



## **Rural Youth Survey: Trends and Developments in the Attitudes and Aspirations of Rural Pennsylvania Youth**

**By:**  
**Lacey Wallace, Ph.D., Sam Tanner, Ph.D., Freyca Calderon-Berumen, Ph.D.,**  
**and Lauren Jacobson, Ph.D.**  
**Penn State Altoona**

May 2022

This project was sponsored by a grant from the Center for Rural Pennsylvania, a legislative agency of the Pennsylvania General Assembly. The Center for Rural Pennsylvania is a bipartisan, bicameral legislative agency that serves as a resource for rural policy within the Pennsylvania General Assembly. It was created in 1987 under Act 16, the Rural Revitalization Act, to promote and sustain the vitality of Pennsylvania's rural and small communities. Information contained in this report does not necessarily reflect the views of individual board members or the Center for Rural Pennsylvania. For more information, contact the Center for Rural Pennsylvania, 625 Forster St., Room 902, Harrisburg, PA 17120, telephone (717) 787-9555, [www.rural.pa.gov](http://www.rural.pa.gov).

## **Abstract**

This project expanded on the Rural Youth Education Project, a longitudinal study of youth enrolled in rural Pennsylvania schools that began in 2006 and ended with a final wave of data collected in 2010. The goals of this project were to document the educational, career, and residential aspirations of rural youth, to examine the community, family, and peer factors that might shape aspirations, and to detail the opportunities and barriers that youth experience. The project involved a survey of 9<sup>th</sup> and 11<sup>th</sup> grade students in four randomly selected rural Pennsylvania school districts. Student survey data were supplemented with interviews of one school principal in each of the four districts. Data were collected in spring 2021, during the COVID-19 pandemic. The results indicated a decrease in rural youth educational aspirations since 2010. Students' educational goals were strongly associated with their relationships with their parents. More youth wanted to remain living in rural Pennsylvania than in 2010, though students with higher educational aspirations were more inclined to leave rural Pennsylvania. Career aspirations remained similar to 2010, with health care being the top-reported career goal of today's rural youth. Career aspirations were highly gendered, as male and female students largely aspired to gender-normative occupations. Significant percentages of youth were using social media to explore educational and job opportunities. The data also revealed that many students and their families were negatively impacted by COVID-19. Student reports of depression and anxiety were related to these experiences. Youth reported significant concerns about academics, health, and their futures as a result of the pandemic. The results of this project suggest that rural youth may benefit from increased emotional support following the COVID-19 pandemic, increased efforts to encourage diversity in career aspirations, and more strategic use of social media to raise awareness of local career and educational opportunities.

**Key Words:** rural youth; aspirations; COVID-19

## Executive Summary

This project expanded on the Rural Youth Education Project (RYE), a longitudinal study of 7<sup>th</sup> and 11<sup>th</sup> grade youth enrolled in rural Pennsylvania schools in 2006. The RYE concluded in 2010.

The goals of this project were to document the educational, career, and residential aspirations of rural youth today, to examine the community, family, and peer factors that might shape these aspirations, and to detail the opportunities and barriers that youth experience. The study, conducted in spring 2021 during the COVID-19 pandemic, also investigated the impact of COVID-19 on rural youth and their families. This study involved the development and administration of an online survey to students enrolled in 9<sup>th</sup> and 11<sup>th</sup> grades. These students attended schools in four rural school districts in Pennsylvania. Secondary data from sources including the Pennsylvania Department of Education and the U.S. Census Bureau American Community Survey were used to assess how district-level factors, like poverty, were related to students' own aspirations. To supplement student survey data, the research team interviewed a school principal from each district for their insights into challenges and successes within each school district, barriers faced by students, opportunities available to students, and the impact of COVID-19.

### *Key Findings*

- Educational aspirations of rural youth are lower than in the 2010 RYE. More youth today plan to earn a high school diploma or less, and fewer plan to complete a four-year college degree. In this project, 27.5 percent of 11<sup>th</sup> grade students indicated that they planned on attaining a high school diploma or less, a 16.5 percent increase since 2010.

- Educational aspirations were strongly related to family relationships. Youth who had a positive relationship with a parent held aspirations that paralleled the educational attainment of that parent.
- More youth today than in 2010 hoped to live in rural Pennsylvania as adults. About a third of 9<sup>th</sup> and 11<sup>th</sup> graders wished to either stay in their hometown or somewhere else in rural Pennsylvania. However, those with higher educational aspirations are more inclined to leave rural Pennsylvania.
- Few students reported being satisfied with current job opportunities or chances to get ahead in their local communities.
- Youth largely aspire to careers that are gender-normative (i.e. females gravitate towards nursing, males towards manufacturing), contributing to a gender divide in both educational and residential aspirations.
- Healthcare was the most common career field sought by students. There were few changes in the career aspirations of youth since 2010. The desire for positions in labor and production decreased since 2010, from 11 percent to 8.5 percent.
- Youth experiences with COVID-19 were unrelated to their aspirations for the future. However, significant percentages of youth reported concerns about the impact of COVID-19 on their health, future education, and relationships. Youth whose families were impacted by the pandemic reported more frequently experiencing symptoms of depression and anxiety.

## *Policy Considerations*

The study results suggest that today's rural youth need additional support from their schools and, indirectly, the Pennsylvania legislature to help close gender gaps and rural-urban gaps in youth aspirations and achievement. Several specific policy considerations include:

- Expand the Reach Out PA: Your Mental Health Matters initiative to provide additional mental health support for rural youth as they return to in-person schooling. The results of this study indicate that rural students have experienced a substantial negative impact on their emotional well-being as a result of COVID-19. Addressing the mental health needs of these returning students will require more than the initiative initially suggested in regard to personnel (full-time counselors) and screening.
- Use social media more strategically to keep youth informed about jobs and educational opportunities in their local areas. A significant percentage (~25 percent) of students in this project reported using social media to learn about such opportunities. Social media can also be used to livestream classes, training, and other events for rural students who may not be able to access these opportunities otherwise.
- Integrate efforts to break down gender barriers in career aspirations and labor force participation into the existing Academic Standards for Career Education and Work (CEW). Without trusted adults to model success in various fields, rural youth may have difficulty seeing themselves working in a field that is not gender-normative or different from the jobs held by their family members.

