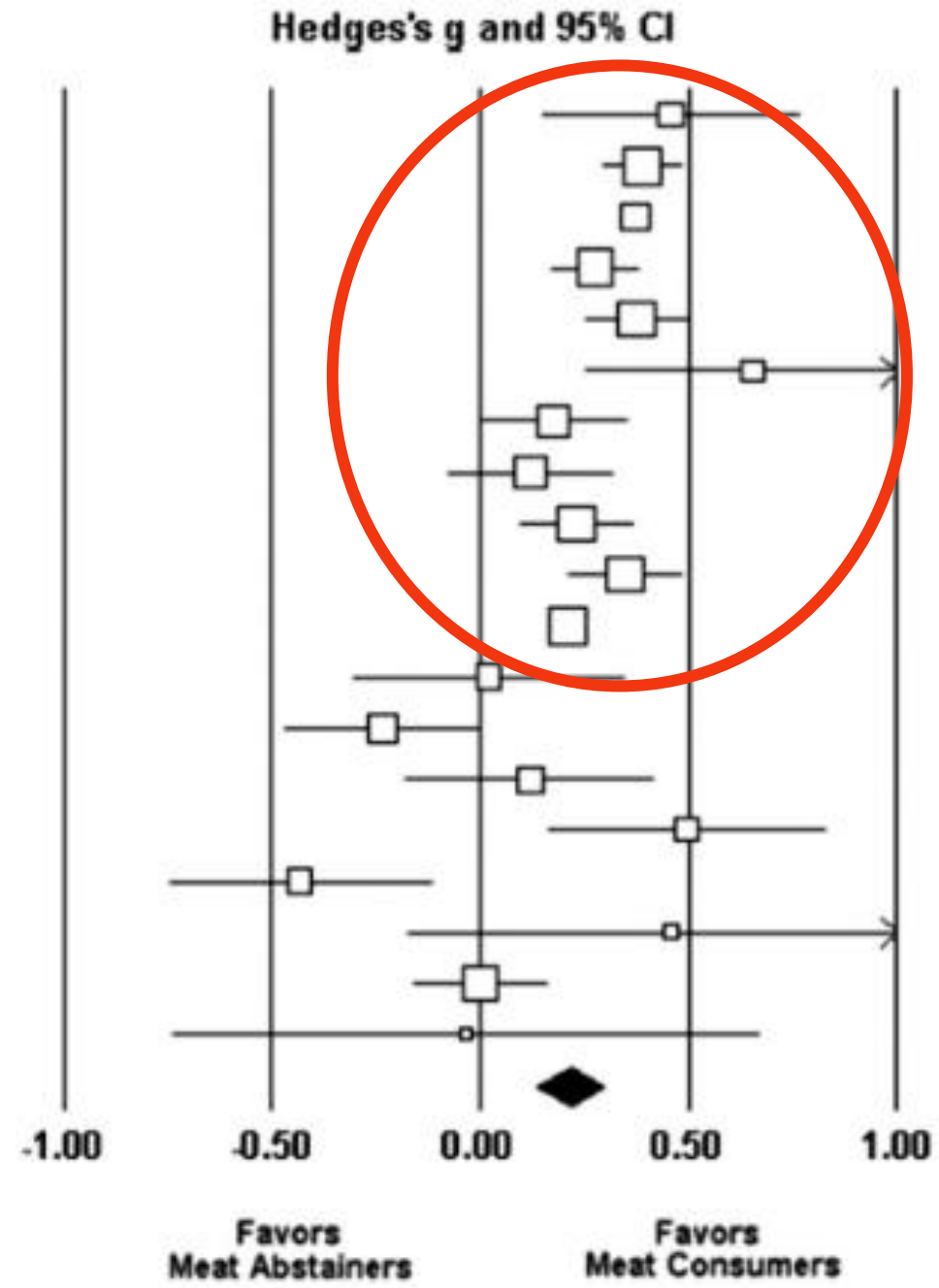

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