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The irony of drinking to health and happiness

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An invited comment on Hammerton et al.

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12 I confirm that I have no conflict of interest to disclose, according to the definitions on the
13 ICMJE disclosure form.

14

15 In testing the relationship between alcohol consumption in young people and depression in
16 young adulthood, Hammerton et al. ¹ address a very important question. Depression causes
17 an enormous public health burden. The World Health Organisation identifies depression as
18 affecting more than 4% of the world's population and causing very substantial disability ².
19 Understanding how modifiable risk factors, such as alcohol consumption, influence onset of
20 depression in adulthood is therefore a crucial question for epidemiology to tackle. The Avon
21 Longitudinal Study of Parents and Children (ALSPAC) is a highly appropriate data resource to
22 use to address this question. ALSPAC is well placed in the UK's catalogue of large birth cohort
23 studies, sitting between the 1970 British Cohort Study and the Millennium Cohort Study,
24 uniquely assessing the development of children born in the 1990s. I was involved in a
25 systematic review of available evidence on the adult outcomes of late adolescent alcohol
26 consumption ³. We concluded that the area needed more high-quality prospective cohort
27 studies and Hammerton et al.'s work strongly contributes to this need.

28

29 A major contribution of Hammerton et al.'s study is that through examining the association
30 between levels of alcohol dependence at each age of the growth curve (age 17–22 years)
31 and depression at age 24 years, the study found the association was consistent across this
32 developmental period (latent intercept probit coefficient 0.13 [95% CI 0.02 to 0.25];
33 $p=0.019$), whereas alcohol consumption was not associated with future depression (latent
34 intercept probit coefficient -0.01 [-0.06 to 0.03]; $p=0.60$) to show that alcohol dependence
35 at ages 16 and 18 predicted depression at age 24 while consumption did not predict future
36 depression. I was initially surprised by this finding as I thought consumption and
37 dependence would be correlated and, to some extent, what would be predicted by one
38 measure would also be predicted by the other. Supplementary Table 4 shows there are

39 correlations between the consumption and dependence measures, but the main analyses
40 show there is a relationship for dependence and not consumption. While replication is
41 always desirable, the current findings raise the intriguing possibility that there is something
42 special about adolescent alcohol dependence that indicates increased risk for future
43 depression beyond the effects of simple consumption.

44

45 Hammerton et al. suggest that antisocial behaviour could be a mediating factor; adolescents
46 who become dependent on alcohol may engage in more antisocial behaviour and this might
47 be their route to depression. This is certainly one plausible option but there are other
48 possibilities too. For example, there might be a characteristic of people whose alcohol use
49 turns to dependence that also puts them at risk of future depression. Candidates for such a
50 factor include the personality trait of neuroticism. High neuroticism is a well-documented
51 risk for depression ⁴ and is also linked to alcohol dependence ⁵. It might be speculated that a
52 component of such an effect could reflect reporter bias. Higher neuroticism might invoke
53 young people to view a certain level of drinking as problematic in a way that individuals
54 lower on neuroticism would not. No doubt Hammerton et al.'s findings will be the
55 inspiration for future studies to test potential mechanisms that will develop our theoretical
56 understanding.

57

58 The practical implications of the target paper are clear; reducing heavy alcohol consumption
59 in young people is a desirable public health goal. This study identifies dependence
60 specifically as a risk factor for depression. The authors are correct, however, to point out
61 that a good way to prevent dependence is to target frequent drinking. The pathway to
62 dependence will likely involve heavy non-dependent drinking. Harm will likely have already

63 occurred if interventions were only targeted to dependence. As Hammerton et al. also note,
64 there are other well-documented motivations to minimizing alcohol consumption in young
65 people including the need to reduce the more immediate harms associated with alcohol
66 fuelled antisocial behaviour and injury risk.

67

68 In this context I see two important ways Hammerton et al.'s findings can contribute to
69 intervention efforts. First, they provide additional emphasis that preventing frequent alcohol
70 consumption in young people is an important goal. I do not believe that all stakeholders are
71 convinced that this is a high priority. Therefore, providing further understanding of the range
72 of alcohol's harms may help to convince any who are in doubt. Second, these findings will be
73 useful for stakeholders who specifically wish to prevent adult depression and might not have
74 considered frequent alcohol consumption as an intervention target previously. Therefore,
75 these findings might help to unlock new sources of funding to targeting alcohol use in young
76 people. This should be helpful in reducing the public health burden of adult depression and
77 can also have the extended benefits of reducing the other immediate and long-term harms
78 associated with alcohol use in young people.

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81 References

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83 1. Hammerton G, Lewis G, Heron J, Fernandes G, Hickman M, Lewis G. The association
84 of alcohol dependence and consumption during adolescence with depression in young
85 adulthood: a prospective cohort study in England. *The Lancet Psychiatry* in press.

- 86 2. World Health Organisation. Depression and Other Common Mental Disorders: Global
87 Health Estimates. Geneva, 2017.
- 88 3. McCambridge J, McAlaney J, Rowe R. Adult Consequences of Late Adolescent Alcohol
89 Consumption: A Systematic Review of Cohort Studies. *Plos Medicine* 2011; **8**(2).
- 90 4. Kendler KS, Kuhn J, Prescott CA. The interrelationship of neuroticism, sex, and
91 stressful life events in the prediction of episodes of major depression. *Am J Psychiatry* 2004;
92 **161**(4): 631-6.
- 93 5. Khan AA, Jacobson KC, Gardner CO, Prescott CA, Kendler KS. Personality and
94 comorbidity of common psychiatric disorders. *The British Journal of Psychiatry* 2005; **186**(3):
95 190-6.
- 96