

Fertility and reproductive outcomes following high-energy pelvic fractures: A systematic review and meta-analysis

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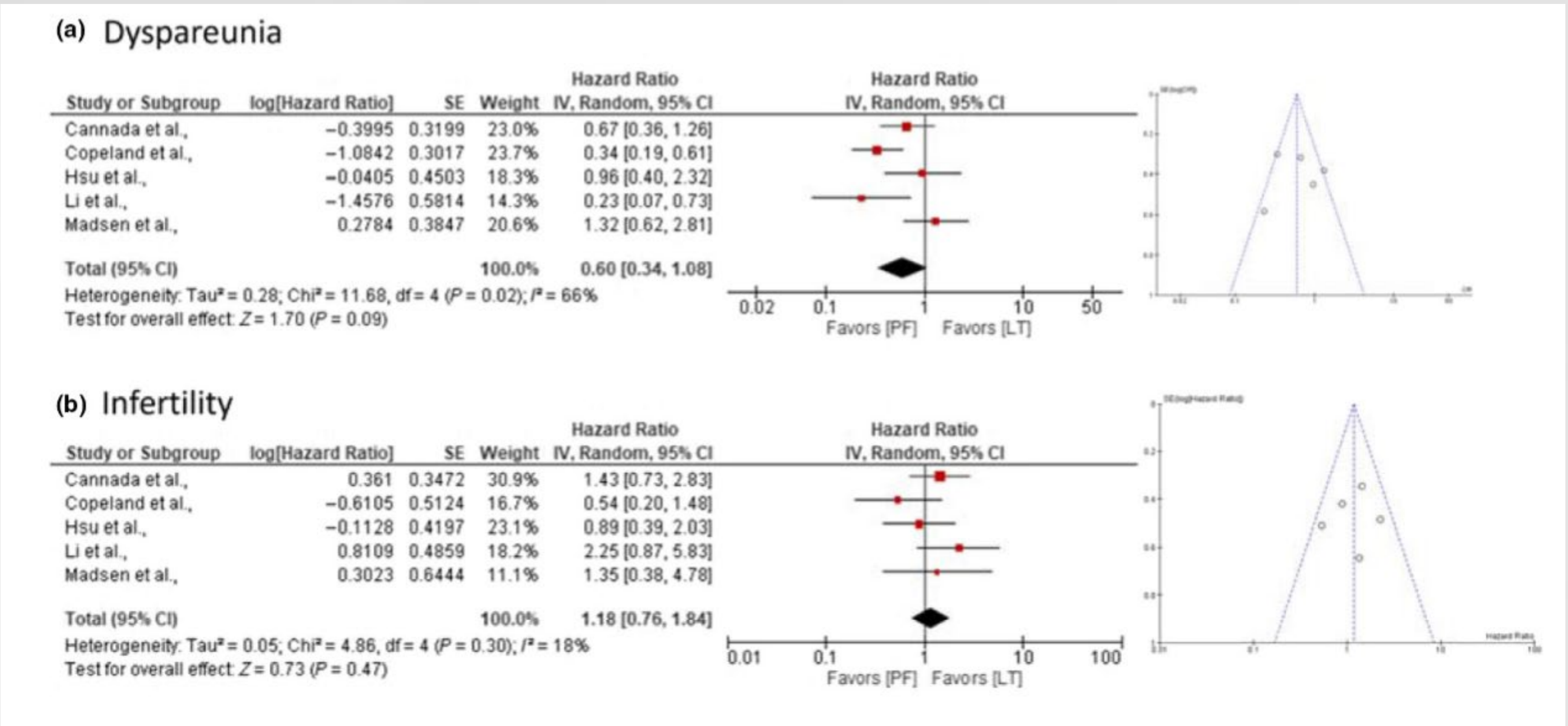
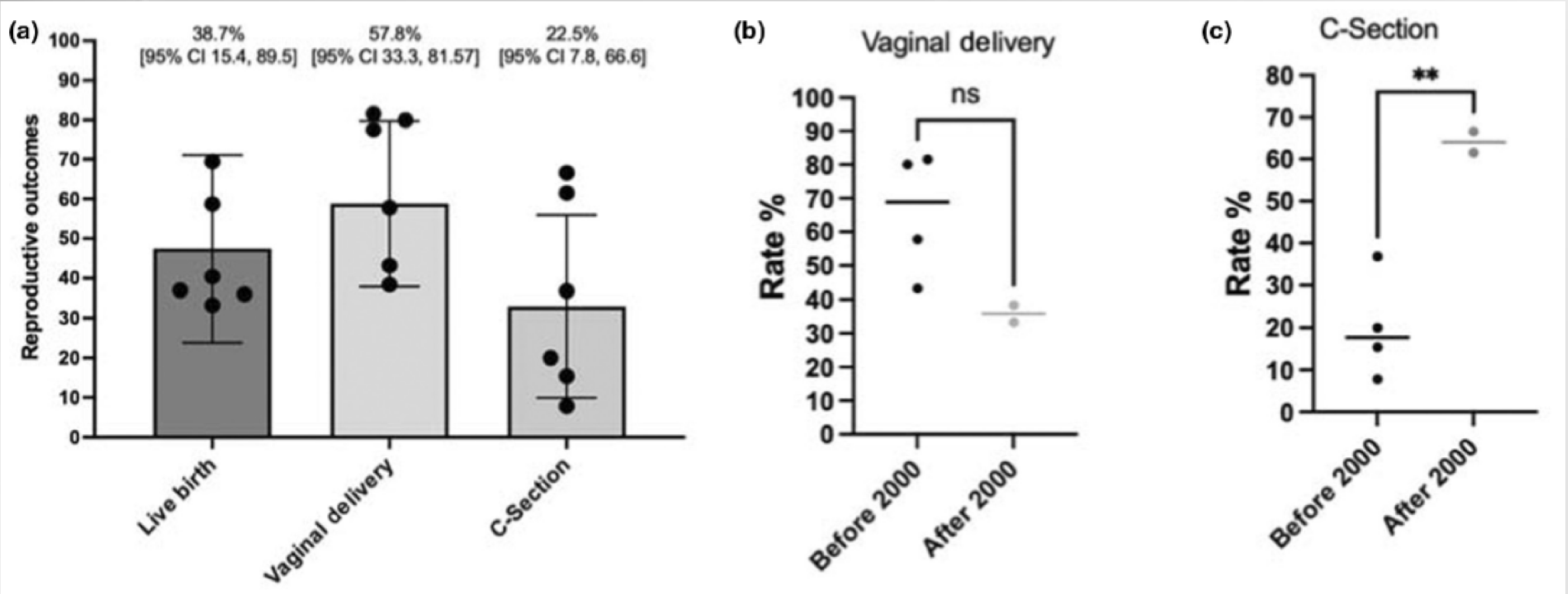
Background: There is a need to decipher the effect of high-energy pelvic fractures (PFs) upon female fertility and live birth rate, as data including treatment regimens in large populations remain scarce

