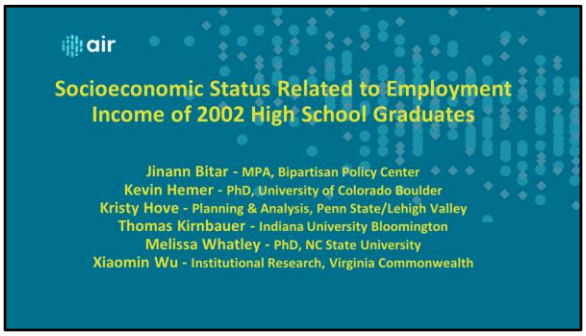
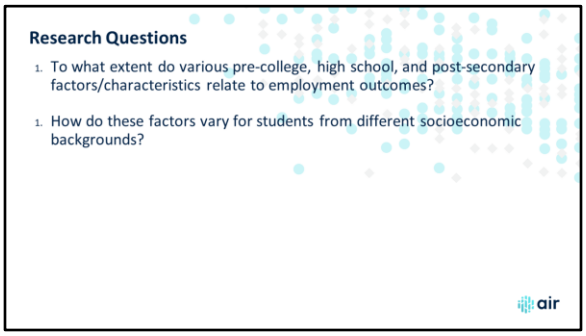


Greetings: Good Morning. My name is Jinann and I was a member of group 6 with a focus on socioeconomic status, along with Kevin, Kristy, Thomas, Melissa and Xiaomin.

Elevator Pitch: Our team was keenly interested in exploring the relationship between variables of socioeconomic status and level of education. Education is a key component to social mobility in the U.S. Using publicly available data from the Educational Longitudinal Study of 2002 (ELS:2002), our study examines how education relates to employment income. To this end, we conducted a series of multiple regression analyses examining how income relates to pre-college characteristics, high school, and postsecondary factors. We also conducted sub-group analyses for respondents from low-income backgrounds and respondents who have parents without a four-year degree. We found that significant factors vary when data are disaggregated.

To give you a 30,000 foot view, this presentation will briefly describe the process and methodology of our study, as well as results of the analysis.



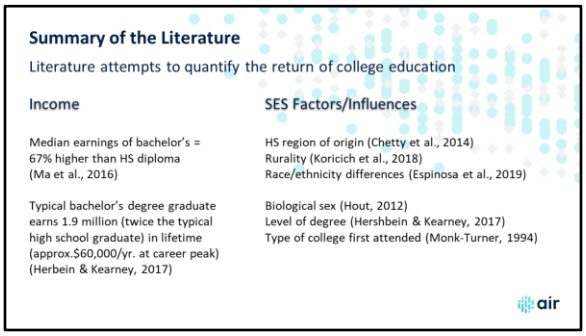
When we began discussing what we wanted to investigate, a primary question stood out to the group -- who achieves social mobility? This lead us to wonder about differences based on education which informed by the literature, guided our our selection of data, variables and analysis.

This discussion resulted in our final research questions,

1) To what extent do various pre-college, high school, and post-secondary factors/characteristics relate to employment outcomes?

1) How do these factors vary for students from different socioeconomic backgrounds?

To better contextualize our study, let's consider a brief summary of prior research on this topic.



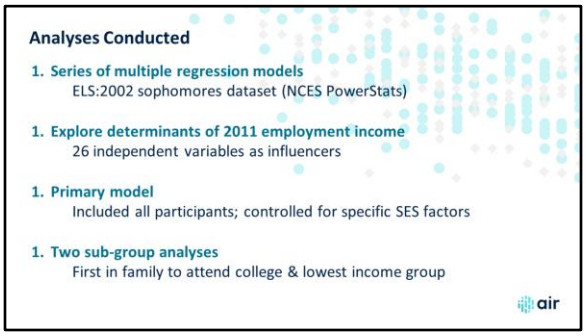
While the literature focused on the effects of postsecondary education, research suggests that several high school characteristics play a role in a student's income mobility, such as a student's region of origin (Chetty et al., 2014) and the rurality of this location (Koricich et al., 2018).

