

Sociable Adolescent Drinking Behaviors and Income Association



Yash Desai, Quantitative Analysis Center, Wesleyan University

Introduction

- Adolescent alcohol consumption continues to be a prevalent public health issue with possible lasting physical and economic effects.
- Excessive drinking during adolescence has been associated with an increased likelihood of neurological and cognitive deficits, as well as poorer educational and employment outcomes in adulthood (Zeigler et al., 2005).
- Research suggests that adolescents who report heavier alcohol use also tend to hold more positive expectations about alcohol's role in facilitating social engagement (McBride, Barret, & Moore, 2014).
- Certain research suggests a positive correlation between binge drinking in male adolescents and anticipated income in adulthood (Mundt & French, 2013).
- Research suggest that social abilities might evolve alongside drinking habits (Mundt & French, 2013).

Methods

Sample

- Adolescents (grades 7-12) who reported binge drinking behaviors the past year (n=6488) were drawn from the first wave of the National Longitudinal Study of Adolescent to Adult Health (Add Health).
- Add Health is a Longitudinal Study that spanned from 1994-2018. It is a representative survey of adolescents in grades 7-12 (Wave 1) in the United States that were followed over time until their late 30's/early 40's (Wave 5).

Measures

- Income was measured with the question "What was the total household income before taxes and deductions in the last calendar year for all household members who contribute to household expenses?" Possible responses ranged from 1 (less than 5,000) to 13 (200,000 or more). A numeric variable was created by averaging the categorical ranges.
- Binge drinking behavior was measured with the question, "Over the past 12 months, how many days did you drink 5 or more drinks in a row?" Possible responses ranged from 1 (every day or almost every day) to 7 (never).
- The number of participant's close friends. 1 (none) to 5 (10+ friends).
- Self confidence measured from 1 (strongly disagree) to 5 (strongly agree)
- Perceived social acceptance measured from 1 (strongly disagree) to 5 (strongly agree)

Research Questions

- How does adolescent binge drinking levels associate with young adult income?
- How does sociability affect this relationship?

Results

Univariate

- 25.7% of the participants reported binge drinking in the past 12 months.
- The remaining either does not binge drink, refused to answer, or selected 'don't know'.

Bivariate

- An ANOVA examining the relationship between binge drinking and income was **statistically significant**, $p < .001$, indicating that mean income differs across binge drinking groups. However, the effect size was very small ($R^2 = .008$), suggesting binge drinking explains less than 1% of the variation in income.
- Post-hoc comparisons showed that some higher binge drinking categories (lower levels of binge behaviors) were associated with significantly higher incomes, while lower categories were not significantly different (Figure 1).
- Tested a simple regression. However, the association is parabolic so a linear line of best fit would not be suitable.

Multivariate

- Across most levels of binge drinking behavior, participants who reported more close friends tended to earn higher incomes (Figure 2).
- Within each level of binge drinking, for each increase in the amount of close friends, **predicted income increases** by \$11,250 ($\beta = 11250$ and $p < 0.001$).

