Lower IQ has been linked to greater and riskier drinking among young adult men

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Although several studies have shown an association between intelligence and various health-related outcomes, the research on cognitive abilities and alcohol-related problems has been inconsistent. A new study of the association between IQ-test results and drinking, measured as both total intake and pattern of use, has found that a lower IQ is clearly associated with greater and riskier drinking among young adult men, although their poor performance on the IQ-test may also be linked to other disadvantages.

Results will be published in the March 2015 online-only issue of *Alcoholism: Clinical & Experimental Research* and are currently available at Early View.

"Previous results in this area have been inconsistent," said Sara Sjölund, a doctoral student at the Karolinska Institutet in Stockholm, Sweden as well as corresponding author for the study. "In two studies where the CAGE questionnaire - a method of screening for alcoholism - was used, a higher cognitive ability was found to be associated with a higher risk for drinking problems. Conversely, less risk has been found when looking at outcomes such as, for example, International Classification of Diseases diagnoses of alcoholism, alcohol abuse, and dependence."

"In this study of a general population, intelligence probably comes before the behavior, in this case, alcohol consumption and a pattern of drinking in late adolescence," said Daniel Falkstedt, assistant professor in the department of public health sciences at Karolinska Institutet. "It

could be the other way around for a minority of individuals, that is, when exposure to alcohol has led to cognitive impairment, but this is less likely to be found among young persons of course."

Sjölund and her colleagues analyzed data collected from 49,321 Swedish males born during 1949 to 1951 and who were conscripted for Swedish military service from 1969 to 1971. IQ results were available from tests performed at conscription, and questionnaires also given at conscription provided data on total alcohol intake (consumed grams of alcohol/week) and pattern of drinking, as well as medical, childhood and adolescent conditions, and tobacco use. Adjustments were made for socio-economic position as a child, psychiatric symptoms and emotional stability, and the father's alcohol habits.

"We found that lower results on IQ tests in Swedish adolescent men are associated with a higher consumption of alcohol, measured in both terms of total intake and binge drinking," said Sjölund. "It may be that a higher IQ results in healthier lifestyle choices. Suggested explanations for the association between IQ and different health outcomes, could be childhood conditions, which could influence both IQ and health, or that a socio-economic position as an adult mediates the association."

"By taking into account as little as four measured characteristics of the men, including their backgrounds," added Falkstedt, "the authors seem to be able to explain a large part of the association between IQ and heavy drinking. I think this may be a main message of this large cohort study: poor performance on IQ tests tend to go along with other disadvantages, for instance, poorer social background and emotional problems, which may explain the association with risky alcohol consumption. In reality, other differences of importance are likely to exist among the men, which could further explain the IQ-alcohol association."

Both Sjölund and Falkstedt noted that results may vary among cultures

and countries.

"I think that large parts of the association between IQ and alcohol consumption may be indirect and mediated by experiences in everyday life and differences in social situations," said Falkstedt. "It is not necessarily about making intelligent or unintelligent choices. For instance, in countries with weak social-safety nets and high alcohol consumption among low-wage workers and the unemployed, I assume the association could be stronger than in economically more-equal countries, perhaps also among the young."

"I hope that our findings add to the general understanding of drinking behaviours and what factors that may influence them," said Sjölund. "However, we must be very careful in making any attempt to generalize our results to women, since their level of consumption and patterns of drinking likely differ in comparison with men."

"I think a higher intelligence may give some advantage in relation to lifestyle choices," noted Falkstedt. "However, I think it is very important to remember that intelligence differences already existing in childhood and adolescence may put people at an advantage or disadvantage and may generate subsequent differences in experiences, and accumulation of such experiences over many years. Therefore, another important explanation of 'bad choices' among lower-IQ individuals may be feelings of inadequacy and frustration, I think. A number of studies have shown that a lower IQ in childhood or adolescence is associated with an increased risk of suicide over many years in adulthood."

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