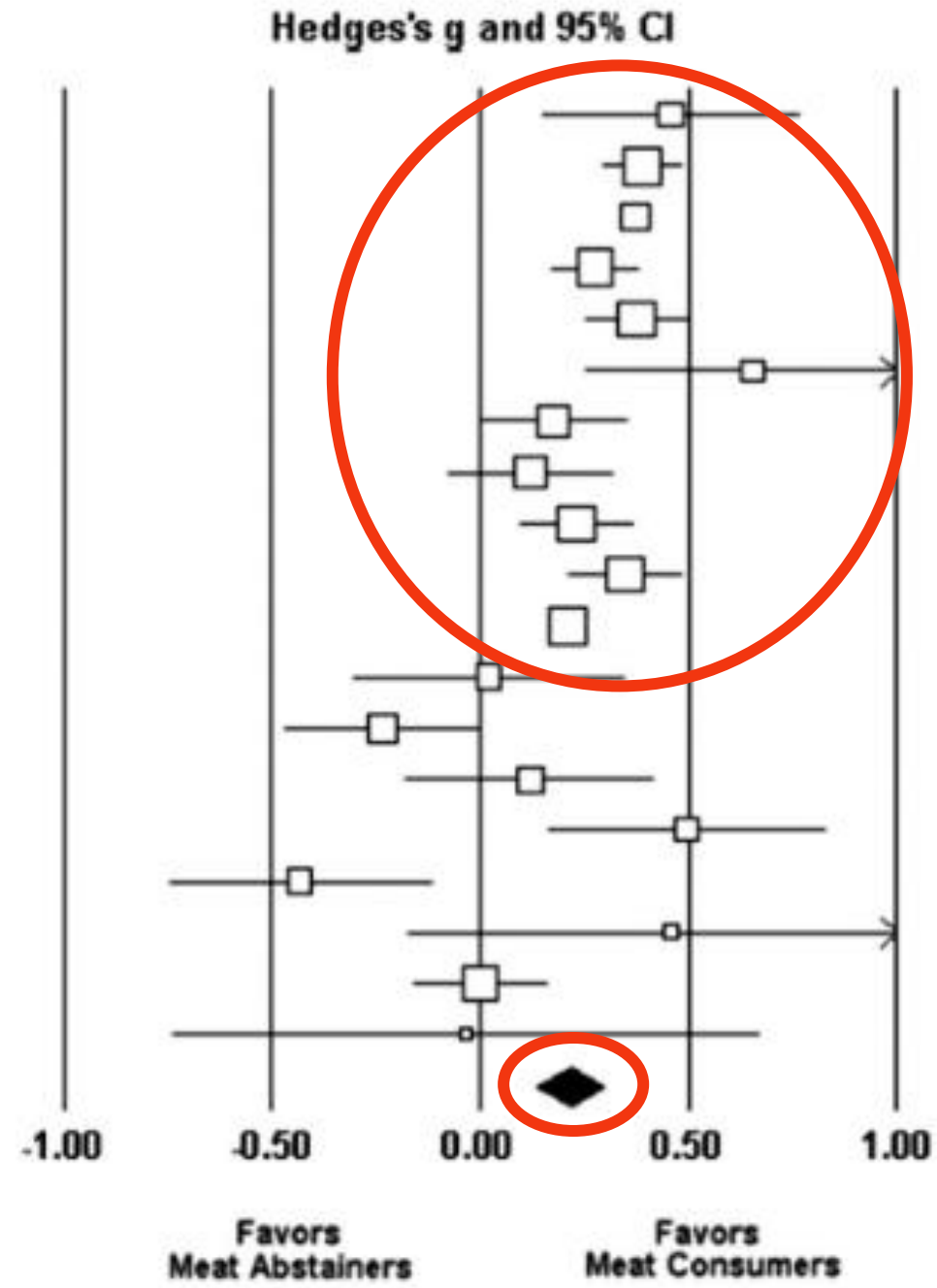
