

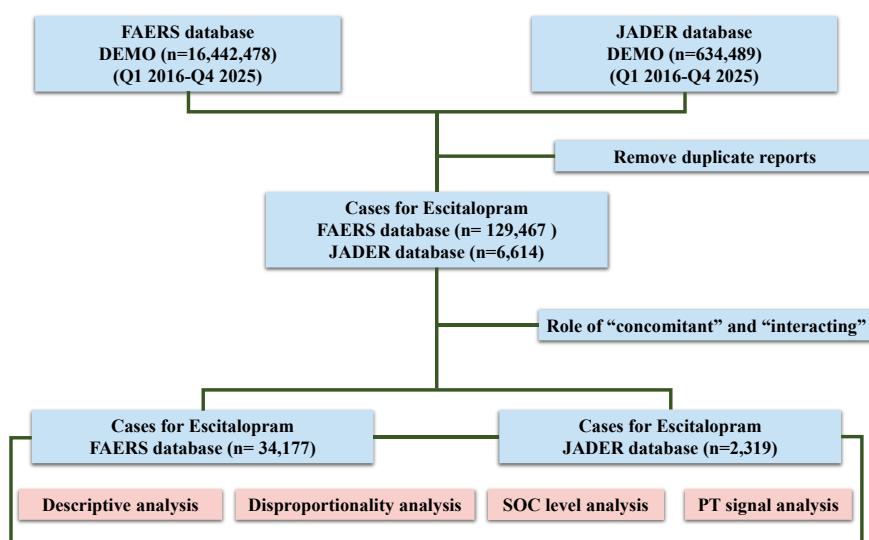


Figure 1 Data processing flowchart showing the analysis process of the study.

Note: The flowchart provides a detailed description of data extraction and processing for escitalopram-related adverse events identified in the FAERS and JADER databases.

Abbreviations: FAERS, the U.S. Food and Drug Administration’s Adverse Event Reporting System; JADER, Japanese Adverse Drug Event Report; SOC, system organ class; PT, preferred term.

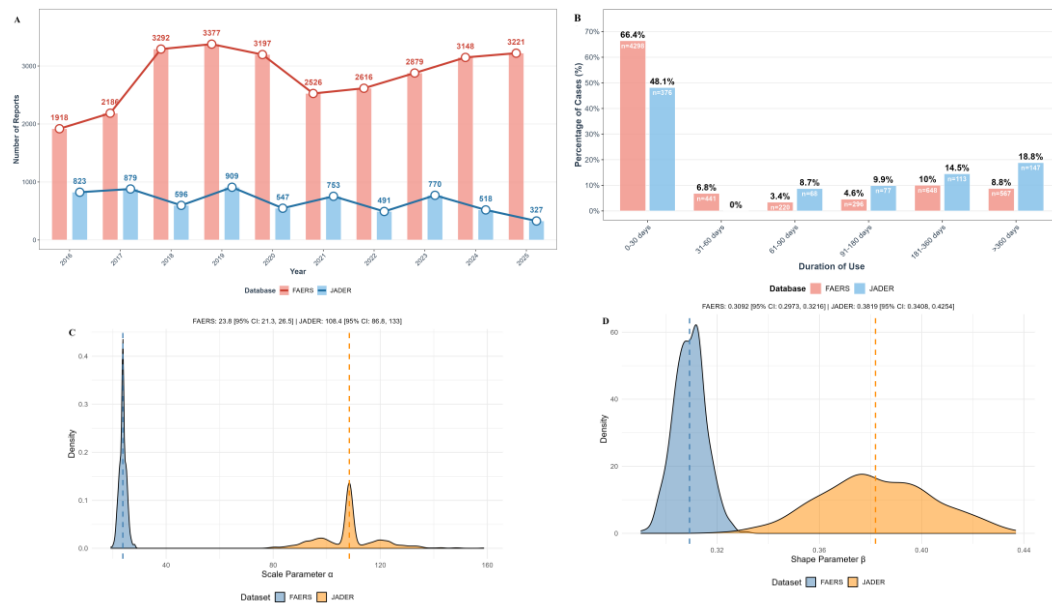


Figure 2 Annual trends and time-to-onset distribution of escitalopram-related adverse events.

