

HOW INTOXICATED ARE YOU? COMPARING SELF AND OBSERVER INTOXICATION RATINGS TO BAC

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Introduction and Aims: The ability to accurately discern intoxication is an important skill for healthcare workers, police, and those serving alcohol. Past research suggested intoxicated people are generally poor at estimating how intoxicated they are; however, observer ratings of other's intoxication are more mixed. Few studies have compared both self- and observer-ratings to Blood Alcohol Concentration (BAC) levels to determine which is more accurate.

Method: We analysed data from a field study which interviewed 406 students outside three university events. During a brief interview, participants provided information about their demographics, current drinking session (alcoholic drinks consumed, length of drinking session), reported how intoxicated they felt (0=not at all, 10=very), and provided a breath test (LifeLoc FC10). Interviewers also recorded a rating of how intoxicated the participant appeared to be.

Results: Correlational analyses demonstrated significant association between self and observer intoxication ratings ($r=.804$), and a slightly stronger correlation between BAC and interviewer-reported intoxication ($r=.716$) than self-reported intoxication ($r=.625$; $z=2.36$, $p=.02$). When dichotomising BAC (<0.05% vs. >0.05%) and the intoxication reports (0-5 vs. 6-10), there was only moderate agreement between BAC and self-reported (accuracy=68.2%; Kappa=.40, sensitivity=54%, specificity=90%) and interviewer-reported intoxication (accuracy=70.2%; Kappa=.44, sensitivity=56%, specificity=93%).

Discussions and Conclusions: It appears intoxicated people and observers may be able to tell if people are more vs. less intoxicated but may be less precise determining whether someone is over the Australian legal limit for driving. Sensitivity and specificity analyses may provide a better understanding of the relationship between intoxication ratings and BAC, relative to correlation analyses.

Implications for Practice or Policy: As the legal intoxication limit for driving in Australia is BAC 0.05%, it is concerning that many participants over this legal limit were not classified at the higher levels of intoxication, by the individual or the interviewer. These findings point to the importance of further training in intoxication detection.

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