

The effectiveness of Traditional Chinese Medicine in prenatal anxiety: A meta-analysis

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Background

Anxiety during pregnancy can negatively impact both mother and fetus, leading to complications like prolonged labor and fetal asphyxia. Traditional Chinese Medicine (TCM)interventions, including acupressure and auriculotherapy, have demonstrated efficacy in alleviating anxiety by modulating neurotransmitter levels and promoting physiological equilibrium, thereby improving mental health during the perinatal period.

Objective

This systematic review and meta-analysis aimed to evaluate the effectiveness of TCM in mitigating perinatal anxiety. Additionally, it sought to explore the differential impacts of TCM, perinatal stages, and modes of delivery on anxiety reduction.

Results

- This meta-analysis incorporated 13 RCT studies with 465 experimental and 99 control participants.
- The findings revealed that women receiving acupressure and auriculotherapy treatments reported significantly lower anxiety scores compared to those in the control group (SMD= -0.65, 95% CI -0.87 to -0.42) (Figure 1).
- Subgroup analysis indicated that auriculotherapy (SMD = -0.69, 95% CI: -1.22 to -0.17) was marginally more effective than acupressure (SMD = -0.64, 95% CI: -0.93 to -0.36) (Figure 2).
- Furthermore, interventions during pregnancy (SMD = -0.76, 95% CI: -1.40 to -0.11) was slightly effective than those during labor (SMD = -0.62, 95% CI: -0.88 to -0.35).
- Additionally, interventions associated with vaginal delivery (SMD = -0.69, 95% CI: -1.07 to -0.32). were slightly effective than those associated with cesarean-section (SMD = -0.53, 95% CI: -0.92 to -0.15).

Methods

A comprehensive literature search was conducted across PubMed, Embase, Web of Science, the Cochrane Library, and CINAHL for studies published between 2014 to May 2024. Randomeffects meta-analyses and subgroup analyses were employed to estimate the pooled effects of various TCM interventions, different perinatal stages.

Conclusion

Auriculotherapy and acupressure are effective in significantly reducing prenatal anxiety. These findings support the utility of TCM as a viable therapeutic approach for managing perinatal anxiety. Further high-quality randomized controlled trials are needed to confirm these results.