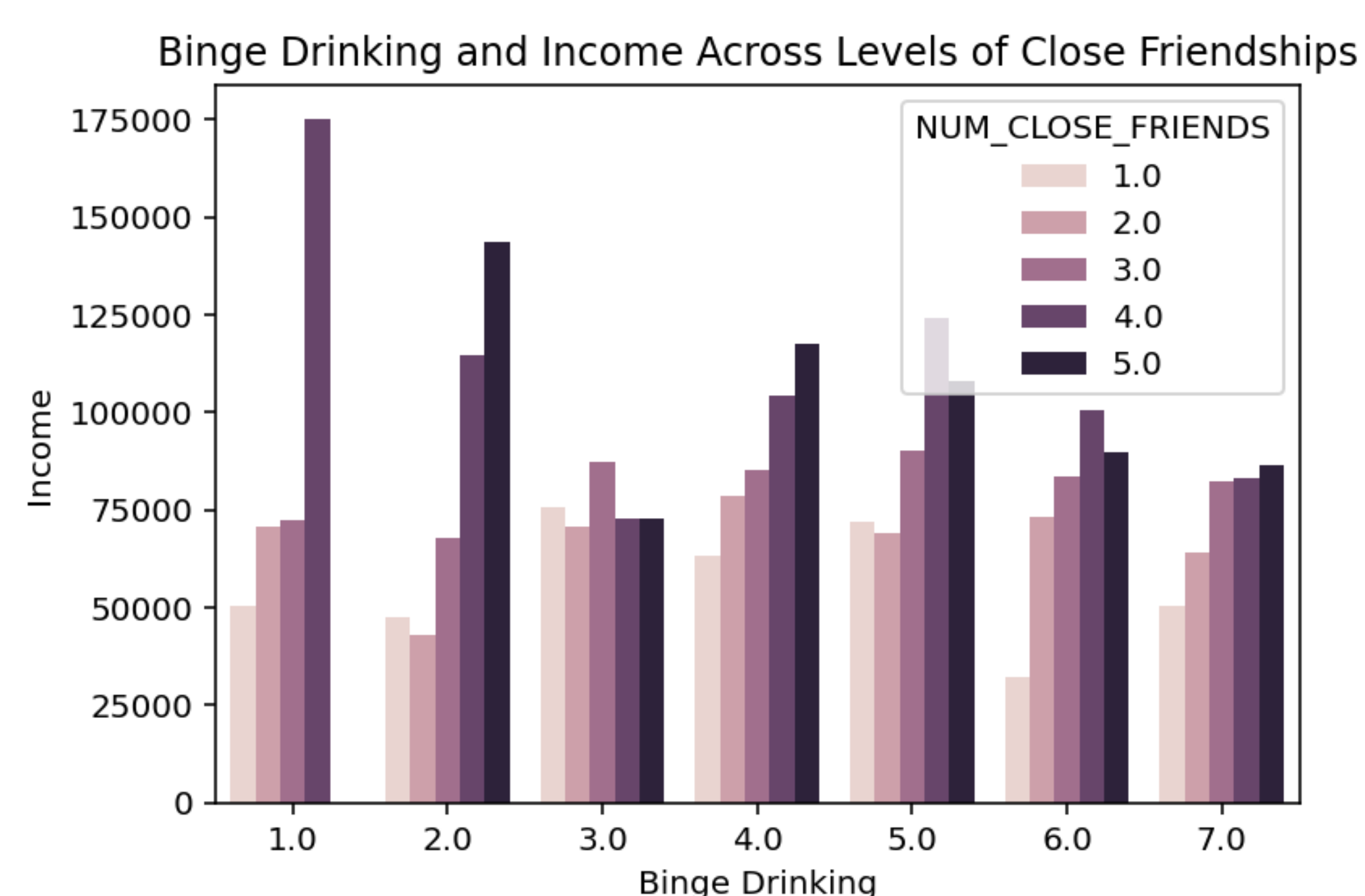


Figure 2: Relationship Between Binge Drinking and Income Across Levels of Close Friendships. 1 (none) to 5 (10+ friends).

Multivariate (cont.)

- Controlling for self confidence, perceived social acceptance, and the number of close friends, binge drinking remains significantly associated with binge drinking ($p = .023$).
- Confidence is a **significant positive predictor** of income, ($\beta = 4,266.01$ and $p = 0.008$).
- Social acceptance is also a **significant positive predictor** of income ($\beta = 3,220.14$ and $p = 0.019$).
- Number of close friends is a **significant positive predictor** of income ($\beta = 10,750$ and $p < 0.001$).

Discussion

- When controlling for the sociable variables, income remained significant. Each significant variable positively predicted income, which supports existing research and literature.
- Although the between income and binge drinking was statistically significant amongst the bivariate model and multivariate models, they all had **low R^2 values**, indicating that the linear relationship is **weak and explains little variation in income**.
- Limitations to prior research, including this project, include reliance on self-reported alcohol consumption and income measures, along with the difficulty in measuring sociability.
- Further research should be conducted given the repeated finding of wage premiums associated with sociability. However, because sociability is difficult to measure directly, future research should incorporate a wider range of variables that reflect different dimensions of social behavior.