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## Introduction

Outmigration (residents leaving Pennsylvania), unemployment, and substance abuse challenge rural Pennsylvania communities disproportionately compared to urban populations. Yet, the interplay between youth expectations and aspirations and the ultimate fate of rural youth are poorly understood. Significant insight was gained from the Center for Rural Pennsylvania's 2010 Rural Youth Education Project (RYE), but many factors have changed since then. This project built on the RYE by developing and administering a comparable survey tool that was more relevant to what youth faced in 2020/21. Following is an outline of the reasons a new survey was needed, the project's goals and objectives, and the relevant literature on the topic.

The 2010 RYE was a longitudinal study, conducted from 2004 to 2010, that followed two cohorts of rural Pennsylvania youth who were enrolled in grades 7 and 11 at the start of the project. Much has changed in the past decade that necessitated a new and updated study of Pennsylvania's rural youth. College tuition rates increased across the country, including in Pennsylvania. Unemployment rates in Pennsylvania as well as the nation steadily decreased since 2010 (Bureau of Labor Statistics, 2019). Yet, the population described as the "sandwich" generation, those raising high school and college-aged youth while also struggling to care for elderly parents, increased substantially in the past decade (Friedman et al., 2017). These families face financial and emotional strains that impact youth college and career aspirations in ways we do not adequately understand. Families influence youth not only through upbringing (parents' level of education, extracurricular activities, etc.), but also in the degree to which they offer financial and social support for college and vocational training. It is likely that some undetermined set of rural youth do not aspire to further training or education because they believe they lack the resources to do so.

Significant and rapid social and cultural changes have occurred since 2010. Teens now face profound and novel influence from social media platforms, like Snap Chat and Tik Tok, that did not exist in 2010. How these platforms influence the aspirations of youth needs to be studied. The human brain continues to develop through the early 20s. Susceptibility to peer influence changes substantially from early high school to later high school and beyond (Steinberg & Monahan, 2007). Younger teens are more vulnerable to peer influence than older teens, and teens, as a whole, are more susceptible to social influence than adults (Brechwald & Prinstein, 2011). The ever-presence of smartphones means teens receive news and peer feedback more quickly than in decades past (Anderson & Jiang, 2018). Teens today spend more time on smartphones and other internet-connected devices than ever before (Anderson & Jiang, 2018). A large portion of this time is spent on social media. For many teens, social media platforms are not only a source of entertainment and social connection, but also a source of information and opportunity. Policies aimed to help youth reach their educational and career aspirations have not kept pace with changes in the ways youth engage with social media.

Rural students have higher likelihood of low educational attainment than their urban counterparts (DePaoli et al., 2016). Rural youth are more likely than other youth to attend a two-year college and relatively more rely on community colleges (Byun et al., 2017). School college prep opportunities are significant predictors of whether rural youth later attended four-year institutions or attained bachelor's degrees (Byun et al., 2017). Prior to this project, it was unknown how these opportunities may have changed in rural Pennsylvania high schools since 2010. While educational attainment in rural areas has increased since 1970, the urban-rural gap in the percentage of adults with a bachelor's degree or higher increased in recent years; that gap was 14 percent in 2017 (Marre, 2017).

Keeping youth engaged in their local communities may help prevent out-migration. About half of Pennsylvania out-migrants in 2016 were ages 18 to 34 (Pennsylvania State Data Center, 2019). Limited pay prospects and lack of job opportunities were top predictors of rural youth leaving rural communities (Vazzana & Rudi-Polloshka, 2019). Other research found that families encouraged youth to leave rural communities following economic downturn (Sherman & Sage, 2011). The 2040 population projections for Pennsylvania predict a population decrease for rural counties (Behney et al., 2014). Declining populations can harm local economies through a shortage of those with needed skills, decreased tax revenue, and slower growth.

It is clear the factors that shaped youth aspirations have been changing since 2010. A key component in evidence-based policymaking is a needs assessment. Given the dramatic and rapid social changes in the past decade, the needs of today's youth have almost certainly changed in ways we do not adequately understand. The programs and policies directed at today's youth must also, by necessity, differ to adapt to the changing youth environment. A comparison to 2010 was necessary to determine which current efforts have been most effective to retain youth in rural communities. Pinpointing the factors that affect future aspirations may help rural Pennsylvania schools identify promising youth and foster their career aspirations. Unless youth aspirations are matched with opportunities in the local community, out-migration remains a serious risk.

Identifying youth aspirations and helping youth reach their goals is not a task specific to schools. Community-based organizations, such as the Be Proud Foundation (partnered with the Upper Darby School District), have stepped in to help youth with life obstacles, like poverty or abuse/neglect, prepare for opportunities after high school. Other examples are: the Beaver County Rehabilitation Center Pre-Employment Transition Services program, which helps youth ages 14 to 21 with skills like job interview techniques, locating job opportunities, and filling out

job applications; and the Bradford County Action Out-of-School Youth Programs, which give youth the chance to talk to potential employers to learn more about possible career opportunities. As these examples indicate, helping youth determine and reach their aspirations is an effort shared by schools, nonprofit agencies, local governments, Pennsylvania state government, employers, and families. This research sought to identify barriers related to peers, families, schools, and communities that keep students from exploring local employment opportunities or considering higher education.

Failing to keep youth engaged in their local communities creates long-term costs. Youth and young adults who are neither working nor enrolled in school are referred to as “disengaged” (Belfield et al., 2012). In 2017, an estimated 174,900 Pennsylvania young adults ages 16 to 24 were disengaged (Lewis, 2019). The Pennsylvania youth disengagement rate increased from 10.8 percent in 2014 to 11.7 percent in 2017, with higher disengagement rates in rural areas (Lewis, 2019). Lewis and Gluskin (2018) compared the life outcomes of youth who experienced disengagement with youth who did not. After 14 years, those who were engaged/connected throughout young adulthood earned \$31,000 more per year, were 45 percent more likely to own a home, were 42 percent more likely to be employed, and were 52 percent more likely to report good or excellent health. Identifying what factors shape the future career and educational aspirations of youth is essential to prevent later disengagement. This project examined these factors, particularly the new variables arising in the past decade that have almost certainly exacerbated challenges for Pennsylvania’s rural youth.

