

# Better verbal development during childhood linked to later drinking and intoxication

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Some studies have found that poorer cognitive abilities during adolescence and early adulthood predict an increased risk for alcohol-related injury and death among drinkers several years later. Yet other studies have connected better cognitive and verbal abilities during childhood, an earlier experimentation with alcohol, and higher levels of drinking in young adulthood. A new study supports linkages between better verbal development during childhood and more frequent drinking and intoxication during adolescence and young adulthood.

Results will be published in the February 2014 issue of *Alcoholism: Clinical & Experimental Research* and are currently available at Early View.

"Previous studies have suggested that the relationship between cognitive abilities and [alcohol](#) use behaviors is complex," said Antti Latvala, a post-doctoral researcher at the University of Helsinki as well as corresponding author for the study. "Whether differences in [cognitive abilities](#) play a role in drinking initiation or frequency – in contrast to severe problems – is not so clear. Some studies haven't found any association. However, in recent years this issue has been investigated in several large-scale cohort studies in the U.K. and the U.S., and these studies have found that those who scored better in a standard cognitive ability test in childhood or adolescence were less likely to abstain from alcohol and more likely to drink frequently in adulthood."

Latvala added that verbal ability is a noteworthy component of general

cognitive ability because language is so crucially involved in daily lives and interpersonal relations. "We wanted to see whether already early childhood differences in language outcomes, such as age of speaking words, are predictive of drinking behaviors, and if so, whether better verbal development predicts less or more drinking," he said.

"This research highlights the potential role of individual differences in verbal abilities during childhood as a risk factor for the subsequent development of alcohol use during adolescence and [young adulthood](#)," said Michael Windle, professor and chair of the Rollins School of Public Health at Emory University. "These findings are of importance for identifying the role(s) of childhood cognitive and intellectual factors as predictors of subsequent alcohol-use behaviors to complement the larger literature on the consequences of alcohol use and abuse on cognitive and neuropsychological functioning in adulthood."

Latvala and his colleagues used data from two ongoing population-based longitudinal studies of Finnish twins, FinnTwin12 (FT12), of twins born 1983-1987, and FinnTwin16 (FT16), of twins born 1975 to 1979. They examined verbal developmental differences for two cohorts of twins, among which twin pairs dissimilar in childhood language development were identified. The data collection with questionnaire surveys for FT12 (n = 2,724 families) took place at age 11 to 12, and again at ages 14, 17.5, and as young adults between ages 20 to 24 years of age; and data collection for FT16 (N = 2,733 families) was conducted at age 16, and repeated at ages 17, 18.5, and between ages 23 and 25 years of age. Parental reports included differences in the twins' age at speaking words, age at learning to read, and expressive language skills during school age, and the twins self-reported on within-pair differences in drinking, intoxication, and alcohol-related problems across adolescence and young adulthood.

"We found that differences in language development in early childhood

and school age predict alcohol use behaviors in adolescence and up to young adulthood," said Latvala. "Specifically, we found that better childhood verbal development – as indicated by an earlier age of speaking words, learning to read earlier, or having better expressive language skills in school age – was often predictive of a higher likelihood of engaging in more frequent drinking and intoxicating across adolescence. The results came from comparing the drinking behaviors of twins from twin pairs in which the co-twins differed in their language development according to their parents. We also found that the verbally more advanced co-twins were more likely to have friends who drink in adolescence, and they also reported higher values for the temperament trait 'sensation seeking.' Peer associations and the tendency to seek novel experiences may in part explain the link between better language skills and engaging in drinking behaviors."?

"This study's findings make a significant contribution to the [field] by using a discordant twin design to address issues about the association between childhood verbal ability and subsequent alcohol use in adolescence and young adulthood," said Windle. "The discordant twin design minimizes a number of potentially confounding factors that may explain the association between childhood verbal ability and subsequent alcohol use by 'controlling' for differences on variables [such as] socioeconomic differences or family factors that, if excluded, could cloud the interpretation of findings."

"It is important to realize that experimenting with alcohol and drinking to [intoxication](#) – although illegal and not without risks – is very common among adolescents and can be regarded as normative behavior in many countries," said Latvala. "It is not surprising, then, that individual differences in personality traits and cognitive skills, such as language abilities, may be associated with different likelihoods of engaging in these common behaviors. However, even though an adolescent with good language and cognitive skills may experiment with drinking earlier than

his/her less advanced peer, better verbal and intellectual abilities have [also] been found to be protective against developing severe problems with alcohol and other substances in adulthood."

"In interpreting the findings from this study in comparison to other studies of verbal ability and alcohol use, it is important to consider the cultural context," added Windle. "For example, in the U.S., socioeconomic and ethnic-group factors play an important role in the onset and manifestations of alcohol and other substance use among [adolescents](#) and young adults. African-American youth are much less likely than Caucasians to use alcohol and other substances during adolescence, but exhibit a telescoping phenomenon of 'catching up' rapidly in young adulthood—this is referred to as a cross-over effect. African-American youth are also more highly represented in the lower socioeconomic-status strata. In Finland, there are few non-Caucasians and wealth is distributed in a manner that yields a lower percentage of people in the lower strata relative to the U.S. These cultural differences may have a differential impact on associations between verbal ability and [alcohol](#) use variables such that this relationship may be moderated by ethnic group in the U.S. but not in Finland. At first glance, such findings might appear inconsistent, but are not if one takes the larger cultural context into account."

Provided by Alcoholism: Clinical & Experimental Research

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