

Oral

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(Meeting Room 1)

Oral 9

[O-9-05] Caffeine Consumption and Schizophrenia: A Systematic Review and Meta-analysis of Cognitive, Symptomatic, and Functional Outcomes

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Background: Schizophrenia is a complex mental disorder characterized by cognitive deficits, persistent symptoms, and functional impairment. Caffeine, a commonly consumed psychoactive substance, has plausible effects on cognition and mood. However, its impact on individuals with schizophrenia remains unclear. This review examines whether caffeine consumption affects cognitive symptoms, symptom management, and functional outcomes in individuals with schizophrenia.

Method: A systematic literature search was conducted for articles up to 30 December 2024 across PubMed, Cochrane Library, PsycINFO, Embase, Emcare, Medline. Studies were eligible if they were full-text, English-language articles involving adults with schizophrenia that compared different levels of caffeine intake (e.g., high vs. low or none) and reported on at least one outcome related to cognition, symptoms, or functioning. Cohort, cross-sectional, and clinical trial designs were included. Data were synthesized using a random-effects model, with effect sizes calculated by Hedges' g and heterogeneity assessed by I^2 statistics.

Results: Of 252 articles screened, 11 studies ($n=1,406$) met inclusion criteria. Findings were mixed: some studies reported improvements in cognitive performance and working memory, while others noted inconsistent associations with symptom management—higher caffeine intake was sometimes linked to fewer negative symptoms but more positive ones. Meta-analyses revealed non-significant trends in overall symptom severity(measured with BRPS and NOSIE), and functional outcomes (e.g., hospital stay and global functioning) were similarly variable. Physiologically, caffeine was found to reduce cerebral blood flow, with no statistically significant effects on blood pressure or pulse.

Conclusion: Caffeine may have mixed effects in schizophrenia, with potential positive effects on cognitive and negative symptom whilst possibly worsening positive symptoms. Functional and physiological impacts are unclear, underscoring the need for further research to guide clinical recommendations.