Just prior to the start of the project, Pennsylvania faced an unprecedented crisis: COVID-19. The pandemic substantially altered daily life for parents and their school-age children throughout the United States. Many parents lost jobs, started working from home, started new

jobs, or changed their work hours (Parker et al., 2020). Parents reported experiencing higher stress, especially if they were faced with financial challenges (Brown et al., 2020). Low-income households, rural residents, those under 30, and racial and ethnic minorities were impacted more negatively, financially, than others (Horowitz et al., 2021; Neel, 2020). Research on rural areas, specifically, found severe negative consequences of COVID-19 for mental health, unemployment, life satisfaction, and other outcomes (Mueller et al., 2021). Thompson et al. (2020) found that parents' social isolation not only predicted negative health outcomes for themselves, but also for their adolescent children.

As schools across the nation closed, some areas offered time-structured remote learning for students while classes in other school districts were asynchronous or unstructured (UNICEF, 2021). In all, 93 percent of homes with children reported some form of distance learning in 2020 (McElrath, 2020). About 80 percent of these families were using online resources while 20 percent were using paper materials sent home from school; some were using both (McElrath, 2020). In rural areas with limited internet access prior to the pandemic (Powell et al., 2010), reaching students was a particular challenge. A systematic review of COVID-19 impacts worldwide found that school closures were associated with increased anxiety, sadness, stress, loneliness, obesity, hyperactivity, and lack of self-discipline among children and teens (Chaabane et al., 2021). Further, youth with disabilities and mental health needs often lost or saw a reduction in the school-based resources that were previously available. Other research found evidence of stagnated learning progress during remote learning, particularly among disadvantaged families (Engzell et al., 2021). Developing an understanding of how COVID-19 impacted rural families and youth became an additional goal of this project as the pandemic unfolded.

## Goals and Objectives

The project had five goals:

1. Document the attitudes of today's rural Pennsylvania public high school students toward their communities, academic aspirations, future careers, and where they hope to live as adults. Attitudes towards the community refer to topics such as social support and safety as well as opportunities for jobs, advancement, and education. Academic aspirations are whether youth hope to attain a high school diploma, some sort of college education, or vocational training. Future career plans refer to the type of profession youth hope to pursue after high school. Some youth may immediately seek employment after high school while others may pursue higher education or career-specific training.
2. Document advanced or specialized classes, training, and other opportunities offered in rural Pennsylvania public high schools.
3. Identify family, peer, school, and individual demographic factors that influence youth aspirations, future plans, and attitudes. The impact of COVID-19 on youth and families was included as part of this goal.
4. Identify district-level demographic factors that influence youth aspirations, future plans, and attitudes.
5. Assess how youth attitudes, and the factors that influence attitudes, have changed since 2010.

## **Methodology**

### **Design of the Student Survey Instrument**

Student-based data for this project were collected using a survey in spring 2021. Questions for the survey included items from the 2010 RYE project, some verbatim and others that were modified to reflect the 2020/21 context and interests of the current project, as well as new items written by the investigative team. The survey was targeted towards students in the 9<sup>th</sup> and 11<sup>th</sup> grades. To ensure readability, the student survey was written to the 6<sup>th</sup> grade reading level using the Flesch-Kincaid Grade Level scoring system (Brewer, 2019). The survey was also pilot tested with lower-level college students at Penn State Altoona. Participating college students in the pilot study were asked to provide feedback on wording and answer choices to ensure readability. The Penn State Institutional Review Board also reviewed and approved the final survey instruments and administration protocols prior to administration. The survey is included as Appendix 1. The investigators created both a paper version of the survey, as shown in the Appendix, as well as an online version with the same questions and response options.

The student survey focused on the following as dependent variables: educational aspirations (high school, 2-year or 4-year college, vocational training, certificate programs), occupational aspirations (professional/managerial, service/technical, labor and production), residential aspirations (rural/urban Pennsylvania, outside Pennsylvania), and attitudes about the community. Other topics addressed in the student survey as predictors and control variables included, but were not limited to: classes taken, family structure, education, interaction with peers, social media use, perceived aspirations of peers, and classes taken by peers, and student and parent demographics. Most items on the student survey were closed-ended to facilitate data

analysis and reduce coding error. The exceptions were items asking students about their desired job as an adult and the occupations of their parents.

### **Secondary Data**

In addition to the survey measures, the investigators also used district-level data to examine the role of community and school context. Data on district-level demographics were obtained from existing, publicly accessible data, specifically the 2019 American Community Survey and the Pennsylvania Department of Education.

### **School Principal Interview Protocol**

The qualitative part of this project involved four semi-structured interviews with superintendents of rural school districts in Pennsylvania at the end of the 2020-2021 school year to explore what the expectations of district administrators are for their students after high school graduation and the support they provide for them. The research interview is likely the most commonly used and widely recognized type of qualitative data collection in the social sciences. Marvasti and Tanner (2020, p. 329) described the research interview as “a mode of communication where one party, the researcher or interviewer, asks questions and the other side, the respondent or interviewee, provides answers.” While students addressed many topics on the student survey, school principals can speak to the wider context that students may not be aware of, particularly school challenges with funding, response to COVID-19, and teacher-parent relations.

There are different types of research interviews. This project used what Galletta and Cross (2013) described as a semi-structured interview, which falls somewhere between structured survey interviews and qualitative in-depth interviews. Seitz (2016, p. 233) suggested that in-depth interviews are helpful in “creating detailed pictures of people’s lives.” Survey

interviews typically consist of predetermined questions and response categories like the one used with the students in this project. The semi-structured interviews for this project were similar to a survey interview in that each included a set of questions to ask the respondents. The base set of questions is included as Appendix 2. These questions, as well as interview procedures, were vetted and approved by the Penn State Institutional Review Board prior to the start of the project.

