

Moderate alcohol consumption and depression: A marginal structural model analysis of a representative US cohort

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Introduction and Aims: *Moderate alcohol consumption is associated with decreased depression risk, but it remains unclear whether this is a causal relationship or merely a methodological artefact. This study aimed to investigate this issue using a marginal structural model (MSM) comparing the effects of various stable alcohol consumption levels throughout early-to-middle adulthood on depression at age 50.*

Design and Methods: *A secondary analysis of the US-based National Longitudinal Survey of Youth cohort was conducted. 5,667 eligible participants provided valid data on alcohol consumption, Centre for Epidemiological Studies-Depression Scale short form (CES-D-SF) measurements, and covariates of interest at baseline, with 3,593 participants providing valid outcome data. MSMs were used to predict CES-D-SF means and rates of probable depression for hypothetical trajectories of consistent alcohol consumption.*

Results: *Both consistent occasional and consistent moderate drinkers were predicted to have reduced CES-D-SF scores and probable depression at age 50 compared to consistent abstainers (CES-D-SF scores: $b=-0.84$, $CI=-1.47, -.11$; probable depression: $OR=0.58$, $CI=0.36, 0.88$ for consistent occasional drinkers vs abstainers; CES-D-SF scores: $b=-1.08$, $CI=-1.88, -.20$; probable depression: $OR=0.59$, $CI=0.26, 1.13$ for consistent moderate drinkers vs consistent abstainers). Consistent above-guidelines drinkers were predicted to have slightly increased risk compared to consistent abstainers, but this was not significant ($b=0.34$, $CI=-0.62, 1.25$; $OR=1.06$, $CI=0.66, 1.72$).*

Discussions and Conclusions: *The present study contributes preliminary evidence that associations between moderate alcohol consumption and reduced depression risk may be causal. Further research using diverse methodologies promoting causal inference is required.*

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