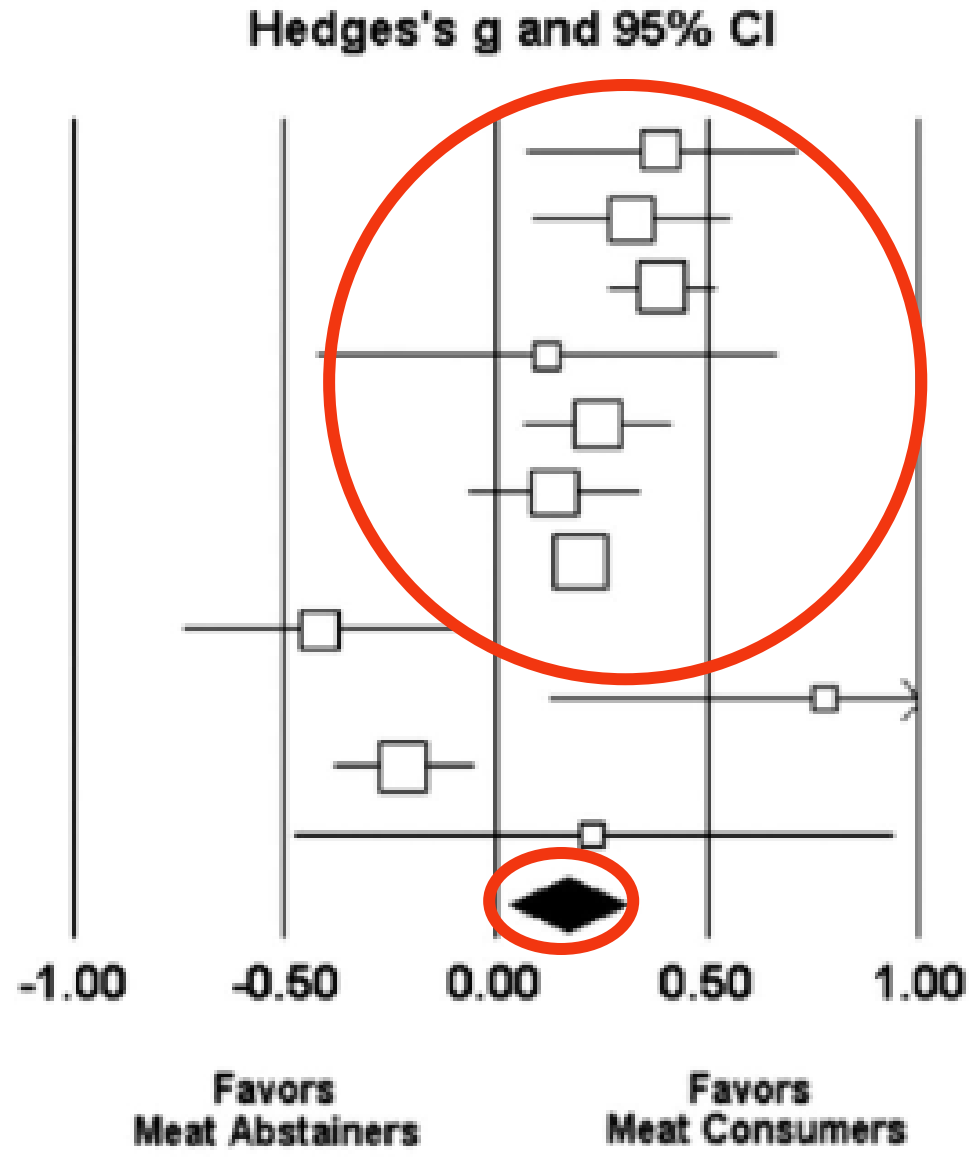
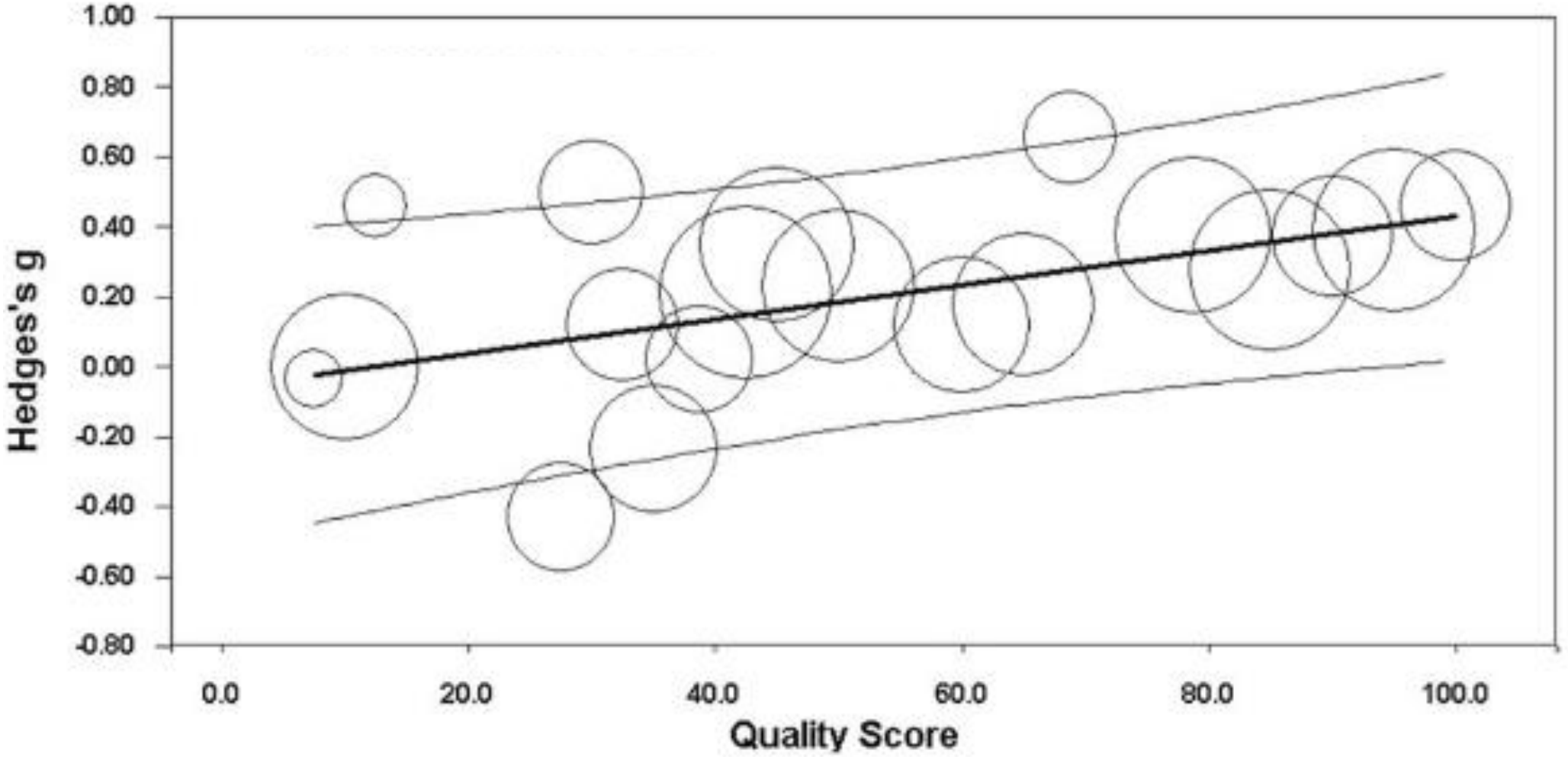