However, the interviews also borrowed from practices of the in-depth interview in that interviewers were encouraged to ask follow-up questions or allow participants to respond in ways that deviated from the script. Marvasti and Tanner (2020, p. 333) argued that semi-structured interviews “allow for and encourage flexibility in the design of interview questions.” The research team took this claim into consideration while building interview questions, in part, to honor Kvale’s (1996, pp. 3–4) suggestion that interviews are social occasions in their own right where the interviewer and the interviewee are jointly involved in the production of knowledge, and space should be made to “wander through the landscape” of the interview rather than extract information.

All of the interviews were conducted on Zoom. Indeed, Marvasti and Tanner (2020, p. 333) suggested that “new technologies have the potential to significantly alter the way interviews are gathered and represented” and online communication tools offer “new possibilities for face-to-face interviews with respondents.” This trend seemed especially relevant in light of the ongoing COVID-19 pandemic.

All interviews were recorded and transcribed for later analysis. Interview transcripts were analyzed using elements of Constant Comparative Analysis. Fram (2015, p. 3) described this method of interpretation as “an iterative and inductive process” where “data are compared to other data” that begins with “open coding to develop categories” allowing “possible core

categories to emerge.” The research team analyzed the transcripts individually. Next, they brought codes back to the group. The research team collaborated on making decisions about the categories to explore and, in turn, returned to the transcripts to identify moments where interview responses connected with these categories. The process was iterative and, eventually, the team decided on the following categories as a way to interpret the interviews. These include: how the administrators articulated what was next for students in their districts, their responses about technology, and their responses about the COVID-19 pandemic.

### **Student Survey Sampling**

This study focused on public high school students in four rural Pennsylvania school districts. When the project started in late 2019, the initial goal was to recruit 15 rural school districts to participate. Challenges associated with COVID-19, including school closures, school reopenings, staffing shortages, and outbreaks, left most school districts unable or unwilling to take part in a research study. Rather than abandon the project, the researchers opted to focus efforts on a small handful of school districts that were able to participate. These school districts will not be identified in this study to protect student and school principal confidentiality.

School districts were selected using a two-stage random sampling procedure. Pennsylvania is divided into 29 Intermediate Units (IUs). IUs serve a specific geographic area (one or more counties) and are essentially an organizational level between the school district and the Pennsylvania Department of Education. IUs were used as the basis for sampling to ensure that the final sample included schools from across the Commonwealth. Using the Center for Rural Pennsylvania’s definition, school districts were considered rural if the number of people per square mile within the school district was fewer than 291. Of the 29 IUs, five contained no school districts designated as rural. A total of four IUs were randomly selected from the

remaining 24 IUs. Within each selected IU, one rural school district was randomly selected. The four selected school districts were contacted to discuss the study and to determine willingness to participate. The lead investigator initiated contact via emails and phone calls to the superintendent's office and school board in each district. Contact information for each school district was located by visiting the district's webpage. This initial contact was followed by a conference call to discuss the project in more detail and address any concerns or questions held by school district officials.

All 9<sup>th</sup> and 11<sup>th</sup> grade students in selected districts were eligible to complete the student survey. The 9<sup>th</sup> and 11<sup>th</sup> grade enrollment totals for each of the four districts were 311, 102, 163, and 148, for a cumulative total of 724 eligible respondents. Response rates were 74 percent, 81 percent, 50 percent, and 84 percent, respectively. In all, 509 respondents participated in the survey for an overall response rate of 70 percent.

### **Survey Administration**

This study employed a passive parental consent procedure. Research shows that an active-only parental consent procedure results in bias by underrepresenting students with behavioral problems, students living with one parent, and students with poorer academic performance (Shaw et al., 2015). First, an informed consent document describing the project was provided to parents of children enrolled in 9<sup>th</sup> and 11<sup>th</sup> grades in the selected districts. Since all four participating districts were using hybrid or remote learning at the time, all districts opted to email information about the project to parents and/or post information about the project on the school webpage. A copy of this notice is included as Appendix 3. Parents were asked to contact the lead investigator with concerns or questions, or if they wanted to opt their child out of participating. Survey administration did not begin until two weeks after parental notification.

Individual students were also provided with information about the survey at the time of survey administration (via an informed consent document) and were asked to provide their assent on the survey itself. Student responses were and are confidential. Participation in the survey was entirely voluntary. Students could skip any survey questions they chose and could discontinue participation at any time. Both students and their parents could withdraw consent at any time. If a student or parent withdrew consent, that student's data would be removed from the dataset. This did not occur during the project. Each school district opted to have students complete the survey online during school hours using the Qualtrics survey platform. Teachers in each school district helped students access the survey link.

### **Data Limitations**

The data used in this project have several limitations that must be considered. First, all student survey and school principal data were obtained from just four of Pennsylvania's many rural school districts. Gaining school district cooperation was a challenge for this project as many school districts were struggling with school closures and remote learning, health and safety concerns, and other COVID-19-related challenges. The four districts that did participate are not necessarily representative of rural Pennsylvania as a whole. Surveys have their own associated limitations. Students were free to skip over questions. Open-ended questions can result in typos and data entry errors. Response rates, though more than 70 percent for three districts, hovered at 50 percent for one of the districts. The circumstances of students who did not respond to the survey cannot be determined; the survey was anonymous. As a cross-sectional examination, this project cannot speak to changes over time. Since COVID-19 was an evolving crisis, it remains unknown how students and their families coped over time. School circumstances also changed from month to month in many districts.

## **Survey Data Analysis**

The educational, residential, and career aspirations of youth were first examined descriptively, by calculating the percentage of students with various aspirations for their future. These are presented in tables in the remainder of this report, with results distinguished by grade level. Regression analysis was used to estimate associations between student aspirations and factors such as family relationships, involvement with peers, and demographics. Regression analysis requires a different modeling strategy based on the distribution of the outcome (i.e. dependent variable) of interest. Associations with the level of education a student hopes to attain, for example, were estimated with linear regression, which is suitable for outcomes that are continuous or nearly so. Estimating associations with whether a student hoped to remain in or leave Pennsylvania in the future were estimated with logistic regression, which is better suited for outcomes that are dichotomous (i.e. yes or no). In all regression analyses, all predictor variables were entered into the model simultaneously. This means that each coefficient estimated reflects the association between that predictor and the outcome, after accounting for other predictors in the model. Models were estimated using complete case analysis, only using data from students with complete information for all variables in the model.

