

Evening primrose oil: an economical alternative for cervical ripening for labor induction

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- The prevalence of labor induction is increasing, from 10% to 26% in one study, 1 out of 5 deliveries in our institution.
- Cervical ripening is requisite to labor induction. But there are many **barriers** to existing ripening methods in the Philippines



OBJECTIVE

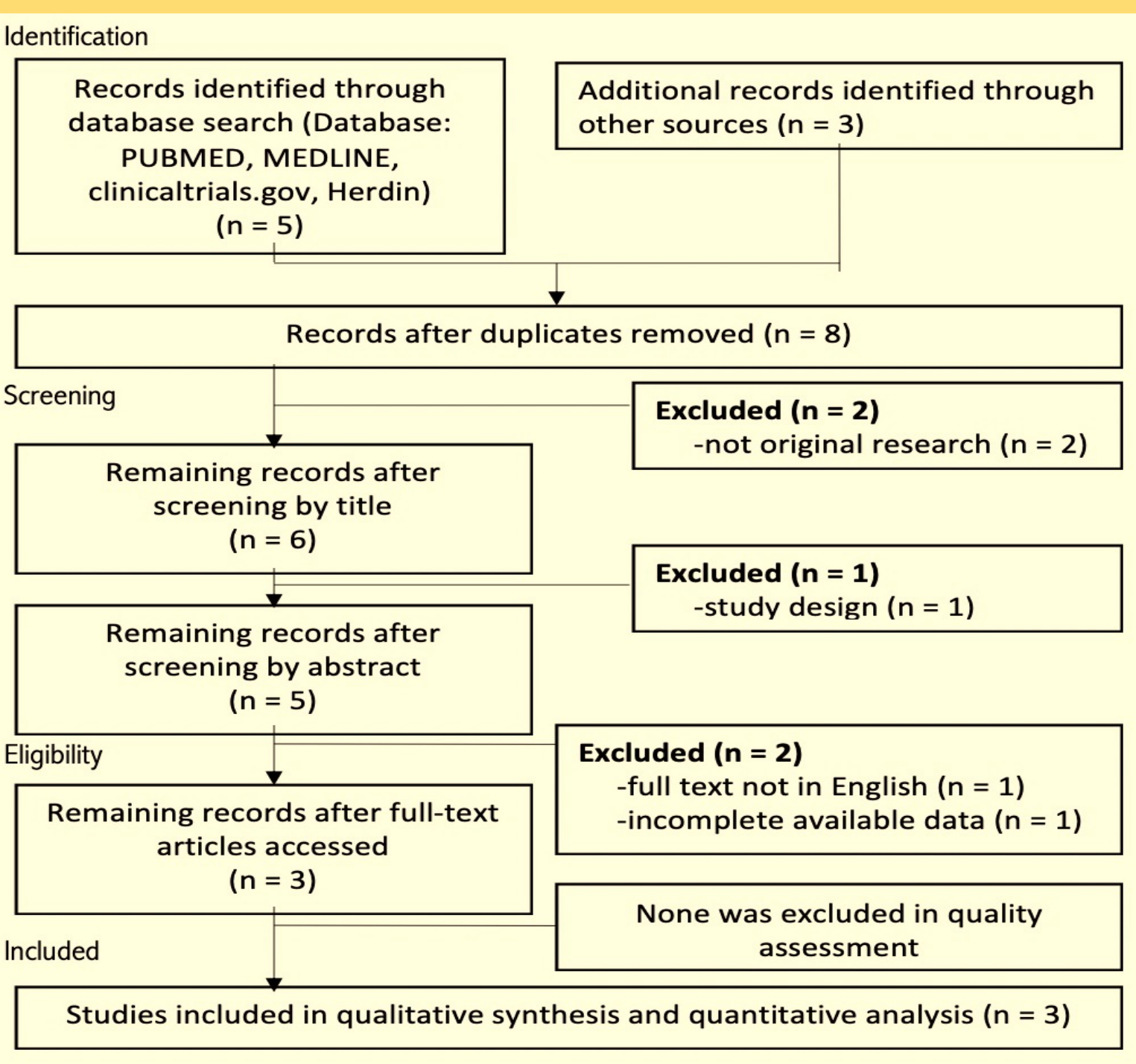
To evaluate the **effectiveness** of *oral and intravaginal evening primrose oil* for labor induction in *term singleton pregnancies* by systematic collection and analysis of published studies on its use for cervical ripening

PRIMARY OUTCOME MEASURE:

