



The Predicted Association between Spending Time with Siblings and Depression Prevalence in Adolescents

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Introduction

- Anxiety is often linked to depression and other mental health struggles. Within anxiety disordered children, there is little association found between perceived hostility and affection from their sibling and an anxiety disorder in the child (Lindhout et al., 2003).
- However, multiple nonclinical studies suggest an association between internalizing problems in children and negative sibling interactions (Lindhout et al., 2003).
- Poorer relationships with siblings prior to age 20 and a family history of depression both independently predict the occurrence of depression in adulthood (Waldinger, Vaillant, & Orav., 2007).
- Analyzing how siblings interact and their current mood as adolescents can provide parents an opportunity to intervene prior to depression further developing into adulthood, especially if there is a family history of depression (Reinherz et al., 2003).

Research Questions

- Is depression prevalence among adolescents associated with time spent with their siblings?
- Does the association between depression prevalence and time spent with their siblings differ between biological sexes?

Methods

Sample

- Respondents (n=1204, only participants who have siblings) were drawn from the first wave of The National Longitudinal Study of Adolescent to Adult Health (AddHealth)
- AddHealth is a longitudinal study of a nationally representative sample of over 20,000 adolescents in grades 7-12 during the 1994-1995 school year (Wave 1) in the United States.

Measures

- **Depression prevalence:** assessed using a question about how often the participant felt depressed within the last week. Each response was coded on a scale of 0 to 3, 0 (never or rarely) to 3 (most of the time or all of the time). These responses were then coded as binary, 0 corresponding to 0 and 1 corresponding to 1 (sometimes), 2 (a lot of the time), or 3.
- **Sibling time:** Score responses were taken from study participants who answered the question of how often they spend time with their siblings, scored over a range of 0 (none) to 3 (a lot).
- **Biological Sex:** Female and male.

Results

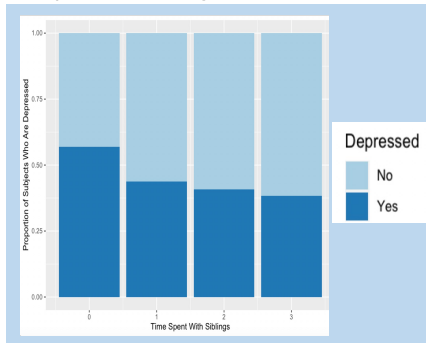
Univariate

- **Depression prevalence:** 41.4% of respondents reported being depressed
- **Sibling time:** 5.98% spent *no time* with siblings, 21.68% spent *a little time* with siblings, 35.63% of respondents spent *some time* with siblings, while 36.71% spent *a lot of time* with siblings.
- **Biological Sex:** 48.09% of respondents are male

Bivariate

- Chi-Square analysis showed that adolescents who **spent time a lot with their siblings on a regular basis were significantly less likely to experience depression or depression-like symptoms** (38.2%) than those who **spent less time** with their siblings on a regular basis. Individuals who spent *some time* with siblings had a **depression** rate of 40.6%. Those who spent *little time* with siblings had a rate of 43.7%, while 56.9% of individuals who spent *no time* with siblings were **depressed**, $p < 0.05$.
- Logistic regression shows individuals who **spend no time** with their siblings are 1.3 times *more likely to experience depression*. However, adolescents who *do not* spend time with their siblings do **not** have a statistically significant association with depression prevalence. See **Figure 1**.

Figure 1. Depression Prevalence Among Adolescents and Time Spent With Their Siblings

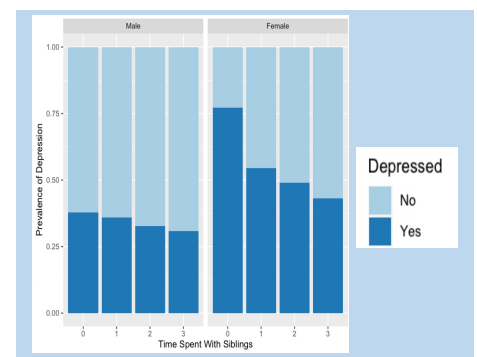


- Adolescents who spend **a little time** with their siblings are 0.59 times *less likely* to experience **depression**. Adolescents who spend **some time** with their siblings are 0.52 times *less likely* to experience **depression** and adolescents who spend **a lot of time** with their siblings are 0.47 times *less likely* to experience **depression**. See **Figure 1**.
- Adolescents who do spend **at least a little time** with their siblings all have a statistically significant association with depression rate.

Multivariate

- The association between **depression** prevalence in adolescents and **time spent** with siblings after controlling for **sex** is statistically **significant and negative**. More time spent with siblings reduces the likelihood of being depressed.
- Additionally, the association between biological **sex** and **depression** prevalence is also statistically **significant**. However, biological sex did *not* prove to be a **significant** moderator of the association between **depression** prevalence and **time spent** with siblings as the interaction term of time spent with siblings and biological sex was *not* significant.
- **Female** adolescents are *more likely* to suffer from **depression at all levels of time spent** with their siblings compared to **male** adolescents (O.R. 2.05, $P < 0.05$). See **Figure 2**.

Figure 2. Proportion of Adolescents Who Experience Depression Based on Time Spent with Siblings, by Gender



Discussion

- Female adolescents may be more sensitive to emotional changes and depression like symptoms compared to male adolescents in general.
- This data was collected during the school year of 1994-1995 so the results from a similarly conducted study today may vary as adolescents live different lives and face different challenges due to changes in society which may result in alternate results from this sample.
- Notably, the present findings are based on how study participants had felt in the past week. Thus, adolescents may not have been clinically diagnosed as depressed and could have just been feeling depressed in the days before when the interview was conducted.
- For future research, it could be worthwhile to focus the study on participants who have been clinically diagnosed as depressed to have a standardized way to classify depressed individuals in order to more effectively compare them to non-depressed individuals.