## **Results and Findings**

The four school districts included in this study each constitute a unique context. The total populations of the four districts ranged from about 5,000 residents to about 15,000 residents in 2019. District population was highly correlated with school district enrollment. In the 2019-20 school year, these four districts had total enrollments under 2,000 students across all grade levels. Median household income was similar across the four districts and was under \$54,000.

School expenditures were more varied. Average school district expenditures per student in these four districts ranged from about \$17,000 to \$24,000 for the 2019-20 academic year.

### **Demographic Overview**

The four school districts that participated in the project had a combined 2019 population of 33,346, a 4.3 percent decrease from their combined 2010 population of 33,848 (U.S. Census Bureau, 2019). In all, about 21 percent of the population was under 18 in 2019, while 57 percent of residents were 18 to 64 years old, and 22 percent were age 65 or older. The population of these four districts was almost exclusively non-Hispanic white (96.6 percent) in 2019. An estimated 14.2 percent of residents in these four districts were below the poverty threshold with almost a quarter of households earning \$25,000 or less per year (U.S. Census Bureau, 2019). In comparison to rural Pennsylvania as a whole, these four districts were less racially diverse, had a greater proportion of residents age 65 and older, and experienced greater rates of poverty (U.S. Census Bureau, 2019). Further district-level details are provided in analysis of district-level influences on student aspirations.

Demographic characteristics of students in the sample are shown in Table 1. As indicated, about 56 percent of the sample was enrolled in 9<sup>th</sup> grade while the remainder were enrolled in 11<sup>th</sup> grade. The sample was evenly divided by gender. In line with district-wide characteristics (U.S. Census Bureau, 2019), only 2.6 percent of students in the sample identified as Hispanic and 3 percent identified as Black. A little over half the sample, 56 percent, lived at home with two biological parents. Another 18 percent reported having one biological parent and one stepparent at home. Most students, 73 percent, said they had at least one sibling living in their household. In terms of parental education and employment, most students in the sample reported parents working full-time jobs outside of the home. Of those who knew their parents'

educational attainment, about 32 percent indicated that their father had a college degree, and more than half said their mother had a college degree.

**Table 1: Student and household characteristics (n = 509)**

Demographic Characteristics		N	Proportion	(95% CI)
	Male	239	51.8%	(47%, 56%)
	Female	222	48.2%	(44%, 53%)
	9 <sup>th</sup> grade	266	55.7%	(51%, 60%)
	11 <sup>th</sup> grade	212	44.3%	(40%, 49%)
<i>Race and Ethnicity:</i>				
	Hispanic	13	2.6%	(1%, 4%)
	White	456	89.0%	(86%, 91%)
	Black	15	3.0%	(2%, 5%)
	Other race	19	3.7%	(2%, 6%)
<i>Household Structure:</i>				
	Two biological parents	287	56.4%	(52%, 61%)
	One biological parent, one stepparent	92	18.07%	(15%, 22%)
	Single parent	89	17.5%	(14%, 21%)
	Has siblings at home	374	73.5%	(69%, 77%)
<i>Parents:</i>				
	Mother figure works full-time	277	71.8%	(67%, 76%)
	Mother figure graduated from college	207	54.8%	(50%, 60%)
	Father figure works full-time	313	83.2%	(79%, 87%)
	Father figure graduated from college	115	31.9%	(27%, 37%)

Note: CI refers to confidence interval. N refers to the count for a particular response category.  
Data source: 2020/21 Rural Youth Survey.

### Educational Aspirations

The educational aspirations of youth are presented in the first panel of Table 2, with results differentiated by grade level. As shown, about 24 percent of 9<sup>th</sup> graders hoped to finish high school while 46.5 percent said they would like to go on to earn a 4-year college degree. A small percentage, 6.6 percent, planned to attend graduate school. Among 11<sup>th</sup> graders, 17.5 percent aimed for high school as their highest educational attainment level. About 42 percent wanted to earn a 4-year college degree and more than 10 percent intended to go to graduate school.

Students have many reasons for aspiring to one level of education over another. As part of the survey, students were asked to indicate their reason(s). These are listed in the second panel

of Table 2. Among 9<sup>th</sup> graders, the most common rationale was that it “will help me get the job I want.” Nearly half of 9<sup>th</sup> graders, 49 percent, said they desired a certain level of education because it would help them earn the income they desired. A little over one third of the sample, 38 percent and 37 percent respectively, said they aspired to a certain level of education because they wanted to learn more or because their parents or guardians wanted them to. For 11<sup>th</sup> graders, reasoning was very similar, but far fewer said their parents’ or guardians’ wishes were driving their goals.

Students were also asked if there were any factors that could prevent them from going as far in school as they would like. These are listed in the bottom panel of Table 2. Nearly half of 9<sup>th</sup> graders, 48 percent, said that cost could pose a barrier to their education. Approximately 29 percent and 27 percent, respectively, worried that their grades or intelligence might hold them back. Students in 11<sup>th</sup> grade expressed very similar concerns, although a smaller percentage reported perceiving barriers to their education.

