

Association between the Age of First Sexual Intercourse Experience, Gender and Appearance of Depression Diagnosis in Adulthood

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Introduction

- Adolescents are more likely to take part in risky behaviors, such as early sexual intercourse, that are found to be associated with also taking part in other risky behaviors that would put one at a higher risk of negative psychological symptoms (Gonçalves, 2017).
- The age of one's first sexual intercourse has been found to be significantly associated with depression (Yu et al., 2023; Gonçalves, 2017; Lu et al., 2023) but others have found contrary results (Lehrer, Shrier, Gortmaker, & Buka, 2006; Sabia, 2006).
- Research has found that people assigned female at birth who had sexual intercourse before or at the age of 17 were at higher risk for major depression (MD) (Gonçalves, 2017) but there are mixed results if this same effect is true for people assigned male at birth (Gonçalves, 2017; Lu et al., 2023).
- This project investigates an association between age of first sexual intercourse and depression in later adulthood (late 30's to early 40's), which has yet to be studied.

Methods

Sample

- Data from the Wave I (in participants adolescence, Grades 7-12) and Wave V (in participants late 30's/early 40's) from National Longitudinal Study of Adolescent Health (Add Health) was used. Representing a surveyed group in the United States (including Alaska and Hawaii).
- A total of 6,504 participants were a part of the multi-wave dataset.

Measures

- A variable reflecting the age at first experience of sexual intercourse was created by subtracting the data for year of first sexual intercourse from the year of participant's birth.
- Depression was measured through a question examining presence of a diagnosis from a medical health professional in adulthood (Wave V).
- Sex in the present analysis was measured in Wave I based on appearance ("Ask if necessary") with response options being female or male and based on sex assigned at birth.

Research Questions

- Is having sexual intercourse at an earlier age associated with a depression diagnosis in adulthood?
- Does the association between having sexual intercourse at an earlier age and depression diagnosis in adulthood differ based on the individuals sex assigned at birth?

Results

Univariate

- A total of 39.44% ($N = 2565$) of the sample had already had sexual intercourse when the Wave I of the AddHealth survey took place.

Bivariate

- Analysis of variance (ANOVA) indicated that among those participants who had had their first experience of sexual intercourse in AddHealth Wave I and those who reported a depression diagnosis in adulthood **were not significantly** more likely to have reported sexual intercourse in Wave I compared to those who did not report a depression diagnosis in adulthood, $F(1, 1423)=1.45, p=.23$.
- However, when controlling the age of first sexual intercourse to those participants who had sexual intercourse before the age of consent (age: 16 in most US states) there **was a significant negative relationship** to depression diagnosis in adulthood (Beta = -0.10 $p=0.021$) (Fig 1).

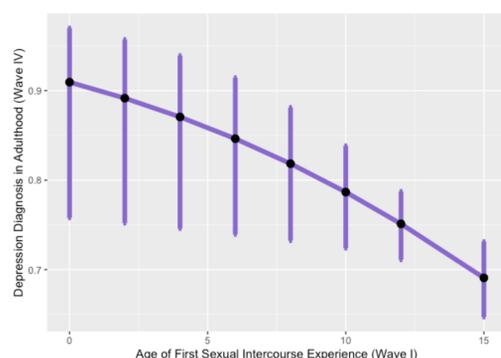


Figure 1. Logistic regression of Age of First Sexual Interaction (0-15 years old, before the age of consent) and Depression Diagnosis in Adulthood

Multivariate

- When comparing the association between age of first sexual intercourse, biological sex and depression diagnosis in adulthood, although at first glance there seemed to be a relationship for male participants, there was no significance (Fig 2).

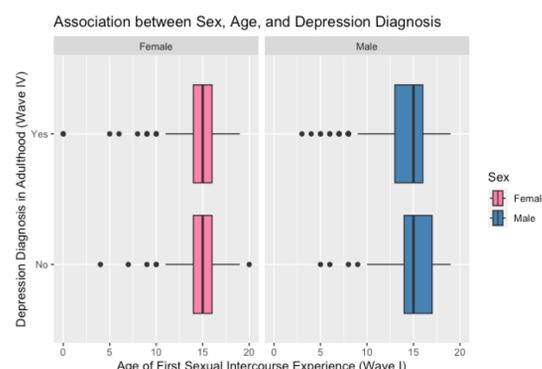


Figure 2. Boxplot presenting the Association between Age of First Sexual Interaction, Biological Sex and Depression Diagnosis in Adulthood

Multivariate (cont.)

- Depression diagnosis in adulthood, biological sex, and race were each **not** associated age of first sexual intercourse experience (O.R. 1.02, CI 0.96, 1.07) after controlling for comorbidity (Figure 3).

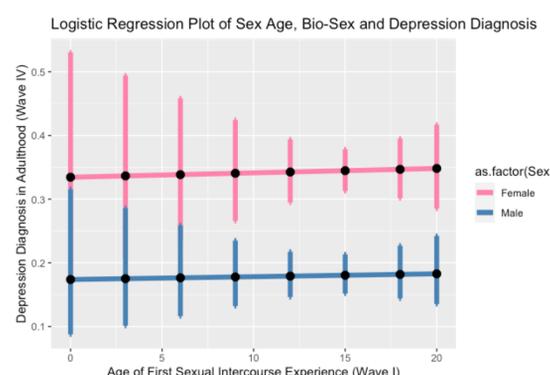


Figure 3: Multiple Logistic Regression of Age of First Sexual Interaction, Biological Sex and Depression Diagnosis in Adulthood

- Those participants who are biologically male have an expected odds of a depression diagnosis in adulthood that is 2.48 times higher than those who are biologically female holding other variables fixed, but results are **not significant**.
- No racial groups were significantly related to depression diagnosis in adulthood or age at first sexual intercourse.

Discussion

- The lack of significant difference between age of first sexual interaction and depression diagnosis in adulthood contradicts much of the previous findings in literature on the topic.
- Individuals of different biological sexes did not have any significantly discernable relationships between reported age of first sexual intercourse and likelihood of a depression diagnosis in adulthood.
- Notably, although the AddHealth data set is large, the present study required data collapsing to represent only the pertinent population. A **small sample size limits the legitimacy of the results**.
- Further studies must consider/include the following:
 - Larger sample size
 - More inclusive definition for someone who suffers from depression (many suffer without a diagnosis)
 - The possible effect of abstinence only/purity culture on the two main variables of interest

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