



The Association between Sibling Rivalries and Academic Success

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Introduction

- Around 80% of Americans live with at least one sibling and are reported to spend half of their free time engaged with their siblings (Demographic Research, 2017).
- Sibling relationships are an understudied field.
- In comparison to the oldest sibling, the youngest siblings are more likely to feel academic rivalry (Jenkins, J., & Dunn, J. (2009).
- Sibling rivalries can lead to underachievements in academic success if sibling rivalries are not regulated since it can lead to resentment or jealousy for one another (Ilechukwu, S. T. (1988), Tucker, C. J., Updegraff, K., & Baril, M. E. (2010).
- However, if it is regulated, then it can be very beneficial to the social and cognitive growth of all children involved (Dunn, J. (1983), Leung, A. K. D., & Robson, W. L. M. (1991).

Research Questions

- Is there an association between sibling rivalries and academic success?
- Is there an association between sibling rivalries and academic success based on self efficacy levels?

Method

Sample

- Respondents (n=864) were drawn from the first wave of the National Longitudinal Study of Adolescent Health (Add Health) during the 1994-95 school year. The questions ranged from health status to familial relations and were asked to adolescents in grades 7-12.

Measures

- Sibling rivalry will be examined looking at two individual measures:
- The amount of time spent with sibling was coded dichotomously; it was given a 0 if the siblings spent none or little time together and a 1 if the siblings spent some or a lot of time together.
- How often siblings quarreled was also coded dichotomously; it was given a 0 if they never quarreled and a 1 if they quarreled to some degree.
- Academic success will be measured using an estimated average GPA for academic success that utilizes all course subjects (math, science, english, and history) collectively. Responses ranged from a quantitative scale of 1 (1.0 gpa or lower) to 4 (4.0 gpa).
- Self efficacy was coded dichotomously; people who did not view themselves as more intelligent than other people their age were given a 0 while people who did were given a 1.

Results

Univariate

- 92% of respondents quarrel with their siblings
- 75.7% of respondents spend time with their siblings

Bivariate

- Figure 1: When examining the association between average GPA and how often siblings quarrel, an Analysis of Variance (ANOVA) revealed that among siblings, those who quarrel more with their siblings had higher average GPAs (Mean=2.93, s.d. ±0.73) compared to those that barely quarrel with their siblings (Mean=2.59, s.d. ±0.78), $F(1,884)=12.12, p<.001$.
- Figure 2: When examining the association between average GPA and time spent with siblings, an Analysis of Variance (ANOVA) revealed that among siblings, those that spent a lot of time with their siblings had higher average GPAs (Mean=2.98, s.d. ±0.72) compared to those that barely spent time with their siblings (Mean=2.67, s.d. ±0.76), $F(1,884)=28.5, p<.001$.

