Comparison of Dimensional and Categorical Alcohol Dependence Diagnosis for Predicting Daily Alcohol Use in Heavy Drinkers

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INTRODUCTION A change has been proposed for the Diagnostic and Statistical Manual V for the substance use disorder diagnostic structure: to eliminate the separate categories for substance abuse and dependence, combining the criteria into one dimensional diagnosis. Using a dimensional diagnosis may be advantageous, because it considers variability in number of symptoms. The current study evaluated whether a dimensional diagnosis may be a better predictor of weekly alcohol use compared to the categorical dependence diagnosis.
METHOD Data for the current analyses were obtained from a study that evaluated the use of daily monitoring using an interactive voice response (IVR) system. Participants (N=222) called the IVR daily and reported alcohol use for 180 days. Categorical diagnosis for alcohol dependence was determined using the Structured Clinical Interview for DSM-IV and 66% met criteria for alcohol dependence. Dimensional diagnosis was determined by summing the DSM-IV alcohol abuse criteria (4) and dependence criteria (7) for a possible range between 0-11. Multi-model inferencing was used to determine whether a categorical or dimensional diagnosis would be a better fit for predicting weekly alcohol consumption. Longitudinal linear mixed effects models were constructed using alcohol dependence categorical diagnosis in model a and a dimensional diagnosis criterion in model b to predict total weekly alcohol consumption.
RESULTS There was very strong evidence that the dimensional diagnosis model was a better fit in predicting weekly alcohol use compared to the categorical diagnosis model. The Akaike Information Criteria for the dimensional model (AIC=21762.84) was 9 points lower than the categorical model (AIC=21771.63) and weight of evidence estimates indicated a 99% likelihood that the dimensional model is the better fitting model.
CONCLUSION These findings support the validity of the DSM-V diagnosis and suggest that a dimensional diagnosis may be a better fit than a categorical one for predicting alcohol use longitudinally.