Depression

Study	Hedges's g	Lower limit	Upper limit	p-Value
Michalak et al. (2012)	0.391	0.071	0.711	0.017
Bains et al. (2007)	0.321	0.087	0.554	0.007
Velten et al. (2018)	0.394	0.269	0.519	0.000
Bas et al. (2005)	0.122	-0.420	0.665	0.659
Paslakis et al. (2020)	0.239	0.063	0.416	0.008
Timko et al. (2012)	0.139	-0.063	0.341	0.178
Lavalee et al. (2019)	0.203	0.158	0.248	0.000
Beezhold et al. (2010)	-0.414	-0.738	-0.089	0.012
Stokes et al. (2011)	0.778	0.128	1.428	0.019
Beezhold et al. (2015)	-0.217	-0.381	-0.054	0.009
Beezhold & Johnston (2012)	0.230	-0.479	0.939	0.524
	0.169	0.031	0.307	0.017



Anxiety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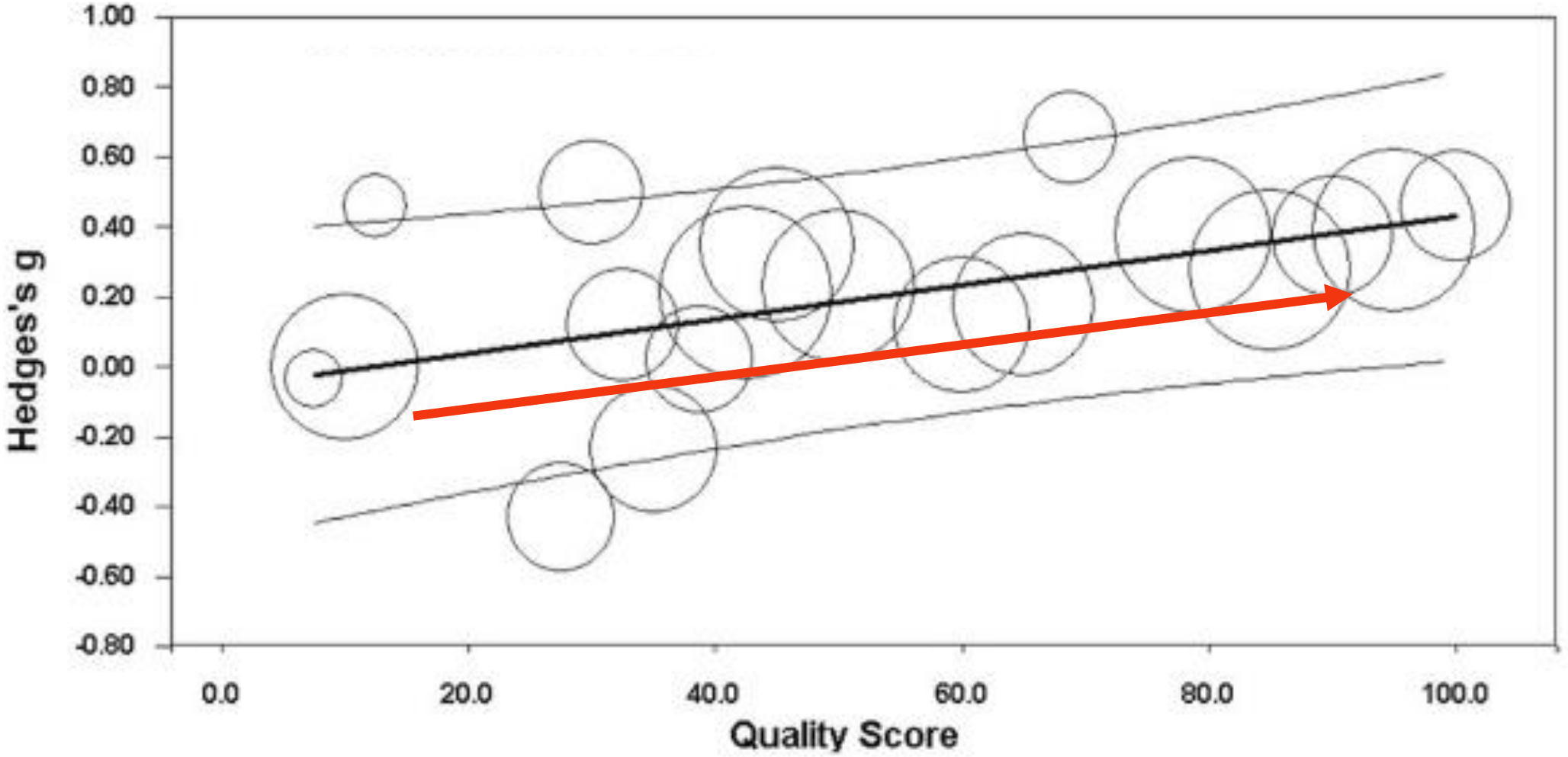
Quality Score