Improvement in Bishop score



STUDY DESIGN: Systematic review and meta-analysis

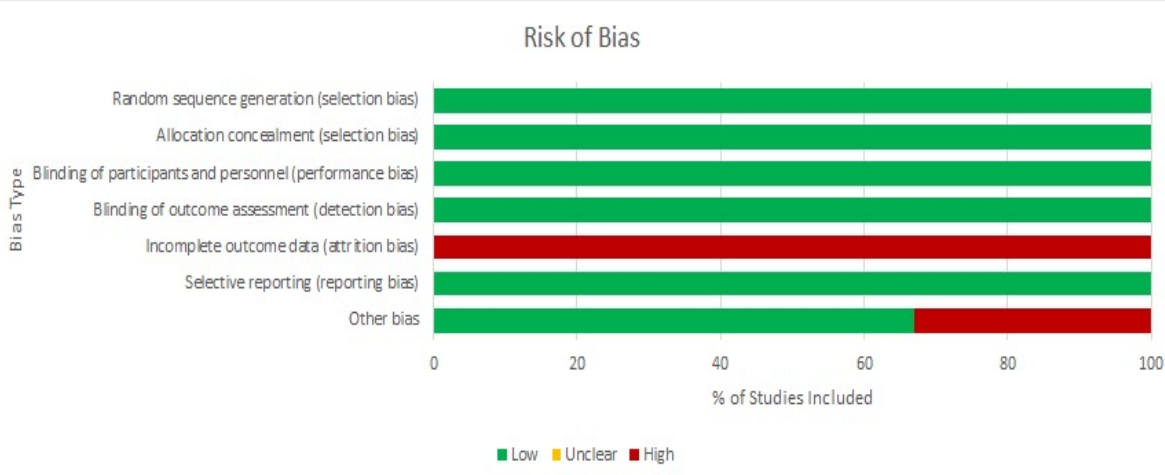


Studies published from: January 2000 to March 2019

Keywords: **Evening primrose oil**
Labor induction
Cervical ripening

3 trials, 216 subjects

Risk of bias assessment



Inclusion criteria

- term singleton pregnancy
- cephalic presentation
- unfavorable cervix = Bishop score ≤ 4
- stable maternal and fetal condition

Exclusion criteria

- EPO was used with another drug
- EPO was compared with another drug
- Different outcome measure was used
- intrauterine fetal demise or missed abortion

CONCLUSION

The use of oral and intravaginal evening primrose oil capsules leads to a significant increase in Bishop Score compared to placebo in term singleton pregnancies with a Bishop Score of 4 or below.

The evidence presented in this review suggests that evening primrose oil is an effective, viable, alternative agent for the use of cervical ripening in labor induction.

RECOMMENDATIONS FOR FUTURE STUDY

Address this study's limitations:

- More RCTs
- Uniform route of administration

Recommendations for future research:

- Explore more appropriate outcome parameters
- Effective dose and frequency?
- Better route?
- Safety profile on mother and fetus
- Complications?

METHODS

Data extraction and analysis	R package meta (version 3.6)	Effect size computation	Standardized Mean Difference
Estimation of summary effect	Fixed Effects Model	Derivation of study weights	Inverse-variance method

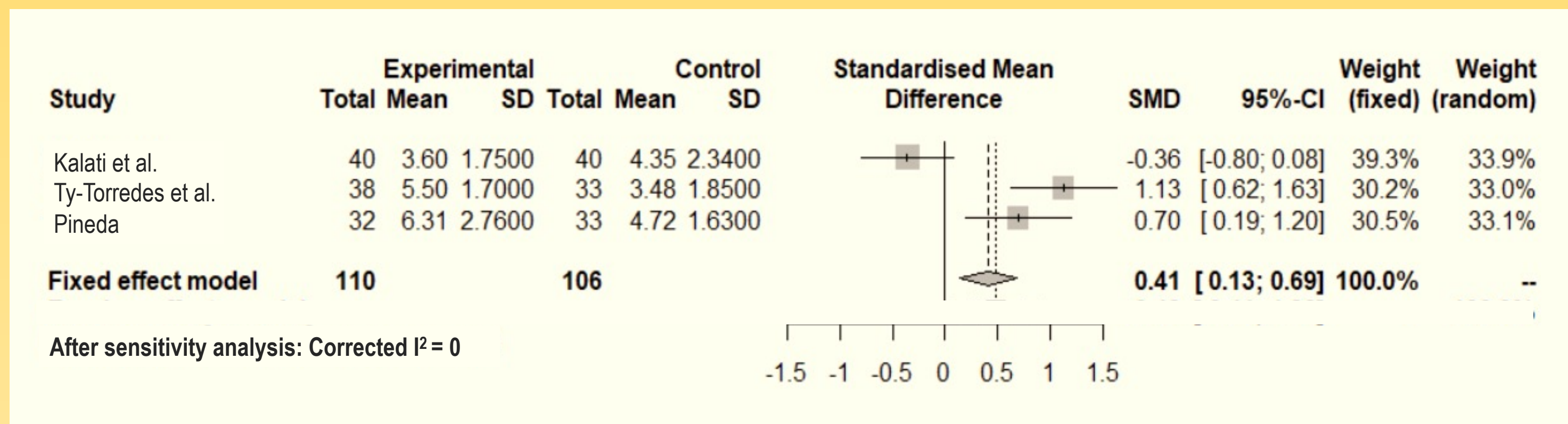
RESULTS

study	Evening Primrose Oil			Placebo			p-value
	n	Mean change in Bishop Score	SD	n	Mean change in Bishop Score	SD	
Kalati et al.	40	+ 3.60	1.75	40	+ 4.35	2.34	not reported
Ty-Torredes et al.	38	+ 5.50	1.70	33	+ 3.48	1.85	0.0001
Pineda	32	+ 6.31	2.76	33	+ 4.72	1.63	0.0005

The two Filipino studies (Ty-Torredes et al and Pineda) showed a statistically significant increase in Bishop score in the EPO group compared to placebo, with a mean of 5.5 for the intravaginal EPO, and 6.31 for the oral EPO. The use of intravaginal EPO showed a greater increase in Bishop score (5.5 vs 3.48), compared to the use of oral EPO (6.31 vs 4.72). The Iranian study (Kalati et al), which also used oral EPO, showed a larger mean change in Bishop Score in the placebo group compared to the EPO group (4.35 vs 3.60).

Standardized mean difference = (+) 0.41

Z = 2.91, p=0.0036
95% CI (0.13, 0.69)



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