(A) Annual report counts. FAERS exhibited an overall upward trend with a 2019 peak ($n=3,377$) and resurgence in 2025 ($n=3,221$); JADER showed stable low-volume reporting with a 2019 peak ($n=909$) and a 2025 nadir ($n=327$). (B) Time-to-onset distribution. In FAERS ($n=6,470$), 66.43% of events occurred within 30 days; in JADER ($n=781$), 48.14% occurred within 30 days, with a higher proportion of late-onset events (>180 days: 33.29% vs. 18.78%). (C) Scale parameter (α), (D) Shape parameter (β). For FAERS, the shape parameter β was 0.3092 (95% CI: 0.30–0.32) and the scale parameter α was 23.8 (95% CI: 21.26–26.39), indicating a decreasing hazard function with early concentration of events. For JADER, β was 0.3819 (95% CI: 0.36–0.40) and α was 108.4 (95% CI: 95.6–123.0), also indicating a decreasing hazard but with a more gradual decline and a later median event time compared with FAERS.

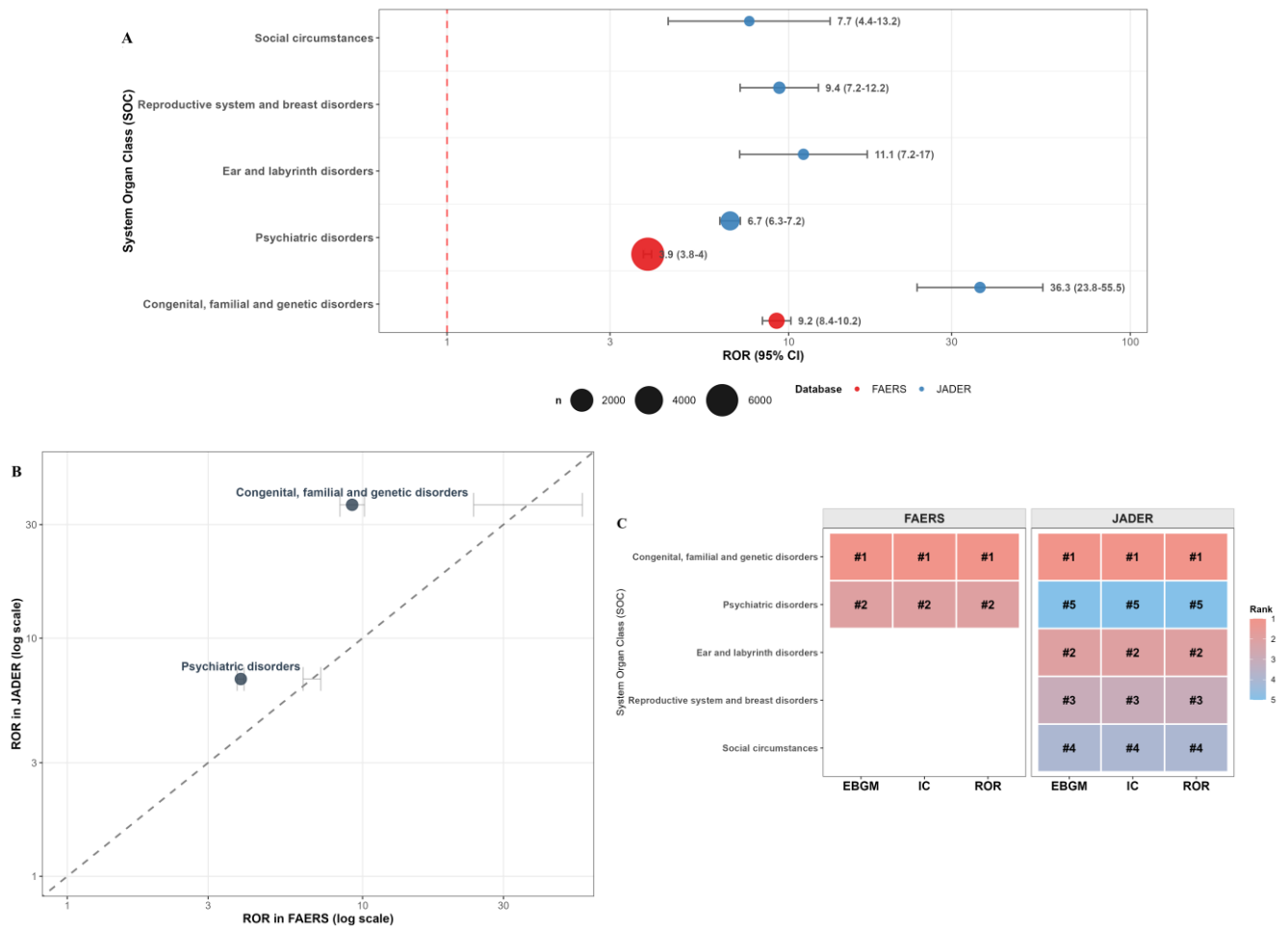


Figure 3 The SOC level ROR of escitalopram-related adverse events in FAERS and JADER

Note: (A) Forest plot showing ROR with 95% confidence intervals for SOC classes that were positive across all four signal detection algorithms. Horizontal lines indicate 95% confidence intervals. The dashed vertical line at ROR=1 indicates the threshold for signal detection. SOC classes are sorted by the number rank of each SOC for each metric. (B) Comparison of ROR estimates between FAERS and JADER for SOC classes present in both databases. Points above the diagonal line indicate higher ROR in JADER than in FAERS. Error bars represent 95% confidence intervals. (C) Heatmap comparing the ranking of SOC classes between FAERS and JADER across the four signal detection metrics (ROR, PRR, EBGM, and IC). Numbers within cells indicate the specific rank of each SOC for each metric.