Depression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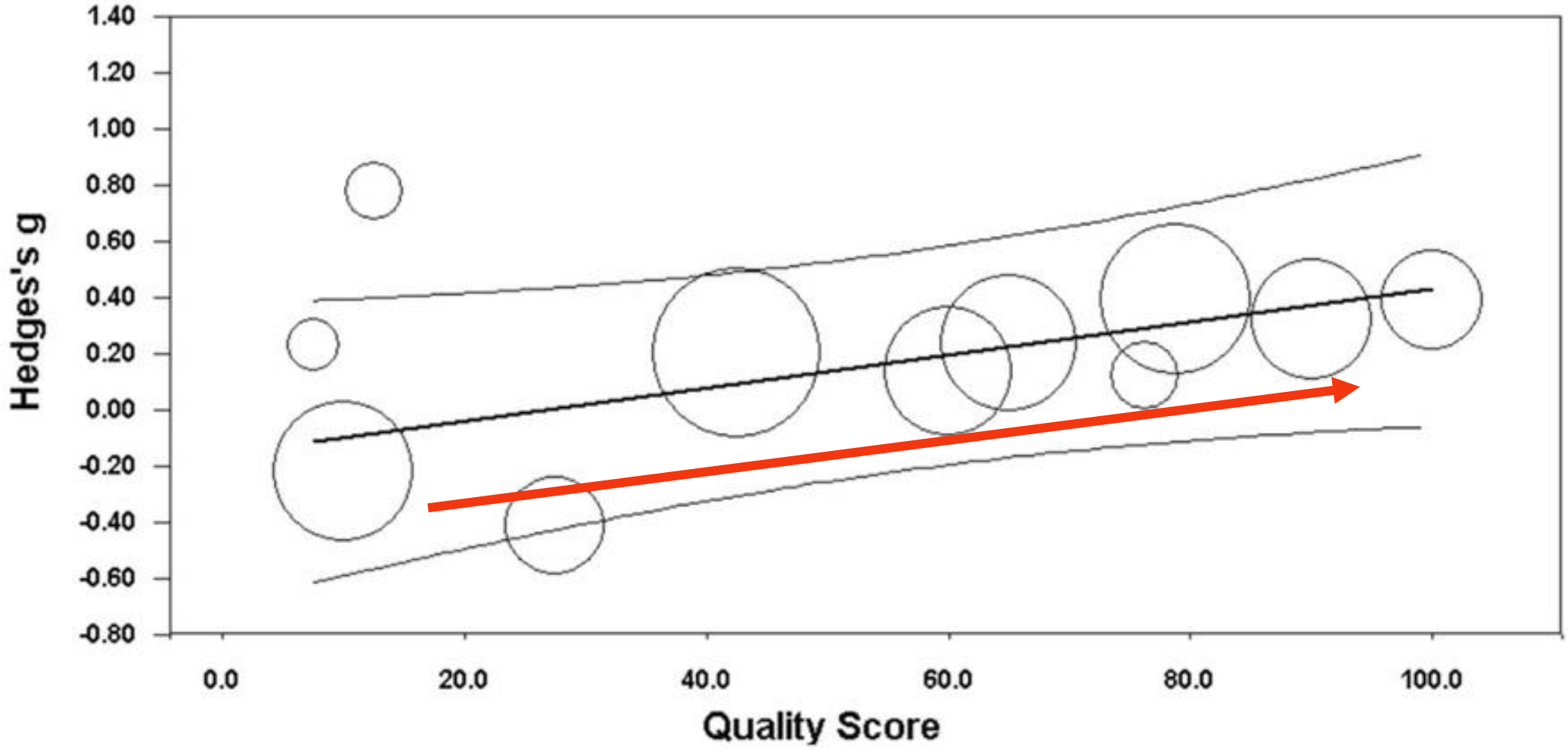
Depression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-0.80
Hedges's g
0.0
20.0
40.0
60.0
80.0
100.0
Quality Score