Figure 1. The amount of time siblings quarrel as well as their average GPA

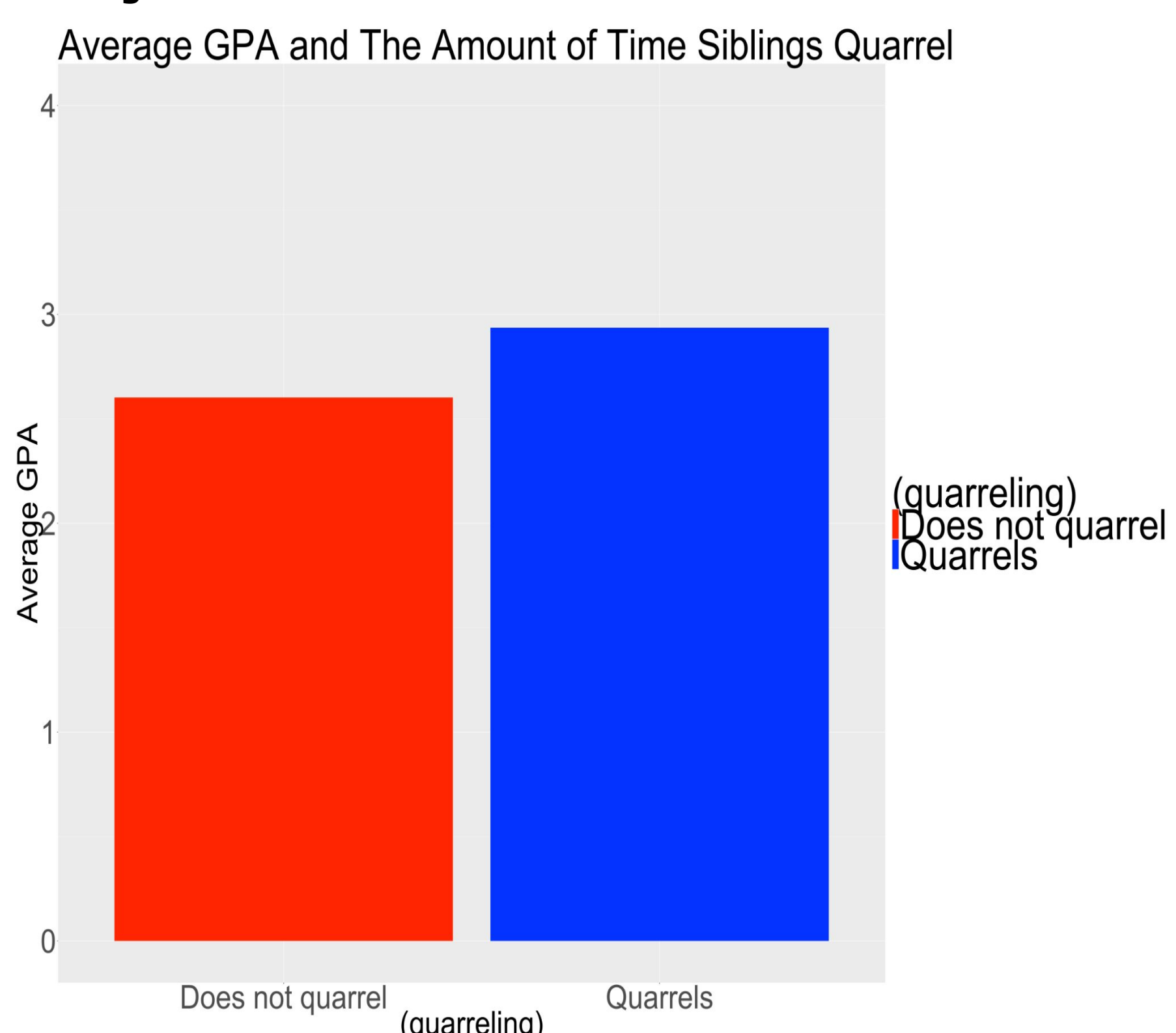


Figure 2. The amount of time siblings spent with one another as well as their average GPA