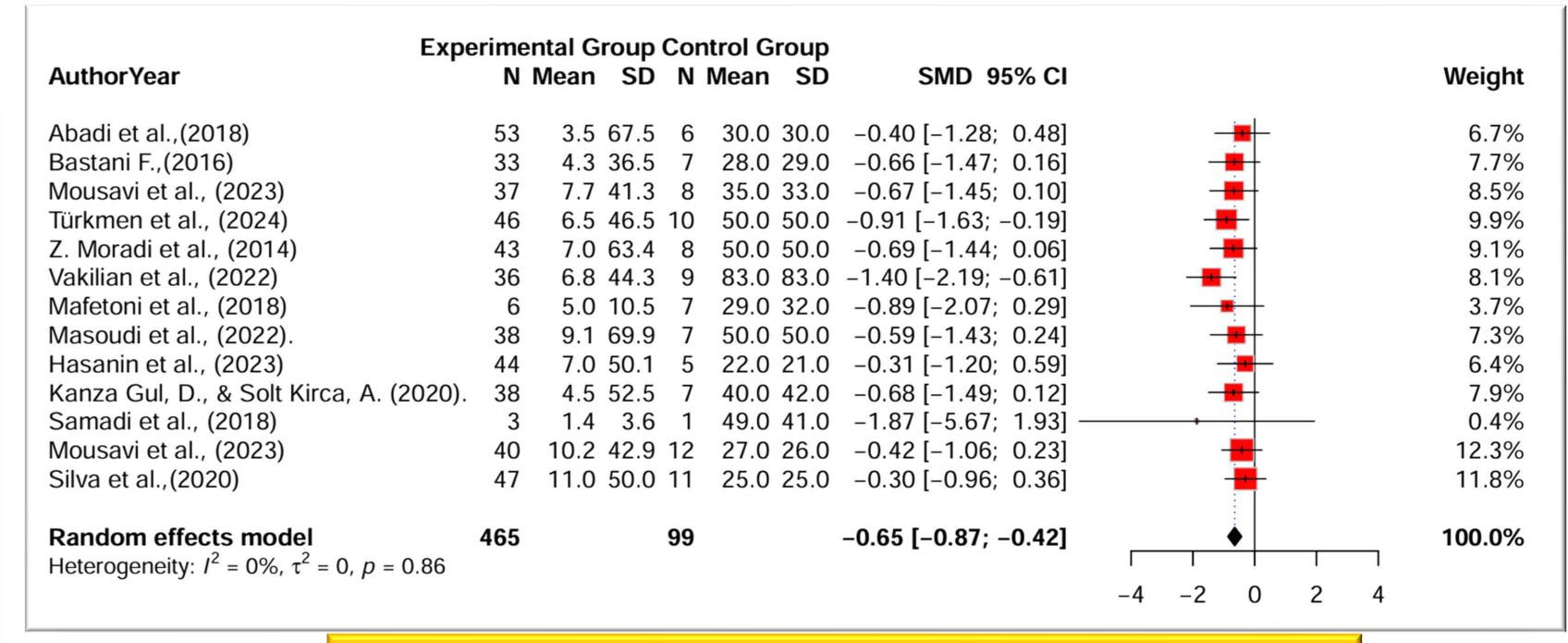


Figure 1. The effective of TCM on Pregnancy and Delivery Anxiety

Exp	erime	ntal G	roup	Cor	ntrol Gi	roup					
AuthorYear	N	Mean	SD	N	Mean	SD	SMD 95% CI				
Acupressure											
Abadi et al.,(2018)	53	3.5	67.5	6	30.0	30.0	-0.40 [-1.28; 0.48]		_	-	
Bastani F.,(2016)	33	4.3	36.5	7	28.0	29.0	-0.66 [-1.47; 0.16]		-	<u> </u>	
Mousavi et al., (2023)	37	7.7	41.3	8	35.0	33.0	-0.67 [-1.45; 0.10]		-		
Türkmen et al., (2024)	46	6.5	46.5	10	50.0	50.0	-0.91 [-1.63; -0.19]		-	-	
Z. Moradi et al., (2014)	43	7.0	63.4	8	50.0	50.0	-0.69 [-1.44; 0.06]		4		
Masoudi et al., (2022).	38	9.1	69.9	7	50.0	50.0	-0.59 [-1.43; 0.24]			-	
Hasanin et al., (2023)	44	7.0	50.1	5	22.0	21.0	-0.31 [-1.20; 0.59]		-	-	
Kanza Gul, D., & Solt Kirca, A. (2020).	38	4.5	52.5	7	40.0	42.0	-0.68 [-1.49; 0.12]		\dashv		
Samadi et al., (2018)	3	1.4	3.6	1	49.0	41.0	-1.87 [-5.67; 1.93] -				
Random effects model Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$, $p = 0.99$	335			59			-0.64 [-0.93; -0.36]		•	♦	
Auriculotherapy Vakilian et al., (2022)	36	6.8	113	a	83.0	83 U	-1.40 [-2.19; -0.61]		_		
Mafetoni et al., (2018)	6						-0.89 [-2.07; 0.29]				
Mousavi et al., (2023)	40						-0.42 [-1.06; 0.23]				
Silva et al., (2020)	47						-0.30 [-0.96; 0.36]				
Random effects model	129	11.0	30.0	39	25.0		-0.69 [-1.22; -0.17]		4		
Heterogeneity: $I^2 = 42\%$, $\tau^2 = 0.1263$, $p =$				55			0.00[1.22, 0.17]				
Random effects model	465			99			-0.65 [-0.87; -0.42]	_		•	
Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$, $p = 0.86$ Test for subgroup differences: $\chi_1^2 = 0.03$, d								ı	ı	ı	ı

Figure 2 The subgroup analysis of the effective of different TCM on Pregnancy & Delivery Anxiety