Author	Type of study	Country	Year	Sample size	Age, y	Previous PID/ Endometriosis	DM	HT	Injury (simple/ complex)	Injury severity score	Dyspareunia	Incidence of Infertility	Afraid to get pregnant	Live birth	VD	CS	Pregnant at time of injury	Maternal mortality	Fetal mortality	Preterm delivery	Follow-up period, y	Fracture classification
Cannada and Barr ⁴	RSO	USA	2000–2007	68	27.8 [17–44]	N/A	N/A	N/A	Simple 60.2% [41] Complex 39.7% [27]	N/A	38%	32.2% [22]	29% [20]	37% [26]	38.4% [10]	61.5% [16]	0%	N/A	N/A	N/A	6 [1–9]	Young–Burgess
Hsu et al. ¹⁶	RSO	Taiwan	1997–2010	36	38 [15–59]	27.7% [10]	30.5% [11]	8.3% [3]	Simple: 55.5% [27] Complex: 44.4% [16]	35 < 16; 1 > 16	N/A	30.5% [11]	N/A	69.4% [25]	N/A	N/A	0% [0]	N/A	N/A	N/A	3.9 [0.1–13.94]	N/A
Copeland et al. ³	RSO	USA	1986–1992	123	27 [16–44]	N/A	N/A	N/A	Simple: 64% [79] Complex: 35.7% [44]	Mean score: 20.3	20% [19.6%]	6% [7]	N/A	15.4% [19]	57.8% [11]	36.8% [7]	4% [5]	0% [0]	80% [4] VS 25% [1]	N/A	4.1 [1.5–7.1]	Young–Burgess
Li et al. ¹⁵	RSOI	China	2004–2017	25	32.8 [17–55]	N/A	N/A	N/A	Simple: 84% [21] Complex: 16% [4]	10 < 25; 8 > 25	16% [4]	20% [5]	N/A	36% [9]	33.3% [3]	66.6% [6]	0% [0]	N/A	N/A	N/A	13	Young–Burgess
Vajaala et al. ⁸	RSO	Finland	1998–2018	596	29 [24–34]	N/A	N/A	N/A	Simple: 54.1% [555] Complex: 44.2% [353]	N/A	N/A	N/A	N/A	40.4% [1024]	77.5% [793] F vs 84.1% [1079715] NF	22.5% [231] F vs 15.88% [183705]	0% [0]	0%	N/A	6.2% [63] F vs 4.6% [53117] NF	10 [1–20]	ICD-10
Madsen et al. ⁶	RSO	Denmark	1970–1979	38	22[10–34]	N/A	N/A	N/A	Simple: 52.6% [20] Complex: 10.5% [4]	N/A	57.9% [22]	10.5% [4]	N/A	89.5% [34]	81.57% [31]	7.8% [3]	2.6% [1]	5.2% [5]	7.8% [3]	3% [1]	4 [1–9]	Trunkley

Main results: A total of 763 female patients of median age 27.8 years (95% CI 22– 38 years) were included with median follow up of 5 years.

Among PF patients, **infertility** hazard ratio (HR) 1.18 (95% CI 0.76–1.84, P= 0.47; I2= 18%) and **dyspareunia** HR 0.60 (95% CI 0.34–1.08, P= 0.09; I2= 66%), did not significantly differ from the age- matched literature- reported rates among non-PF patients.

Conclusions: No significant differences of live birth, infertility, and dyspareunia rates across patients with PFs were found compared with non-PF counterparts.



Objectives: To assess the effect of high energy PFs upon female fertility and live birth rate. Search strategy: Literature search for relevant studies was performed up to March 2022 in five databases: Embase, MEDLINE, CAB Abstracts, ClinicalTrials.gov, and Google Scholar. Selection criteria: Retrospective studies assessing live birth, infertility, and dyspareunia rates following PFs. Data collection and analysis: Data were extracted from studies independently by two authors. The quality of the included studies was assessed using the Newcastle- Ottawa Scale (NOS) for observational studies.