The Association Between Adolescent Mental Health and Adult Income

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Introduction

- Children affected by psychological conditions are associated with lower ability to work and make money as adults (Smith & Smith, 2010).
- Childhood psychological health conditions leave a greater lasting impact than physical health problems. (Goodman et al., 2011).

Research Questions

- Is mental health as an adolescent a predictor of income as an adult?
- Does this relationship differ between males and females?

Methods

Sample

- Respondents (n=4125) were drawn from Waves 1 and 5 of the U.S. National Longitudinal Survey of Adolescent Health (ADDHEALTH).
- Wave 1 is a nationally representative sample of adolescents in grades 7-12 during the 1994-1995 school year, and Wave 5 surveyed the same people in 2016-2018.

Measures

- Participants' income was measured with the question "In the last calendar year, how much income did you receive from personal earnings before taxes?" They were told to include "wages or salaries, tips, bonuses, overtime pay, and income from self-employment."
- Income was coded categorically into 13 groups; less than $5,000 (1), $5,000 to $9,999 (2), $10,000 to $14,999 (3), $15,000 to $19,999 (4), $20,000 to $24,999 (5), $25,000 to $29,999 (6), $30,000 to $39,999 (7), $40,000 to $49,999 (8), $50,000 to $74,999 (9), $75,000 to $99,999 (10), $100,000 to $149,999 (11), $150,000 to $199,999 (12), and $200,000 or more (13).
- Participants were given various statements, and their feelings were measured with the question "How often was each of the following things true during the past week?" where possible responses ranged from 0 (never or rarely) to 3 (most of the time or all of the time).
- Fourteen questions chosen to measure poor mental health based on the DSM-5 criteria for a major depressive episode were summed to create a mental health score.
- The score was collapsed into four roughly equal categories.

Results

Univariate

- Most participants did not experience many feelings associated with depression.

Bivariate

- Analysis of variance (ANOVA) revealed that among individuals in the United States, adolescent mental health score and estimated income as an adult are significantly associated ($F_{(3,4132)}=26.77$, $p = 0.0000$).
- Post hoc comparisons revealed that those with the lowest mental health score as an adolescent have statistically significantly greater estimated incomes than all other groups.
- Those with the highest mental health score have significantly lower estimated incomes than all other groups.
- The only comparison that was statistically similar was between the two middle groups.