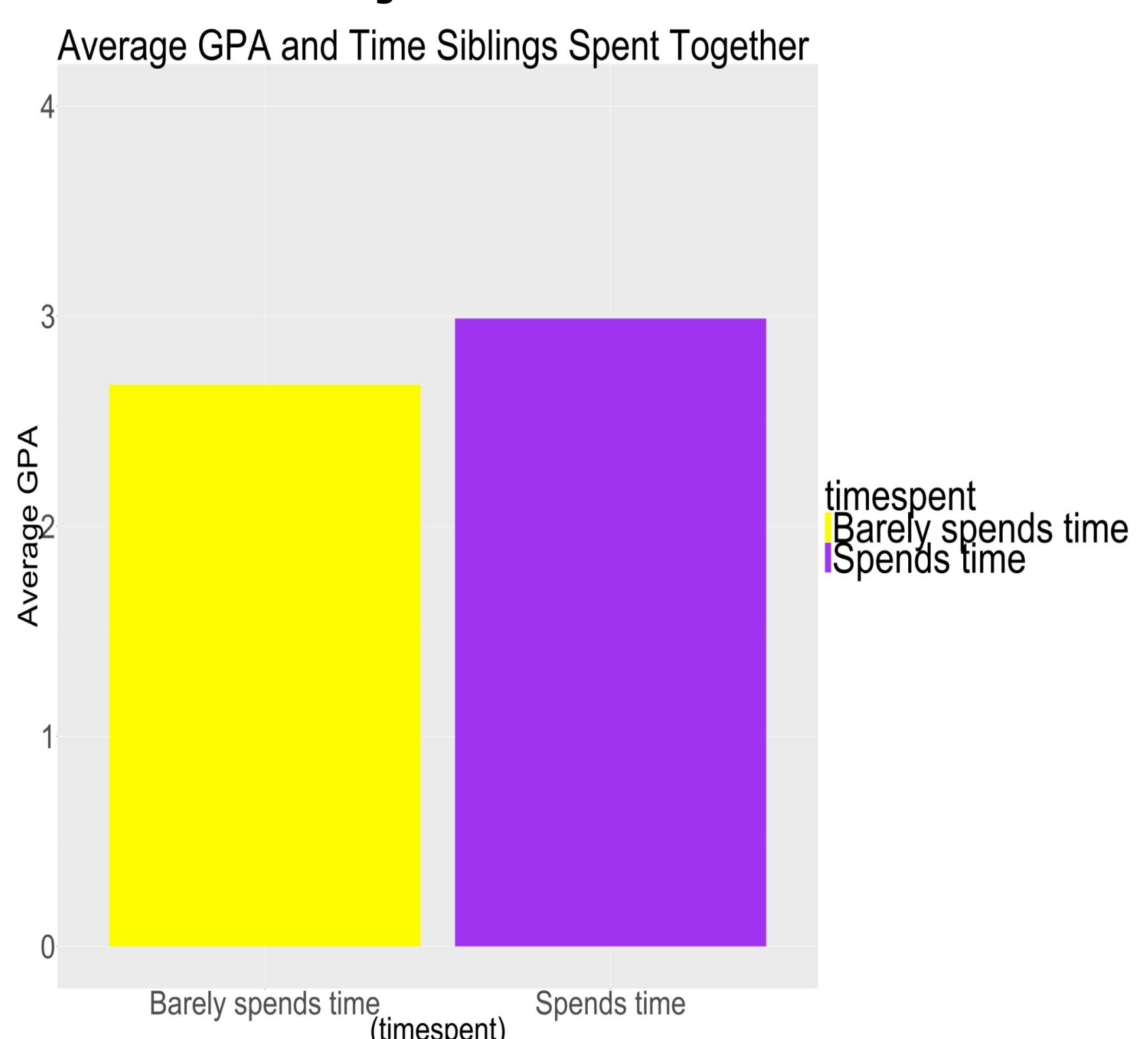
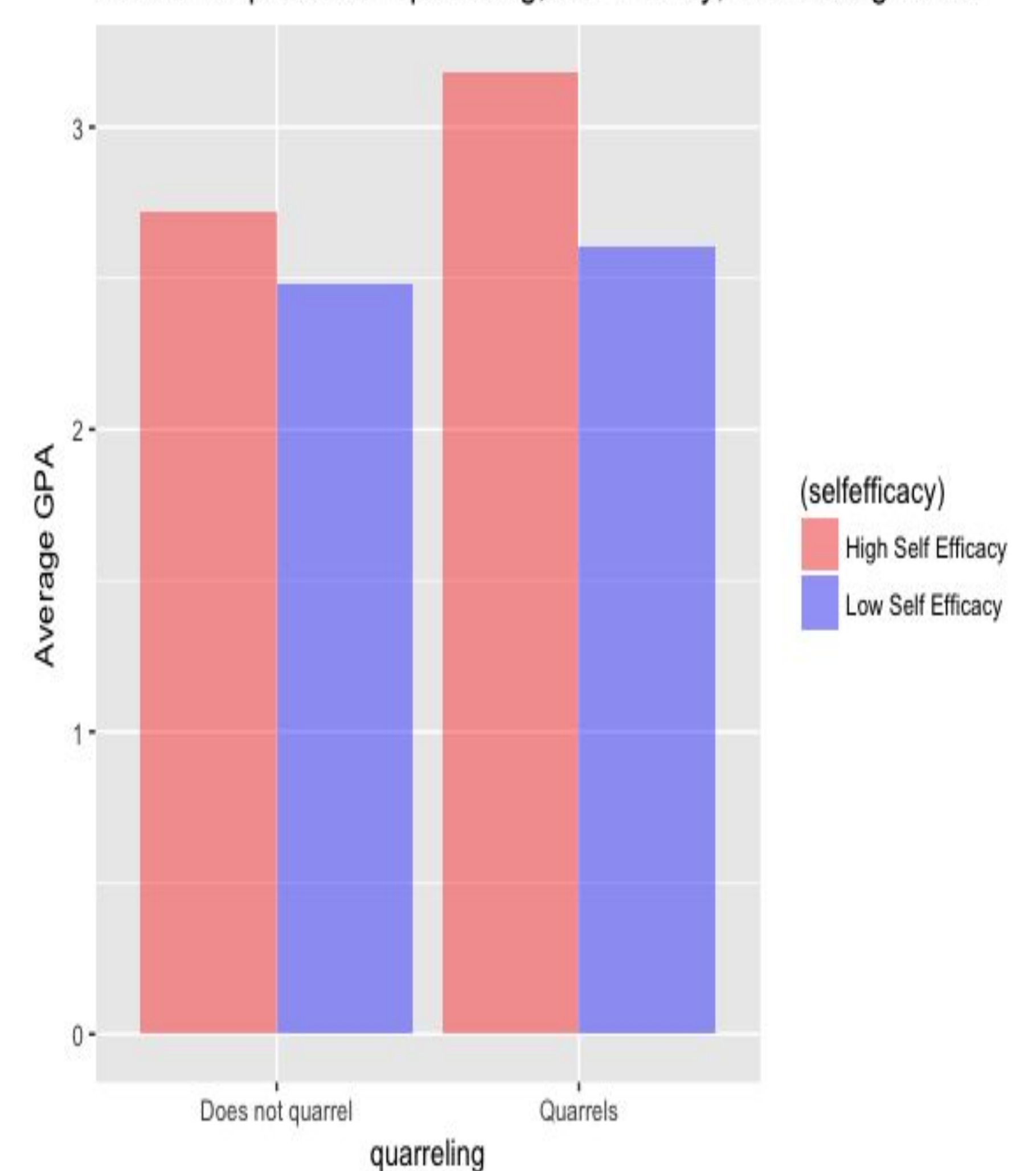