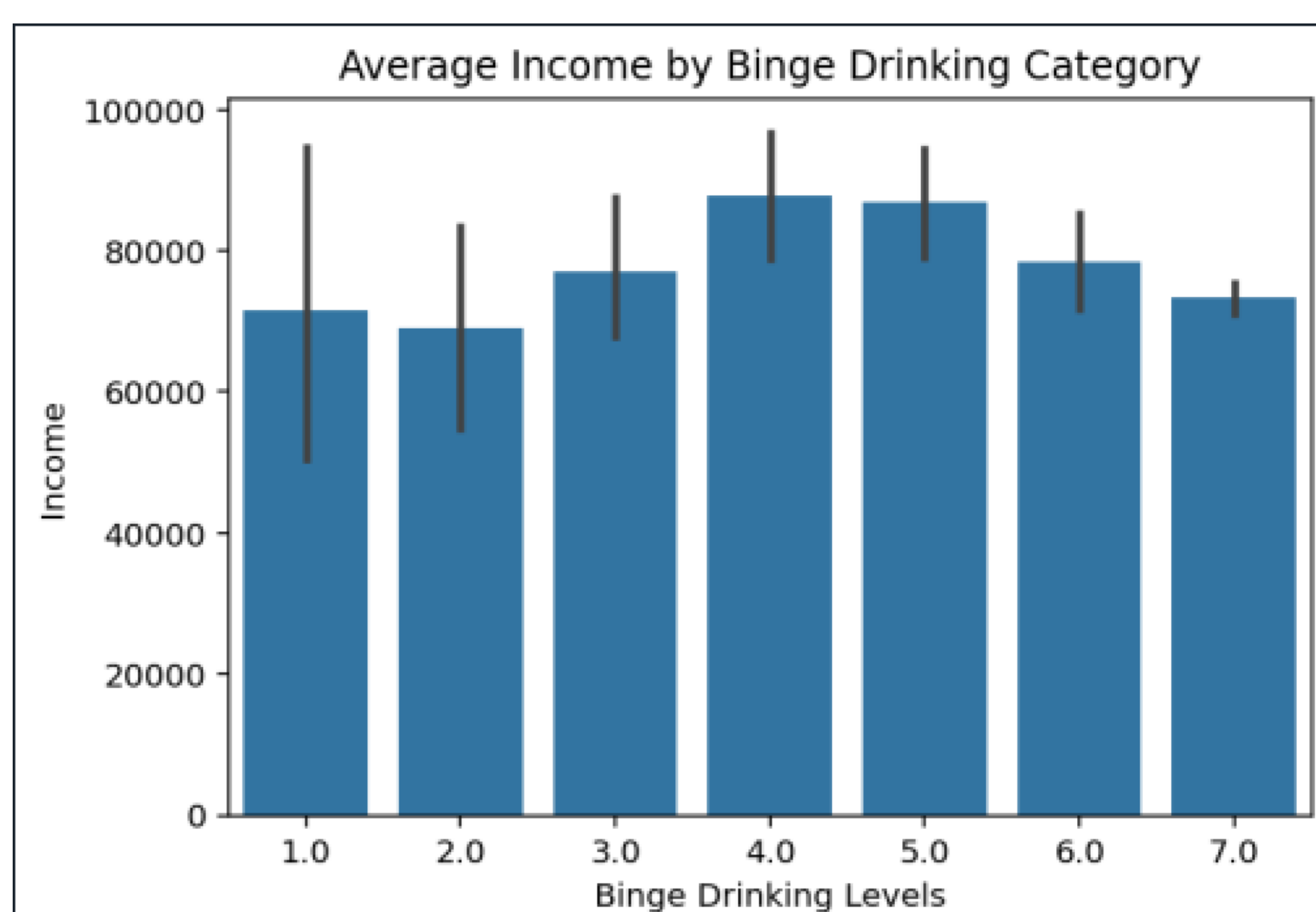


Figure 1: Average Income by Binge Drinking Category. 1 (every day/almost every day) to 7 (never)

McBride, N. M., Barrett, B., Moore, K. A., McBride, N. M., Barrett, B., Moore, K. A., & Schonfeld, L. (2014). The Role of Positive Alcohol Expectancies in Underage Binge Drinking Among College Students. *Journal of American college health*, 62(6), 370-379. <https://doi.org/10.1080/07448481.2014.907297>

Mundt, M. P., French, M. T., Mundt, M. P., & French, M. T. (2013). Adolescent alcohol use, sociability and income as a young adult. *Applied economics*, 45(23), 3329-3339. <https://doi.org/10.1080/00036846.2012.707773>

Zeigler, D. W., Wang, C. C., Yoast, R. A., Dickinson, B. D., McCaffree, M. A., Robinowitz, C. B., & Sterling, M. L. (2005). The neurocognitive effects of alcohol on adolescents and college students. *Prev Med*, 40(1), 23-32. <https://doi.org/10.1016/j.ypmed.2004.04.044>