

Supplement Table 1: Characteristics of included studies evaluating the association between ultra-processed food consumption and depression risk.

Study (author)	Country	Design	Sample size	UPF assessment method	Depression assessment method	Key findings
Gómez-Donoso et al. ¹³	Spain	Cohort	14,907	FFQ, NOVA classification	SUN project clinical interview	Higher UPF intake associated with 33% increased depression risk (HR: 1.33; 95% CI: 1.07–1.65)
Adjibade et al. ¹⁷	France	Cohort	26,730	Web-based dietary records (NOVA)	CES-D scale	UPF consumption linked to 22% higher depression risk (HR: 1.22; 95% CI: 1.10–1.68)
Godos et al. ¹⁴	Italy	Cohort	1,830	FFQ (NOVA)	CES-D scale	Higher UPF intake correlated with depressive symptoms ($\beta=0.15$; $p<0.05$)
Lane et al. ¹²	Australia	Cross-sectional	23,299	FFQ (NOVA)	K10 scale; psychological distress	High UPF consumers had elevated psychological distress (OR: 1.47; 95% CI: 1.20–1.80)
Zheng et al. ⁹	USA	Cross-sectional	24,314	24-hour dietary recall (NOVA)	PHQ-9	UPF intake positively associated with depressive symptoms (OR: 1.28; 95% CI: 1.10–1.48)
Lee and Choi ¹¹	South Korea	Cross-sectional	15,642	24-hour recall (NOVA)	PHQ-9	UPF intake linked with depression (OR: 1.35; 95% CI: 1.12–1.63)
Sen et al. ¹⁰	Canada	Cohort	2,932	Canadian Diet History Questionnaire (NOVA)	CES-D scale	UPF-depression association mediated by Type 2 diabetes risk (HR: 1.45; 95% CI: 1.18–1.72)
Arshad et al. ¹⁶	UK	Cohort	4,052	FFQ (NOVA)	PHQ-9	High UPF intake linked to recurrent depressive symptoms (HR: 1.52; 95% CI: 1.20–1.90)
Contreras-Rodriguez et al. ¹⁵	Spain	Cross-sectional	695	FFQ (NOVA)	CES-D scale	UPF intake associated with depression and reduced mesocorticolimbic volume ($p<0.05$)

CES-D: Center for Epidemiologic Studies Depression; FFQ: food frequency questionnaire; HR: Hazard Ratio; OR: Odds Ratio; K10: Kessler Psychological Distress; PHQ-9: Patient Health Questionnaire-9; UPF: ultra-processed food.