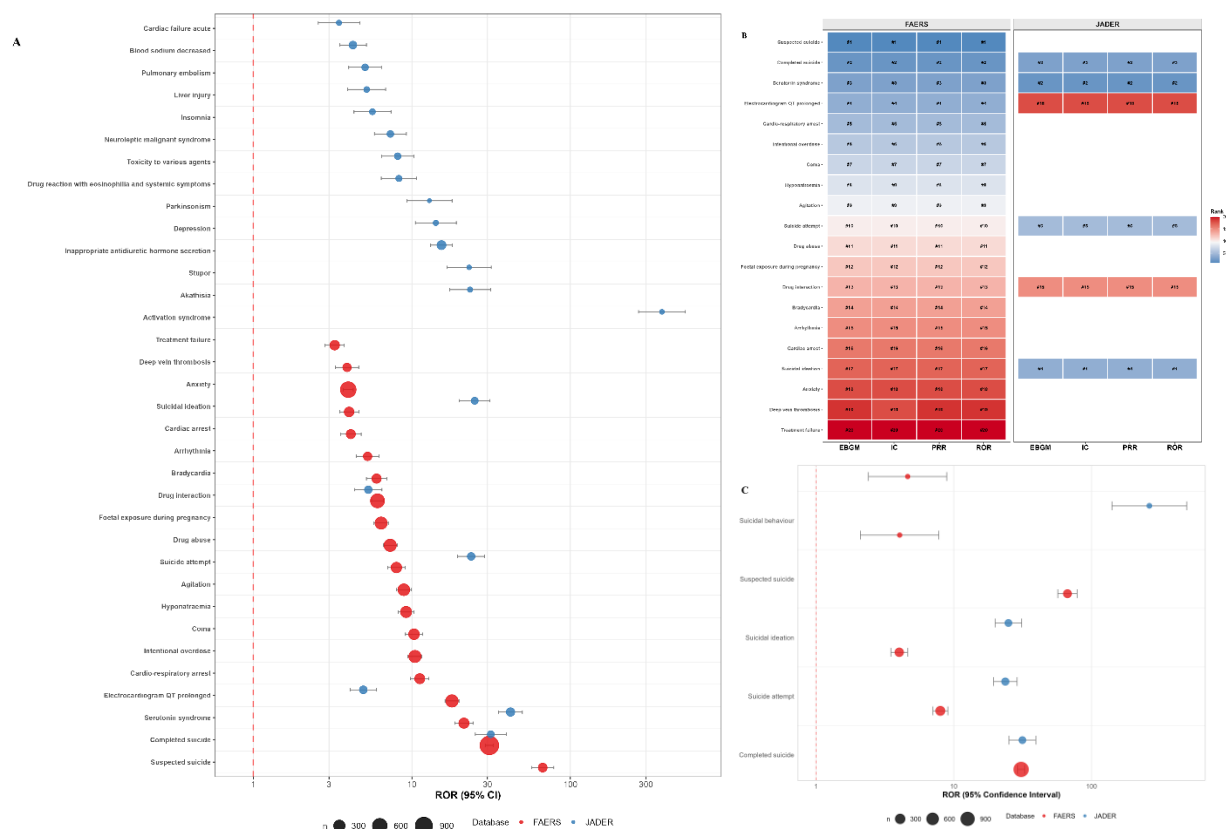


Figure 4 The PT level ROR of escitalopram-related adverse events in FAERS and JADER

Note: (A) Forest plot showing ROR with 95% confidence intervals for the top 20 PTs.

Horizontal lines indicate 95% confidence intervals. The dashed vertical line at ROR=1 indicates the threshold for signal detection. PTs are sorted by the number rank of each PT for each metric. (B) Heatmap comparing the ranking of the top 20 PTs (based on FAERS ROR) between FAERS and JADER across the four signal detection metrics. Numbers within cells indicate the specific rank of each PT