Anxiety

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Matta et al. (2018)	High	0.396	0.305	0.487	0.000
Bains et al. (2007)	High	0.393	0.307	0.479	0.000
Hibbeln et al. (2018)	Moderate	0.347	0.280	0.415	0.000
Velten et al. (2018)	Moderate	0.354	0.295	0.413	0.000
Kapoor et al. (2017)	Moderate	0.361	0.300	0.422	0.000
Paslakis et al. (2020)	Moderate	0.343	0.268	0.418	0.000
Timko et al. (2012)	Moderate	0.321	0.238	0.404	0.000
Perry et al. (2001)	Moderate-Low	0.309	0.234	0.383	0.000
Forestell et al. (2018)	Moderate-Low	0.314	0.248	0.379	0.000
Lavalee et al. (2019)	Moderate-Low	0.296	0.230	0.362	0.000
Goh et al. (2019)	Low	0.288	0.222	0.353	0.000
Jin et al. (2019)	Low	0.258	0.180	0.336	0.000
Hessler-Kaufmann et al. (2020)	Low	0.252	0.177	0.328	0.000
Lindeman (2002)	Low	0.261	0.186	0.335	0.000
Beezhold et al. (2010)	Low	0.231	0.148	0.315	0.000
Stokes et al. (2011)	Very Low	0.235	0.153	0.317	0.000
Beezhold et al. (2015)	Very Low	0.219	0.137	0.300	0.000
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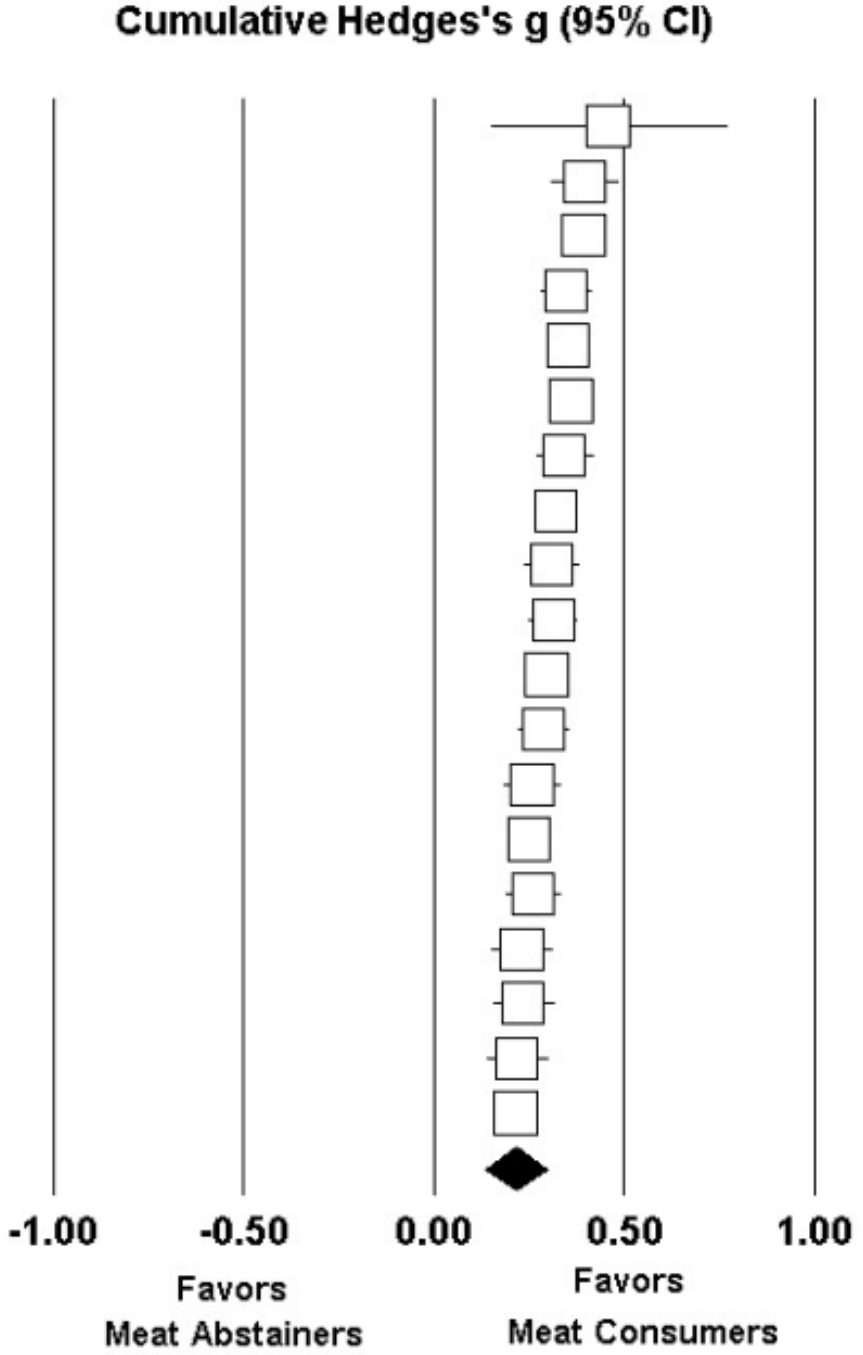