Multivariate

- There is strong evidence that average estimated adult income for individuals in groups 2, 3, and 4 are different than the average estimated adult income for individuals in groups 1 when controlling for sex.
- Females are expected to earn $15,122.95 less than males in the last calendar year (Beta = -15122.95, CI(-17882.41, -12363.49), p = 0.000), holding mental health score fixed.
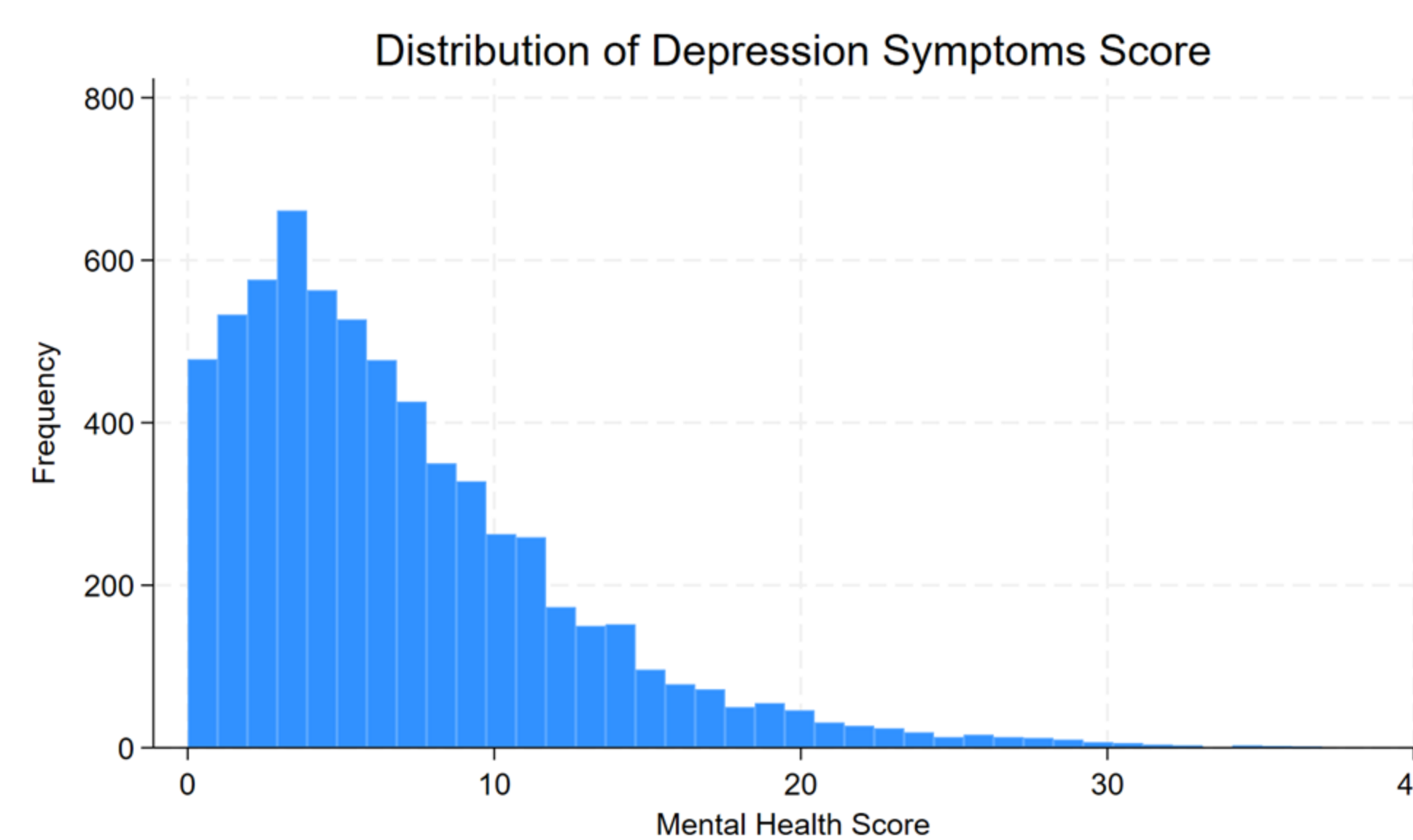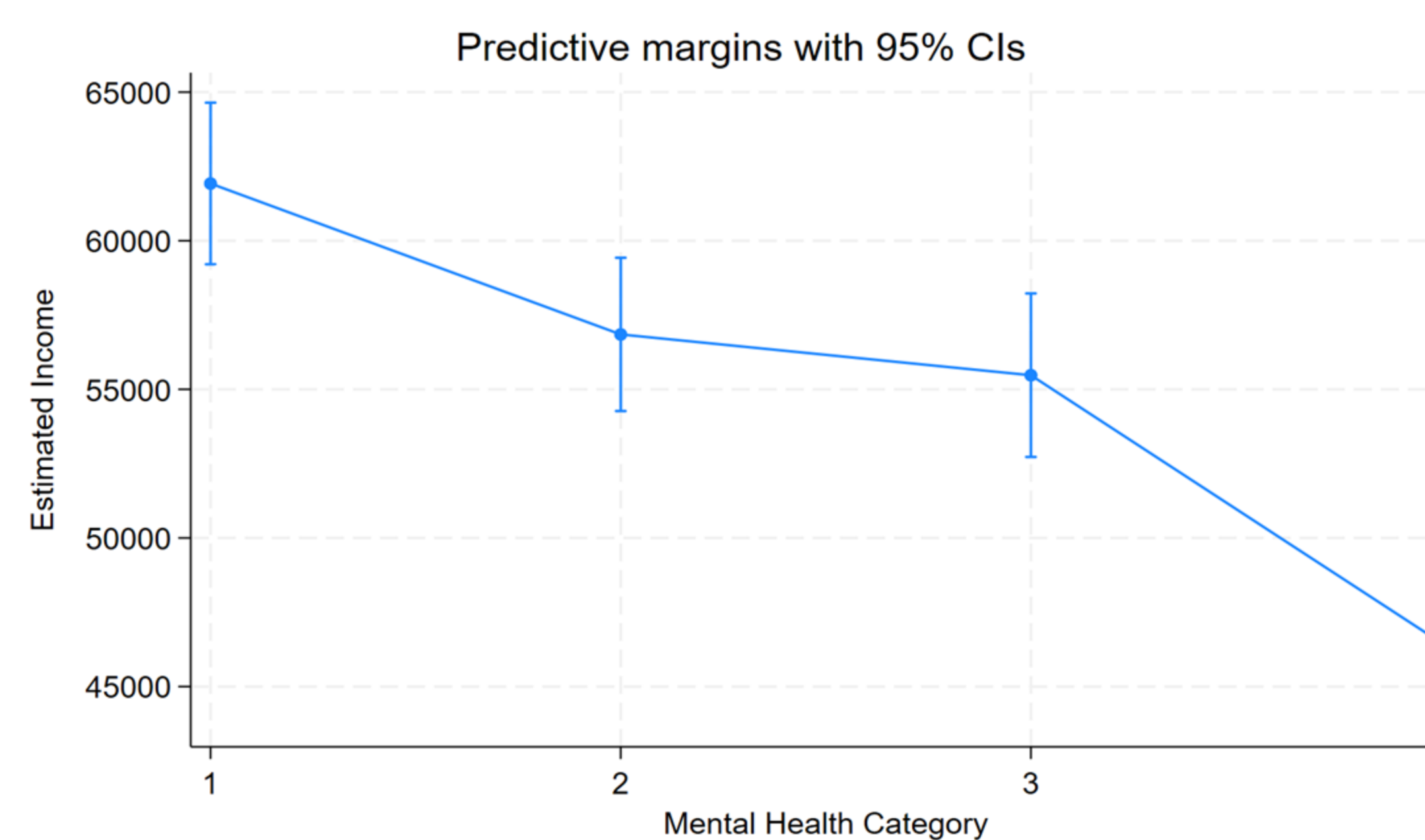