**Table 2: Student educational aspirations (n = 509)**

<b>Educational Aspirations</b>	<b>9<sup>th</sup> Grade</b>		<b>11<sup>th</sup> Grade</b>	
	<b>N</b>	<b>Proportion</b>	<b>N</b>	<b>Proportion</b>
Less than high school	2	0.8%	2	10%
High school	62	24.0%	35	17.5%
Vocational, trade, or business school	23	8.9%	37	18.5%
Associate degree	34	13.2%	21	10.5%
Bachelor's degree	120	46.5%	84	42.0%
Graduate school	17	6.6%	21	10.5%
<b>Reasons for Aspirations</b>	<b>N</b>	<b>Proportion</b>	<b>N</b>	<b>Proportion</b>
I don't know	34	12.8%	19	9.0%
Will help me get the job I want	197	74.1%	161	75.9%
My parents/ guardians want me to	101	38.0%	60	28.3%
My teachers encouraged me to	68	25.6%	58	27.4%
My friends have the same goals	42	15.8%	37	13.9%
It will get me the income I want	131	49.2%	107	50.5%
I want to give back to the community	39	14.7%	37	17.5%
I want to live somewhere else	75	28.2%	56	26.4%
I want to learn more	99	37.2%	83	39.2%
I have family responsibilities	37	13.9%	23	10.8%
I want to go further in school than my parents	68	25.6%	44	20.8%
<b>Perceived Barriers to Reaching Goals</b>	<b>N</b>	<b>Proportion</b>	<b>N</b>	<b>Proportion</b>
Nothing	77	28.9%	56	26.4%
Cost	128	48.1%	107	50.5%
Parents don't want me to go that far in school	7	2.6%	3	3.3%
I need to work right after high school	37	13.9%	28	17.5%
I'm not smart enough	73	27.4%	49	23.1%
Grades	78	29.3%	52	24.5%
I don't work hard enough	33	12.4%	22	10.4%
I have family responsibilities	31	11.7%	13	6.1%
I have health problems	15	5.6%	9	4.2%
My friends are doing something else	16	6.0%	5	2.4%
Not enough educational opportunities nearby	25	9.4%	14	6.6%
It won't get me the job I want	31	11.7%	19	9.0%

Notes: N refers to the number of students in a particular grade selecting the indicated response. Students could select multiple reasons for their education goals as well as multiple perceived barriers. Percentages will not total 100. Data Source: 2020/21 Rural Youth Survey.

A key goal of this project was to not only document students' educational aspirations but to identify the family, peer, and other factors that might be related to those aspirations. Table 3 displays results of an Ordinary Least Squares (OLS) regression analysis assessing how educational aspirations were associated with family, peer, and other factors measured in the

survey. Coefficients greater than one indicate that a predictor was associated with higher educational aspirations. As shown, students identifying as male did not plan to go as far in school as those identifying as female. Students with higher grades, however, aspired to higher levels of education.

The only family-related factors that seemed to be related to educational aspirations were students' relationships with their parents. Students with more positive relationships with their mothers had marginally higher educational aspirations. Those who had more positive relationships with their fathers had significantly lower educational aspirations. This may be related to the concept of modeling (Akers, 2009; Bandura, 1977). When a child identifies and bonds closely with an adult, they may internalize that adult's beliefs and goals, mimic that adult's behavior, and generally turn to that adult for guidance. Since mothers, on average, had higher educational attainment than fathers in this project, those students identifying with mothers may have felt a greater desire to go further in school, like their mothers. Those closer to their fathers may not have felt the same pressure or desire as their fathers had lower levels of educational attainment.

**Table 3: OLS regression with educational aspirations outcome (n = 249)**

		<b>Educational Aspirations</b>	
	<b>Predictor</b>	<b>Coefficient</b>	<b>SE</b>
<i>Demographics:</i>			
	Male	-0.53**	(0.16)
	White	0.54	(0.42)
	9 <sup>th</sup> Grade	0.11	(0.15)
	Grades on report card	0.13*	(0.05)
<i>Family:</i>			
	Two biological parents at home	0.03	(0.17)
	Mother figure works full-time	0.05	(0.17)
	Mother figure graduated from college	0.10	(0.06)
	Frequency talking with mother about goals	-0.04	(0.12)
	Father figure works full-time	-0.13	(0.22)
	Father figure graduated from college	0.04	(0.06)
	Frequency talking with father about goals	0.07	(0.11)
	Mother-child positive relationship	0.20 <sup>+</sup>	(0.11)
	Father-child positive relationship	-0.22*	(0.11)
<i>Peers:</i>			
	Best friend educational aspirations	0.28**	(0.06)
	Frequency talking with peers about goals	-0.05	(0.10)
	Best friend grades on report card	0.00	(0.05)
<i>Other factors:</i>			
	Depression and anxiety score	0.01	(0.44)
	Family impacted by COVID-19	0.10	(0.12)
Constant			
R-Squared		0.31	

Notes: \*\* p< 0.01. \* p< 0.05. + p<0.10. Standard errors in parentheses.

As noted in Table 2, students with higher educational aspirations also tended to have close friends with higher educational aspirations. Without a longitudinal study, it is not clear whether this reflects peer influence or whether students with already high goals cluster together as friends (Brechwald & Prinstein, 2011). The last two predictors in Table 2 related to emotion and the impact of COVID-19. Depression and anxiety were measured as the average frequency the student reported feeling emotions like being downhearted and blue or very nervous and

anxious. The impact of COVID-19 on the family was measured as no impact, one form of impact reported by the student (job loss, for example), or multiple impacts. Neither emotion nor COVID-19 had an association with educational aspirations.

As a further examination of social impacts on educational aspirations, this project asked students several questions about their social media use. Social media has become an almost ubiquitous presence in the lives of today's teens. Only 22 of the 509 respondents indicated that they did not use social media. While social media can be used and enjoyed for many purposes, the students surveyed in this project reported that they used social media to explore and further their education. Of the 9<sup>th</sup> grade students, 28.2 percent indicated that they used social media to learn. This figure was 37.7 percent for 11<sup>th</sup> graders. Additionally, 12 percent of 9<sup>th</sup> graders and 25 percent of 11<sup>th</sup> graders noted that they used social media to explore schools or educational opportunities.

### **Career Aspirations**

Students were asked to indicate on the survey what career or job they hoped to hold at age 30. Their answers were coded into the occupational categories used by the U.S. Census Bureau and American Community Survey (see Appendix 4 for list). The most frequently listed occupations by students are displayed in the first panel of Table 4. Across both grades, the most noted career goal was a career in health care, specifically nursing. The next most common category was professional, scientific, and technical services (18.7 percent of 9<sup>th</sup> graders and 16.9 percent of 11<sup>th</sup> graders). Occupational goals in this category varied but included specific occupations such as engineer and research specialists in fields like biology. More than 10 percent of students in each grade indicated a career goal in other services, like automotive work and hair care. Of students in 9<sup>th</sup> grade, 2.3 percent aspired to join the military. This figure was 4.6 percent

for 11<sup>th</sup> grade students. In all, 9.8 percent of 9<sup>th</sup> grade students and 6.5 percent of 11<sup>th</sup> grade students expressed an interest in the arts. Many of these students had an interest in graphic design.