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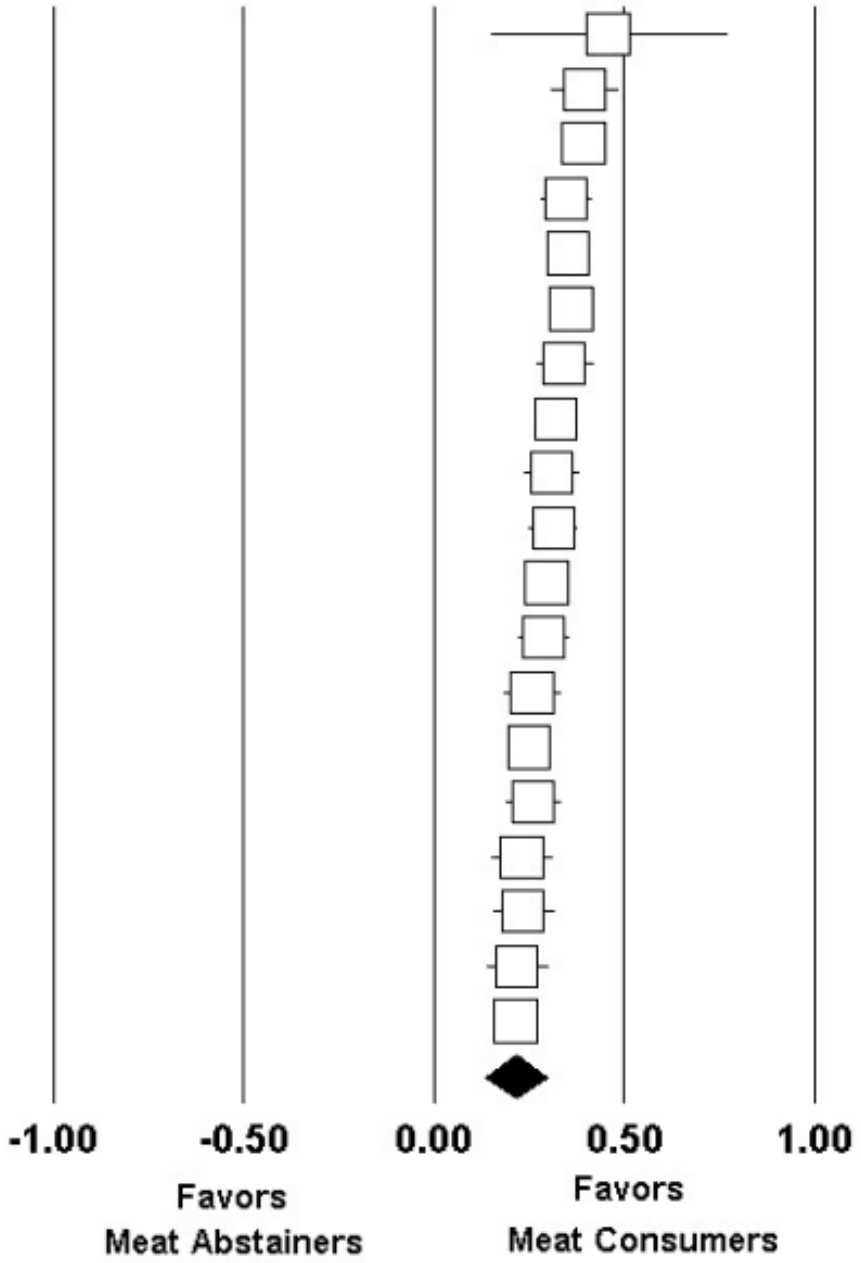

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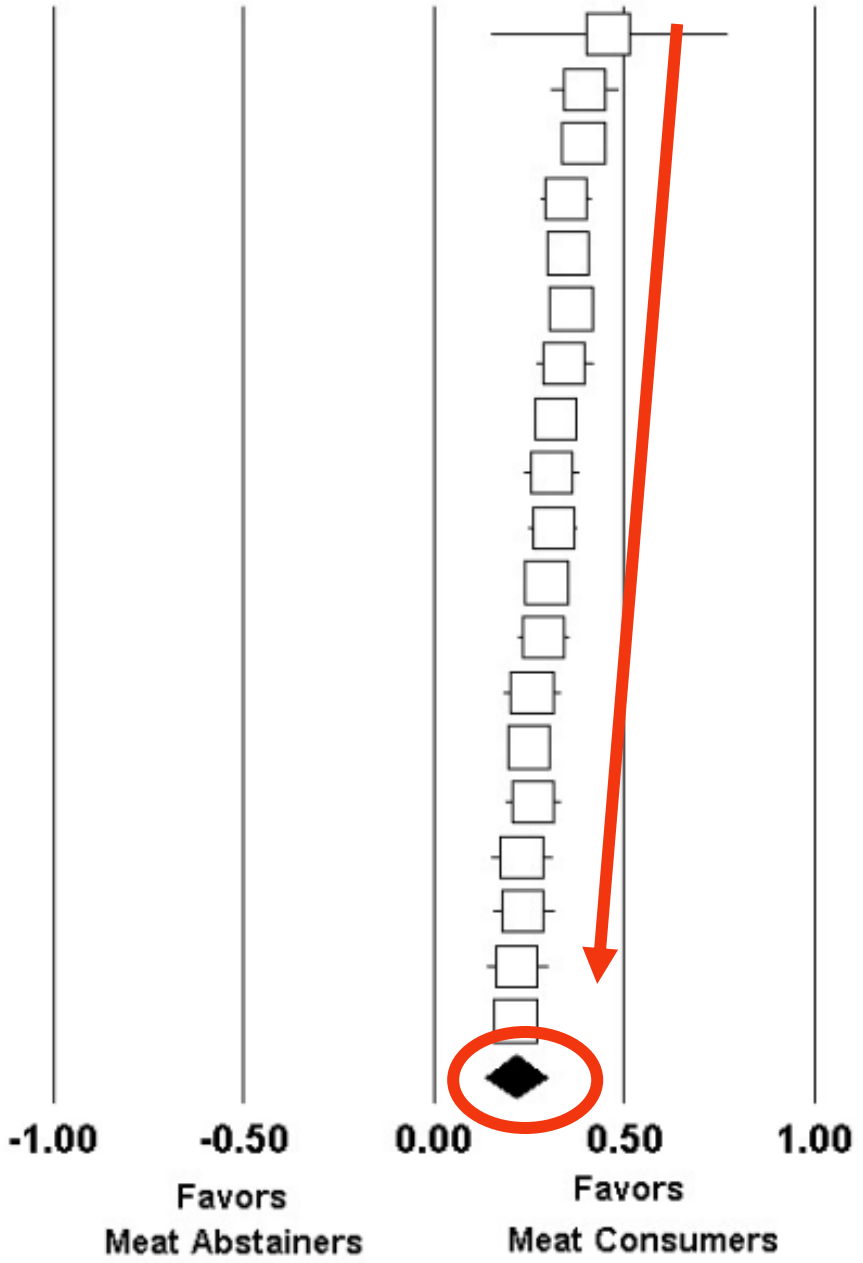
Hessler-Kaufmann et al. (2020)	Low	0.252	0.177	0.328	0.000
Lindeman (2002)	Low	0.261	0.186	0.335	0.000
Beezhold et al. (2010)	Low	0.231	0.148	0.315	0.000
Stokes et al. (2011)	Very Low	0.235	0.153	0.317	0.000
Beezhold et al. (2015)	Very Low	0.219	0.137	0.300	0.000
Beezhold et al. (2012)	Very Low	0.216	0.135	0.297	0.000
		0.216	0.135	0.297	0.000