for each metric. (C) Forest plot focusing on suicide-related PTs (Completed suicide, Suicide attempt, Suicidal ideation, Suspected suicide, and Suicidal behaviour), comparing ROR estimates between FAERS and JADER. The dashed vertical line at ROR =1 indicates no signal.

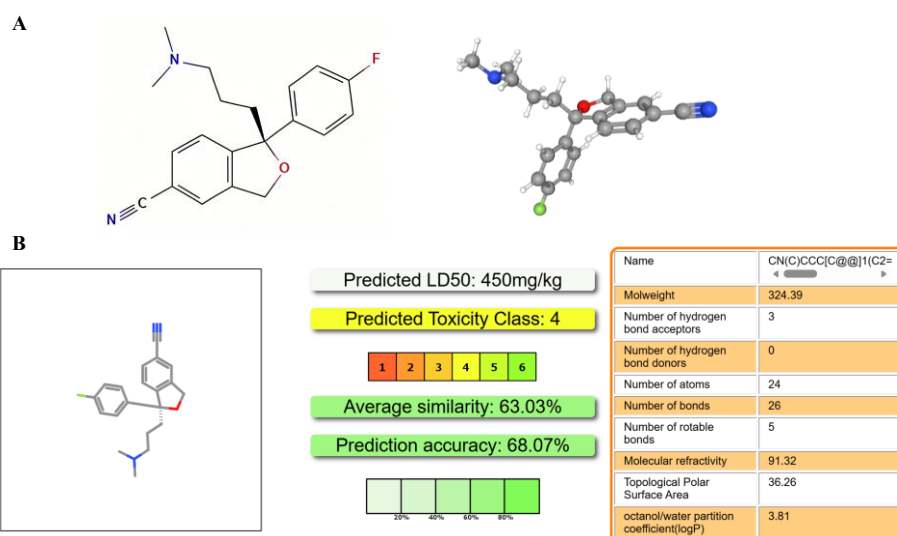


Figure 5 Toxicity Prediction of escitalopram.

Note: (A) The SMILES notation and chemical structure of escitalopram are presented using PubChem data. (B) escitalopram toxicity prediction results showing LD50 of 450 mg/kg with toxicity grade 4 classification and 68.07% prediction confidence.