Figure 1: Distribution of Mental Health Score

Figure 2: Estimated Income by Mental Health Group
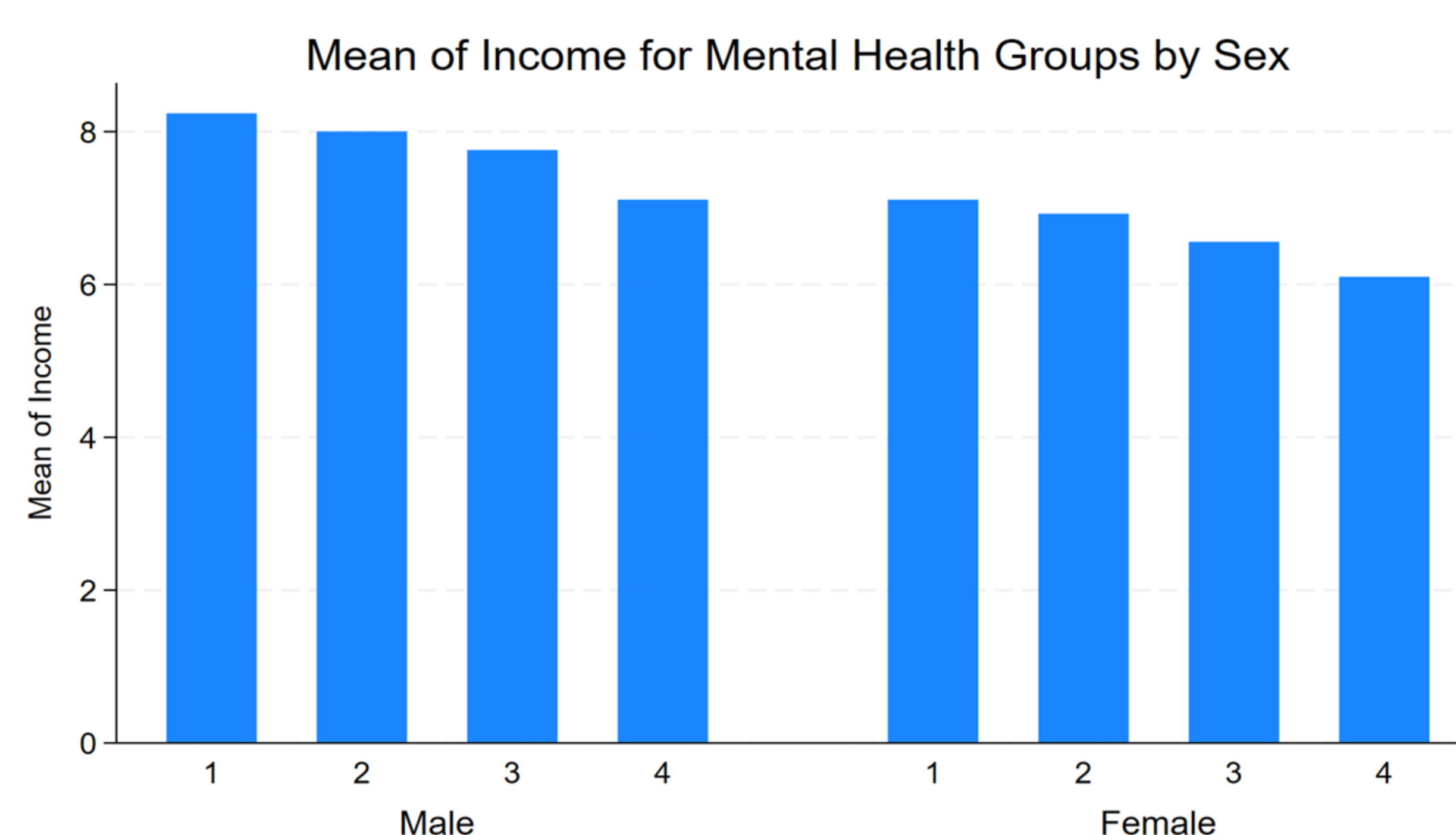

Figure 3: Mean of Income (categorical) for Mental Health Groups Sorted by Sex

Discussion

- As presence of feelings related to depression symptoms increases in adolescents, their predicted income as an adult decreases.
- In every category of mental health females earned less than males, but the relationship within both groups was similar.

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