Depression

Discussion

- Meat abstention
  - Depression
  - Anxiety
  - Self-harm
- No sex differences
- Study quality

Photo: https://theconversation.com/why-its-impossible-to-actually-be-a-vegetarian-55806

Strengths/Limitations of the Literature

- Assessment
  - Psychological outcomes
  - Dietary status
- Recruitment/Sampling
- Confounders
- No causal & temporal inferences

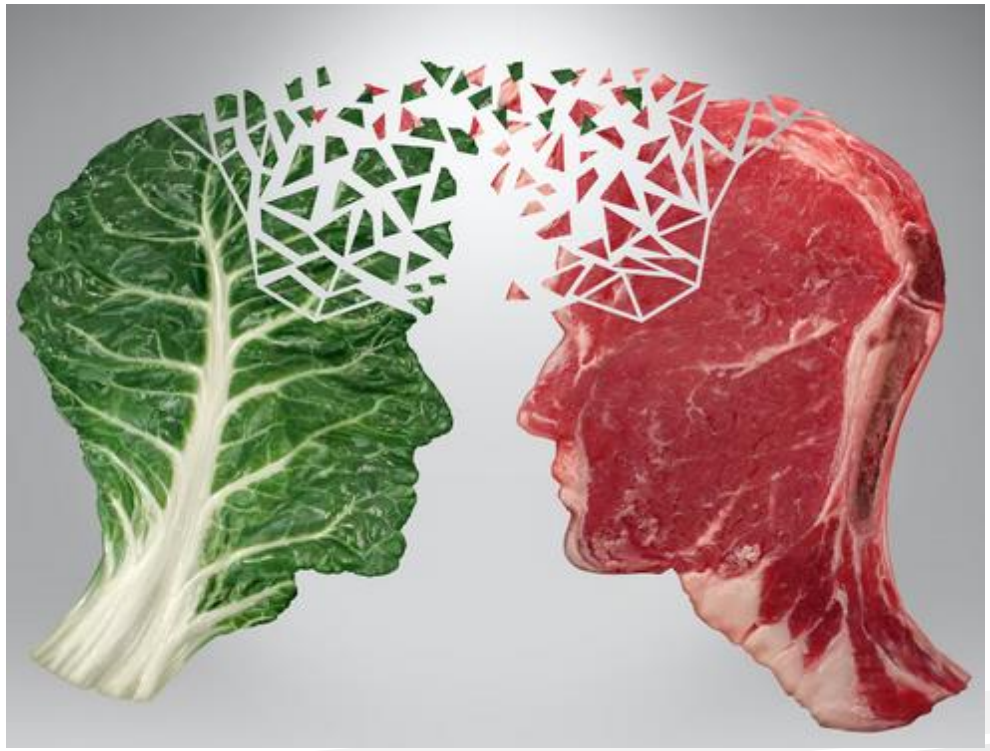


Photo: https://theconversation.com/why-its-impossible-to-actually-be-a-vegetarian-55806

Our Reviews

Strengths

- Clear distinction
  - Meat abstainers/eaters
- Well-defined psychological constructs
- Large sample size

Limitations

- Non-English language studies
- Excluded many studies on the topic

(Archer et al.,2018a; Archer et al., 2018b ; Archer et al., 2015).

Recommendations

- Objective assessments
- Probably sampling
- Complete reporting
- Rigorous designs

https://missvickie.com/should-you-cook-meat-or-vegetables-first/

https://www.cookinglight.com/eating-smart/how-to-eat-a-balanced-diet

Thank you!

- Students
- Colleagues

Thank you!

UNIVERSITY OF SOUTHERN INDIANA

College of Liberal Arts

NCBA National Cattlemen's Beef Association

Critical Reviews in Food Science and Nutrition

Meat and mental health: a systematic review of meat abstention and depression, anxiety, and related phenomena

Urska Dobersek ✉, Gabrielle Wy, Joshua Adkins, Sydney Altmeyer, Kaitlin Krout, Carl J. Lavie & ...show all

Meat and mental health: A meta-analysis of meat consumption, depression, and anxiety

Urska Dobersek ✉, Kelsey Teel, Sydney Altmeyer, Joshua Adkins, Gabrielle Wy & Jackson Peak