Figure 3: The relationship between quarreling, self efficacy, and average GPA

Multivariate

- Self Efficacy appears to moderate the relationship between quarreling and Average GPA. People who quarrel have a higher average GPA than those who do not quarrel for those with high self efficacy. People who quarrel slightly have higher average GPA than those who do not quarrel for those with low self efficacy (Figure 3).
- There appears to be a significant relationship between quarreling and higher average GPA even after introducing the self efficacy variable. Those who quarrel have on average a GPA that is .29 units higher than those who do not quarrel ($B=.29, p<0.001$). Those who have a lower self efficacy on average have a GPA that is .59 units lower than those who have high self efficacy ($B=-.59, p<0.001$).
- I am 95% confident that the true coefficient lies within .01 and .46.

Relationship between quarreling, self efficacy, and average GPA



Discussion

- From my research, it appears that sibling rivalries breeds academic success (via higher average GPA). This means that parents should encourage rather than discourage this friendly competition.
- With that being said, parents should monitor the rivalries to ensure they are healthy rather than detrimental to a child's esteem.
- Educators might use this information to address the advantages of sibling rivalries and encourage parents' to consider enacting such healthy competitions between their children.
- Because sibling relationships in general is an under studied field, further research is needed to determine the scope of sibling rivalries (ex. what constitutes a sibling rivalry, what about being an only child, can the benefits of sibling rivalries extend beyond academics, etc.).

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Jenkins, J., & Dunn, J. (2009). Siblings within families: Levels of analysis and patterns of influence. *New Directions for Child and Adolescent Development*, 2009(126), 79-93. <https://doi.org/10.1002/cd.258>

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