A follow-up question in the survey asked students how determined they were that they would be doing that particular job at age 30. Of those in 9<sup>th</sup> grade, 36.9 percent said they were very sure and 38.1 percent said they were somewhat sure. For 11<sup>th</sup> grade students, 37.0 percent said they were very sure and 46.4 percent said they were somewhat sure.

Even if students were unsure of their occupational goals, the survey asked students to indicate what level of education they believed they would need for their future career. Their responses are noted in the second panel of Table 4. Approximately 30 percent of students across grades believed they would need a four-year college degree to meet their goals. An additional 16.9 percent of 9<sup>th</sup> graders and 11.5 percent of 11<sup>th</sup> graders felt they would need to attend graduate school. In contrast, 14.5 percent of 9<sup>th</sup> graders and 17.0 percent of 11<sup>th</sup> graders felt they would need a high school diploma. Very few students felt they could meet their goals without finishing high school.

**Table 4: Student career aspirations**

<b>Career Aspirations</b>	<b>9<sup>th</sup> Grade (n = 154)</b>		<b>11<sup>th</sup> Grade (n = 214)</b>	
	<b>N</b>	<b>Proportion</b>	<b>N</b>	<b>Proportion</b>
Health care	53	24.8%	34	22.1%
Manufacturing	2	1.0%	6	3.9%
Education	5	2.3%	13	8.4%
Professional, scientific, and technical services	40	18.7%	26	16.9%
Construction	14	6.5%	7	4.6%
Other services, except public administration	23	10.8%	18	11.7%
Public administration	14	6.5%	7	4.6%
Arts, entertainment, and recreation	21	9.8%	10	6.5%
Military	5	2.3%	7	4.6%
Management	8	3.7%	7	4.6%

  

<b>Believed Education Needed</b>	<b>9<sup>th</sup> Grade (n = 182)</b>		<b>11<sup>th</sup> Grade (n = 249)</b>	
	<b>N</b>	<b>Proportion</b>	<b>N</b>	<b>Proportion</b>
No high school	9	3.6%	2	1.1%
Some high school	4	1.6%	3	1.7%
High school diploma	36	14.5%	31	17.0%
< 2 years of vocational, trade or business school	17	6.8%	7	3.9%
2+ years of vocational, trade or business school	9	3.6%	28	15.4%
Some college	25	10.0%	6	3.3%
2-year college degree	20	8.0%	22	12.1%
4-year college degree	71	28.5%	55	30.2%
Graduate school	42	16.9%	21	11.5%
Professional degree	16	6.4%	7	3.9%

Notes: N refers to the number of students in a particular grade selecting the indicated response. Percentages will not total 100 since only selected occupational categories are shown.

Data Source: 2020/21 Rural Youth Survey.

This project investigated what family, peer, and other factors might be associated with students selecting health care, professional and scientific services, or other professional services as a career goal. These were the top three reported career goals of students. This examination involved calculating three ordinary logistic regression models estimating students' likelihood of listing a chosen career as a future goal. These models used the same predictors as for educational attainment (Table 2), with the addition of whether the student had a parent working in the chosen field. Unlike educational aspirations, family, peer, and other factors were not associated with career goals. The only exception was gender. Males were nearly 90 percent less likely than

females to list a career in healthcare. Yet they were 2.7 times more likely than females to list a career in the professional, scientific, or technical services. There were no gender differences in whether students aspired to a career in other services.

As with education, students indicated that they used social media as a job networking tool. Of 9<sup>th</sup> grade students, 10.9 percent said they used social media to connect with others for work or look for job opportunities. This figure was 24 percent for 11<sup>th</sup> grade students.

### **School Principal Insight: What's Next?**

Many of the school principals' responses to interview questions concerned the role their institutions played in readying students for life after school. The two views most prominent in the interview data were that schools should prepare students for college and career readiness and that schools should teach people how to be healthy adults who understand and participate in society.

Each of the respondents mentioned college and career readiness in some way. One interviewee had very specific comments about what he thought students should do after graduation. He said that the "best thing going now is sending lots of students to (a local university) for the Physician's Assistant program or nursing (local universities)." He went on to say that the "science program is the strongest" so "several students are going to (a local university) for Engineering." This comment suggests the purpose of secondary education is to prepare students for jobs in the medical profession or in engineering as that is, in his view, the "best thing going" for students in his district. Another administrator said that "college and career readiness" are "part of the purpose of education." A third interviewee commented that as students "transition through middle school into high school, the job of education shifts into helping prepare kids for what they're going to do beyond high school." One way to understand

these three comments is that they illustrate a belief that school should prepare students for particular middle-class jobs and that college is one route to that end.

Another somewhat competing idea in the data was that school should be teaching students how to be healthy adults who participate in and understand society. One administrator said that “it’s my responsibility to ensure” that students are “getting an education in every aspect of their life, not just academics,” but “social and emotional things and all of that as well.” This view suggests that, rather than preparing students to enter a particular profession, schools ought to be cultivating healthy social and emotional habits. Indeed, another interviewee said that their job was to “create well rounded, engaged citizens.” A third respondent said that “part of education is for kids to understand there is a social structure in this country” and that “whether you like it or not, life is not fair” and it is the role of the school to “break that cycle and have kids have higher expectations for themselves and to know what opportunities are out there” to overcome “generational poverty” and “a generation of government reliance.” Creating curriculum and pedagogy to engage students in learning about social structures, such as generational poverty or social and emotional wellness, is a different view of the purpose of education than preparing students for particular middle-class jobs.

