

# THE ASSOCIATION BETWEEN AGE AT FIRST SEXUAL INTERCOURSE AND HIGH RISK SEXUAL BEHAVIOR AMONG ADOLESCENTS IN THE UNITED STATES

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## RESEARCH QUESTION

How does age at first sexual intercourse relate to high-risk sexual behavior in specifically STI-related risk behavior?

## INTRODUCTION

- Sexual risk behaviors among other stressors are interconnected and are informed by social, class and economic stressors that consequently create different “risk profiles” among adolescents (Hill et al., 2026)
- There is a found association between early sexual initiation and multiple partners, involvement in pregnancy, and frequent intercourse while high or drunk (O'Donnell et al., 2001)
- Sexually transmitted infections (STIs) remain an active public health issue in the United States. Reported 1 in 5 people in the United States having contracted an STI. STIs can pose serious health risks (Bishop, 2022).
- Sexual minority youth have been consistently identified as reporting elevated high risk sexual behavior (Rasberry et al., 2018)
- With diverse health care policies and cultural norms varying by region and identity groups, regional findings are difficult to generalize to American Youth.

## METHODS

### Sample

- Adolescents enrolled in an American accredited high school across the United States who have reported having sexual intercourse (n=2118) were drawn from the 2021 Adolescent Behaviors and Experiences Survey (ABES)
- 399 schools were randomly selected under systematic intervaling at a random start with the probability of selection proportional to population of students in 9-12 grade.

### Measures

- Early sexual initiation was measured with the question, “How old were you when you had sexual intercourse for the first time?”. Responses were combined into three categories: “13 years old or younger”, “14 to 15 years old”, and “16 years old or older.” These groupings were selected to reflect developmentally meaningful distinctions in adolescent maturity while still ensuring each group had adequate responses to make statistical inferences.
- A sexual risk behavior score was constructed by assessing the respondents to these three dichotomous indicators: multiple sexual partners in the past 3 months, absence of condom use at last intercourse, and substance use prior to last sexual intercourse. If respondent indicated yes to any of these questions, they were categorized as presenting high risk sexual behavior. If respondent omitted an answer their risk score was assigned NA for non-applicable.
- Sexuality was binned into two categories: heterosexual vs. non-heterosexual. Respondents who indicated they were unsure or unknown were coded as missing (NA) and excluded from sexuality-related analyses. Sexual identity were retained as an observed variable given documented disparities in sexual risk behavior across sexual identity subgroups (Rasberry et al., 2018).

## RESULTS

### Univariate

- 54% of sexually active respondents reported high-risk behavior. (Note 40 respondents (~1%) were classified as NA and omitted in figure 1.)
- Most respondents (48%) had their first sexual encounter between ages 14-15 (figure 2).

### Bivariate

- Age at first sexual intercourse and current risk level in sexual behavior were significantly associated. Individuals engaging in high-risk sexual behavior differed significantly across all age groups at first sexual debut. (Figure 3)
- Sexual identity and risk level in sexual behavior were significantly associated with non-hetero individuals showing elevated high risk sexual behavior.

### Multivariate

- The interaction between age at first sexual debut and sexuality fail to show a significant association with high risk sexual behavior. As seen in Figure 4, the relation between age and first sexual intercourse is consistent across sexuality.
- Non-Hetero group has elevated odds irrespective of age at first sexual debut.