Beyond these high school considerations, a plethora of literature attempts to quantify the economic return to education. And a meta-analysis of the literature reveals substantial economic benefits for people who obtain a college degree. The annual earnings of bachelor's degree recipients are nearly $25,000 ($24,600), or 67%, higher than those who only have a high school diploma (Ma et al., 2016). More recently, Chetty et al. (2017) found that colleges have an important role in facilitating income mobility.

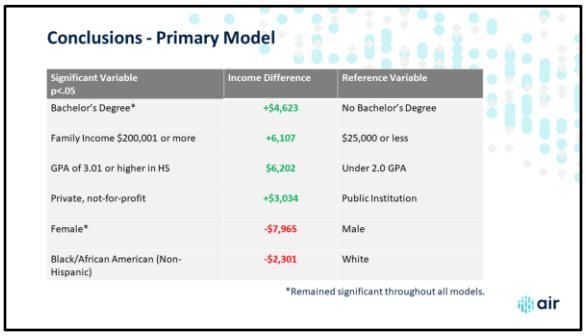
Overall, sigher education pays. Students who complete a two or four year degree see significant increases in wages, are less likely to be unemployed and have healthier lifestyles, reducing health care costs -- although earnings vary greatly by field of study. A recent Georgetown CEW (Center for Education and the Workforce) study reveals that the most lucrative majors are not necessarily the most common and that business and health majors are the two non-stem majors that lead to above-average wages. The good news for those who complete a bachelor's degree is that no matter the major, they

are likely to earn more than high school graduates.

It is important to note that researchers found students who are least likely to obtain a college education benefit the most from college (Brand & Xie, 2010). Additionally, there are employment earnings differences based on race and ethnicity (Espinosa et al., 2019), biological sex (Hout, 2012), the level of the degree earned (Hershbein & Kearney, 2017), and the type of college first attended (Monk-Turner, 1994).



As for the study, we used NCES PowerStats to conduct a series of multiple regression models to explore determinants of 2011 employment income using the 2002 ELS sophomores. The average income for these individuals was $26,088. We included up to 26 independent variables that represent pre-college characteristics, high school, and college factors. Our primary regression model included all participants and controlled for socioeconomic factors. After initial analysis, two sub-group focused on students who have parents without a 4-year degree, and students with a total family income in 2011 that was below approximately $25,001.

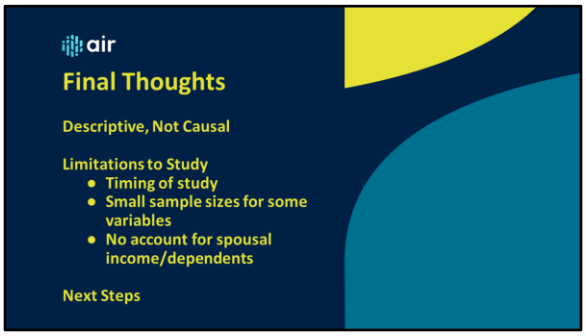


In our first regression model, the 26 independent variables explained 8.4% of the variance in the 2011 income. Statistically significant regression coefficients for the first model included completion of a bachelor's degree, a family income of $200,000 or more, a HS GPA of 3.1 or higher, and attending a private not for profit school. Compared to their male and white counterparts, female identified and Black/African American participants made less overall income.

Following up, the exploration of our two subgroup models based on income and parental education revealed several statistically significant factors, which included a positive impact from graduating with a bachelor's degree and a negative impact on identifying as female.

Across the three models, the influences on average income ranged between just under $12,000 and slightly over $13,000 (-$11,878 and $13,186).

Given the statistical tools and methods used, these results are intended to be descriptive and should not be interpreted as causal factors for income mobility.



Some limitations that guide improvements for future study included the time from of this study, small sample sizes and missing relevant data.

Due to sample sizes, we did have to collapse certain variable responses throughout our models. For instance, individuals listed as “Other Race” include American Indian/Alaska Native, Asian, Hawaii/Pacific Islander, and people with more than one race. In addition, it is important to note that our outcome variable, 2011 income, is only about nine years after students were sophomores in high school. Many individuals could still be in school or early in their professional career and their income may not be considered stable yet.

Finally, our data lacked information on spousal or familial support.

Our next steps will be to take this work and consider how NCES data may be combined or supplemented to answer the question more in depth.

Thank you.