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Assessment of cognition using EMA in alcohol-dependent outpatients attempting to maintain abstinence

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SYMPOSIUM

296–299

**APPLICATION OF NOVEL MOBILE TECHNOLOGIES FOR
DIGITAL PHENOTYPING AND JUST-IN TIME ADAPTIVE
INTERVENTIONS FOR ALCOHOL AND SUBSTANCE MISUSE****Organizers: Vijay Ramchandani and Sherry McKee****297****ASSESSMENT OF COGNITION USING EMA IN ALCOHOL-DEPENDENT OUTPATIENTS
ATTEMPTING TO MAINTAIN ABSTINENCE**

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Using Ecological Momentary Assessment we examined the feasibility and utility of administering two cognitive assessments in the field in a sample of 43 alcohol-dependent (13 female) outpatients attempting to remain abstinent. We also examined whether motivational variables were cross-sectionally and prospectively associated with cognitive processes. Using personal digital assistants (PDAs), patients were signaled to complete three random assessments per day for 4 weeks. They were also instructed to complete a temptation assessment whenever they experienced a temptation to drink alcohol. At each assessment, participants reported their level of craving (1–7) as well as their motivation to remain abstinent (1–7). At every assessment, an alcohol Stroop task (to assess attentional bias to alcohol cues) or an Implicit Association Test, IAT (to assess approach bias) was administered. In total, participants completed 1044 Stroop tasks and 931 IATs. The estimated internal reliability of both tasks was adequate. Over all assessments, participants exhibited a significant alcohol Stroop effect ($p = 0.001$), but not a significant IAT effect. On both tasks ICCs revealed there was evidence for between-subject differences. Analyses using Generalized Estimating Equations revealed that, when participants reported lower motivation to remain abstinent than usual, and higher levels of craving than usual, attentional bias (but not approach bias) was elevated. Higher levels of craving prospectively predicted higher attentional bias at the next assessment later the same day. In sum, it is feasible to administer brief cognitive assessments during EMA to alcohol-dependent outpatients attempting to remain abstinent. There is evidence that attentional bias is associated with motivation and craving. Future analyses can examine the time course of these associations and associations with relapse.