Figure 1

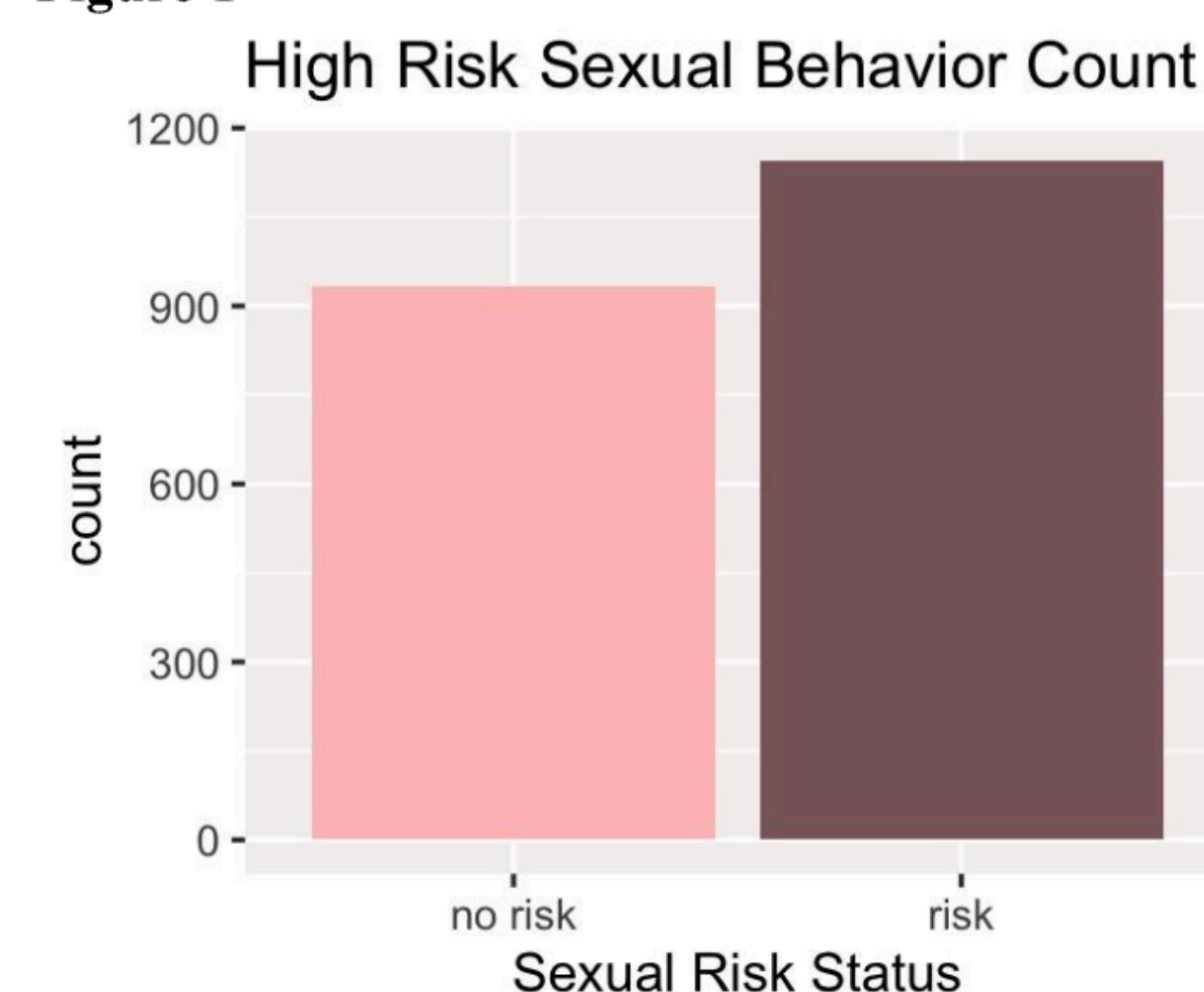


Figure 2

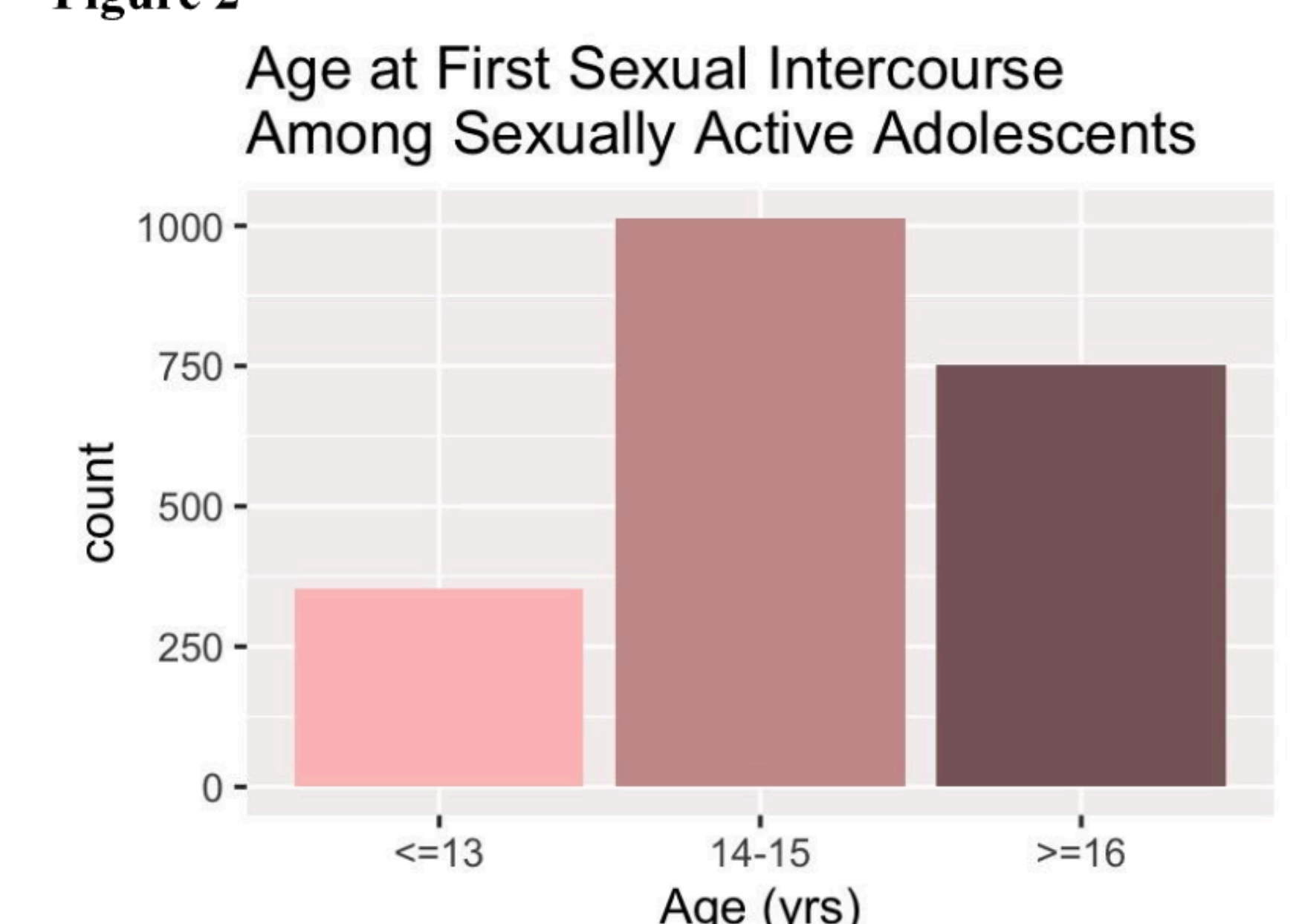


Figure 3

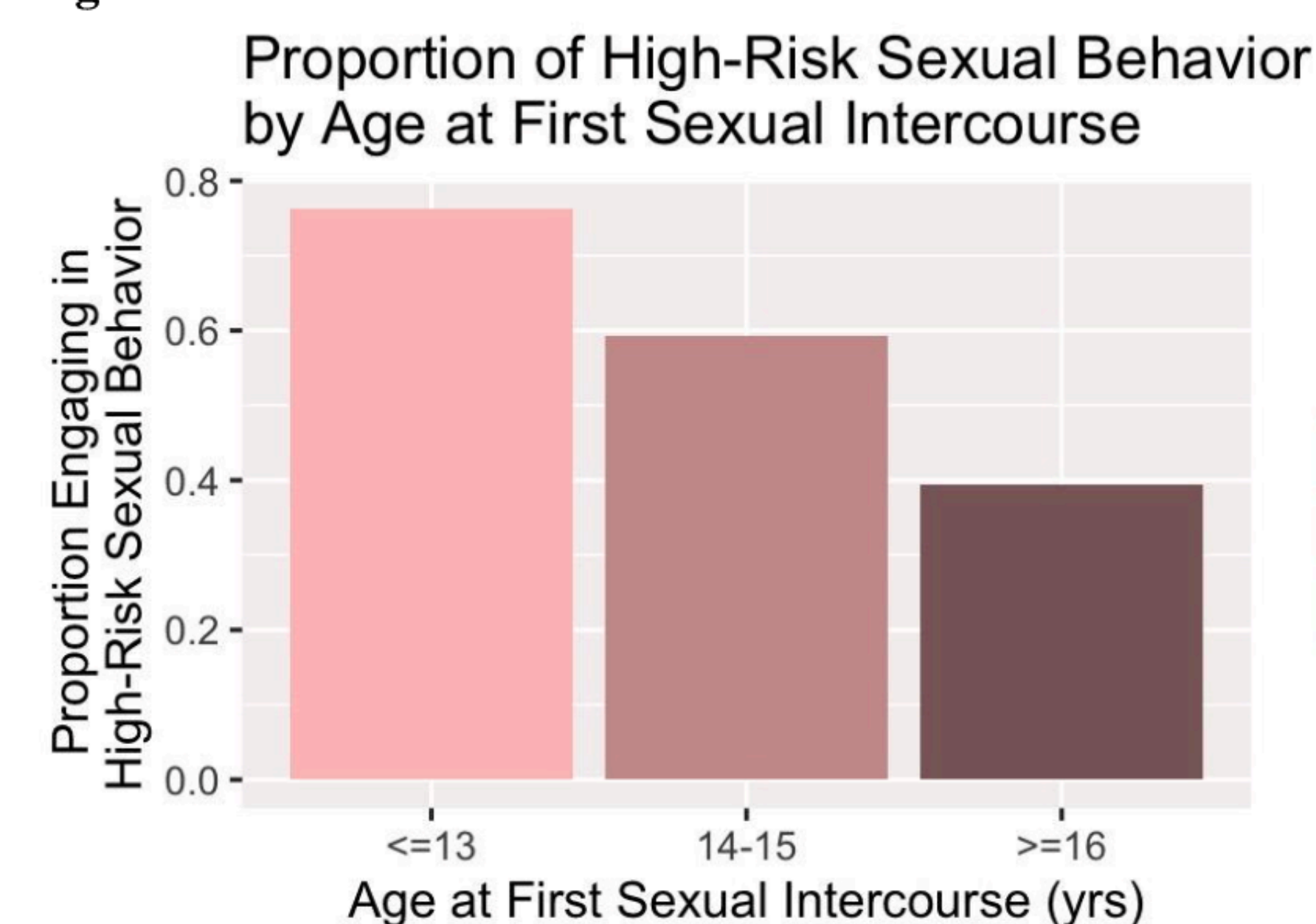
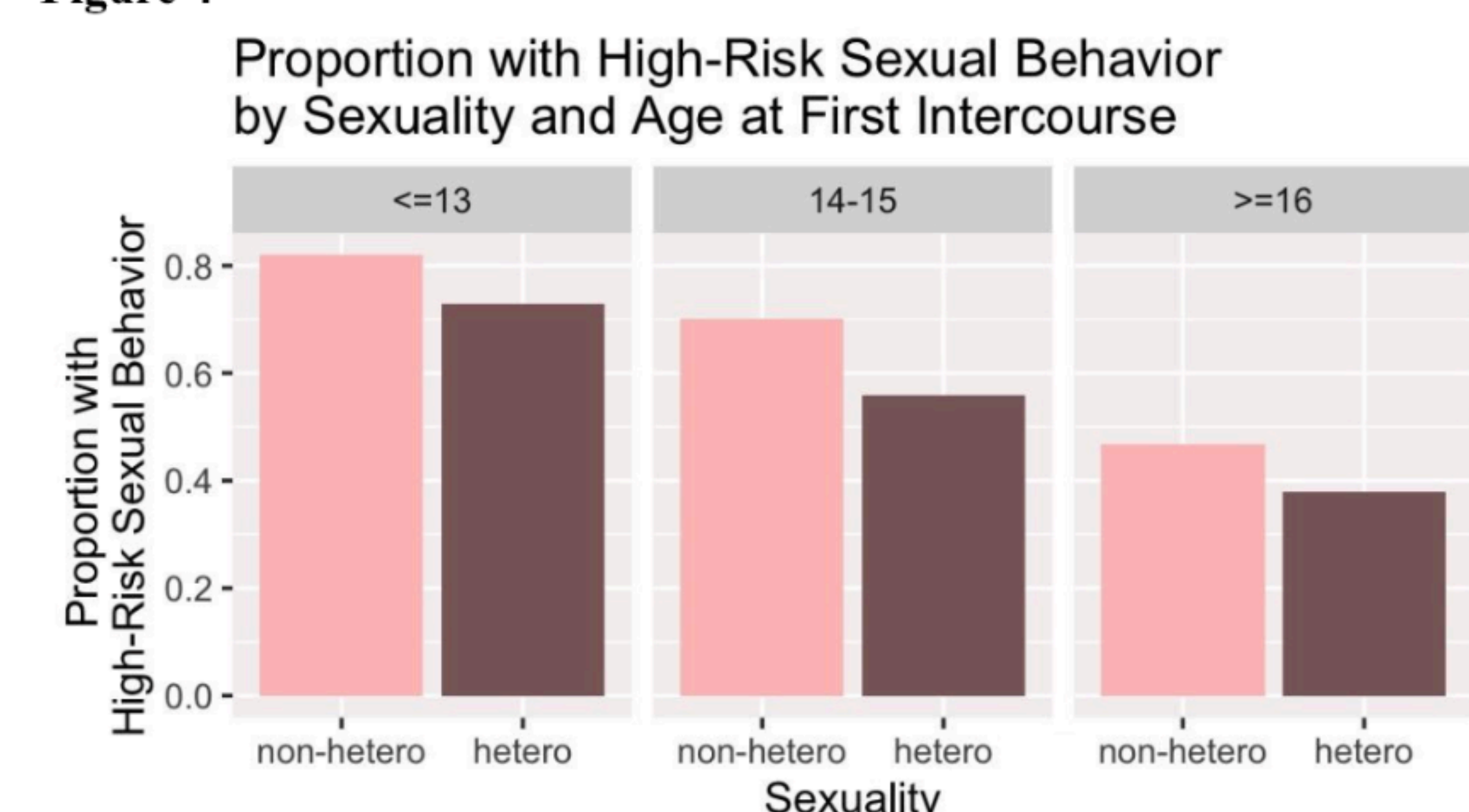


Figure 4



## DISCUSSION

- The age at which adolescents first have sex remains a powerful predictor of risk among American Youth across regions and irrespective of sexual identity (Figure 4).
- Because early sexual debut and non-hetero identity are separately and cumulatively associated with higher risk (Figure 4), they may suggest a “vulnerability profile” (Hill et al., 2026). Health professionals and educators should look beyond isolated behaviors. By assessing vulnerabilities holistically, providers can better identify adolescents who require integrated support services.
- To perform this analysis, sexual identity and high-risk behaviors were collapsed into binary categories. This simplifies the data but loses the nuance of diverse sexual identities (e.g., bisexual vs. asexual experiences) and the varying degrees of sexual risk.
- Future research is necessary to further investigate potential economic, class, and social factors that may also contribute to high risk profiles.

## REFERENCES

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