It is important to highlight the subjectivities the respondents bring to this discussion of the purpose of school in preparing students for what comes after graduation. The comment about generational poverty and government reliance reveals that the political or social perspectives of the administrators might influence how they understand the role of their school district in readying students for life after high school. Administrators have power. If, for instance, a superintendent values preparing students for middle-class jobs they see as “best,” that likely would drive the agenda of a district. An administrator who views school as a place to critique

social structures would likely influence a district differently. Ultimately, this confirms that schools remain spaces shaped by the views of their stakeholders, including school administrators, parents, and students themselves. Admittedly, administrators have more mandate than others in shaping the agenda of a district.

### **Residential Aspirations**

Students were asked how much they liked living in their current town or community. Of the 441 who responded to the question, 32.3 percent said they liked their community a lot and 31 percent said they liked their current community some. When distinguishing 9<sup>th</sup> graders from 11<sup>th</sup> graders, 36 percent of 9<sup>th</sup> graders said they liked their community a lot compared to 28 percent of 11<sup>th</sup> graders. Students' residential aspirations for the future are shown in the first panel of Table 5. As indicated, about one third of 9<sup>th</sup> and 11<sup>th</sup> graders wished to either stay in their hometown or somewhere else in rural Pennsylvania. A small percentage, between 7 percent and 8 percent, expressed a desire to live in urban Pennsylvania, such as Philadelphia or Pittsburgh. Far larger percentages of each grade level, 42 percent and 32 percent, respectively, said they wanted to leave Pennsylvania. However, about one quarter of 9<sup>th</sup> and 11<sup>th</sup> graders were undecided on where they hoped to live in the future.

A follow-up question in the survey asked students to indicate the reason(s) why they aspired to live in a certain type of area, whether inside or outside of Pennsylvania. Their answers are shown in the middle panel of Table 5. Among 9<sup>th</sup> graders, the top four rationales were to experience something new, scenery or look of the area, climate (weather), and job opportunities. For 11<sup>th</sup> graders, these were, in order, job opportunities, to experience something new, scenery or look of the area, and to be independent.

To better understand why students might want to remain in or leave their current community, the survey also asked students how satisfied they were with various aspects of their home communities. The last panel of Table 5 indicates the proportion of each grade level that listed “very satisfied” for each community characteristic. Across both grades, few students reported being satisfied with current job opportunities or chances to get ahead. Only 6 percent and 8 percent, respectively, felt very satisfied with the number of agencies available to help people in the community. There were also very few students who reported being very satisfied with entertainment opportunities in their area. Almost one third of students were very satisfied with the land in their area and more than one quarter were very satisfied with the corresponding outdoor recreational opportunities available. About 23 percent of 9<sup>th</sup> graders and 15 percent of 11<sup>th</sup> graders said they were very satisfied with the quality of their local schools and teachers.

**Table 5: Student residential aspirations (n = 509)**

<b>Residential Aspirations</b>	<b>9<sup>th</sup> Grade</b>		<b>11<sup>th</sup> Grade</b>	
	<b>N</b>	<b>Proportion</b>	<b>N</b>	<b>Proportion</b>
Hometown	38	14.9%	23	12.4%
Rural Pennsylvania	36	14.1%	38	20.4%
Urban Pennsylvania	20	7.8%	13	7.0%
Outside Pennsylvania	106	41.6%	59	31.7%
Don't know	55	21.6%	53	28.5%
<b>Reasons for Aspirations</b>	<b>N</b>	<b>Proportion</b>	<b>N</b>	<b>Proportion</b>
I don't know	56	21.1%	53	25.0%
It's where I grew up	70	26.3%	47	22.2%
Income	45	16.9%	40	18.9%
Job opportunities	90	33.8%	77	36.3%
Recreational Opportunities	40	15.0%	32	15.1%
Social Opportunities	70	26.3%	56	26.4%
Climate (weather)	94	35.3%	57	26.9%
To be close to family	74	27.8%	55	25.9%
To experience something new	103	38.7%	72	34.0%
To start a business	19	7.1%	22	10.4%
Scenery or look of the area	100	37.6%	72	34.0%
To give back to community	17	6.4%	15	7.1%
To be independent	77	28.9%	63	29.7%
<b>Satisfaction with Current Community</b>	<b>N</b>	<b>Proportion Very Satisfied</b>	<b>N</b>	<b>Proportion Very Satisfied</b>
Good paying jobs	13	5.1%	10	5.6%
Clean environment	23	9.4%	18	9.8%
Places to hang out	31	12.5%	16	8.8%
Quality schools and teachers	58	23.2%	28	15.3%
Good library, bookstores	32	12.8%	13	7.1%
Good stores and shopping	38	15.2%	13	7.1%
Cultural opportunities, like concerts	10	4.0%	11	6.0%
Lots of places to eat	30	11.9%	17	9.3%
Many chances to get ahead	18	7.3%	12	6.6%
Indoor entertainment	15	6.0%	11	6.0%
Agencies to help people	15	6.0%	15	8.2%
Land for hiking, hunting, etc.	73	29.2%	57	31.5%
Access to high-speed internet	40	16.0%	23	12.6%
Cell phone coverage	38	15.4%	24	13.3%
Organized outdoor activities, like sports	69	27.6%	49	26.9%
People in the community work together	38	15.1%	26	14.4%

Notes: N refers to the number of students in a particular grade selecting the indicated response. Students could select multiple reasons for their education goals as well as multiple perceived barriers. Percentages will not total 100. Data Source: 2020/21 Rural Youth Survey.

This project explored the family, demographic, peer, and other factors that might be associated with whether a student wanted to stay in rural Pennsylvania or move elsewhere. Table 6 displays the results of an ordinary logistic regression model testing for these associations. Odds ratios are shown. An odds ratio greater than one indicates that a predictor was associated with higher odds of wanting to remain in rural Pennsylvania. Race had to be omitted from this model since all students who aspired to remain in rural Pennsylvania identified as white. As displayed, 9<sup>th</sup> graders were about half as likely as 11<sup>th</sup> graders to say they wanted to remain in rural Pennsylvania, though this association was only marginally significant ( $p < 0.10$ ). Not surprisingly, those who felt more satisfied with their community were three times as likely as others to want to stay there as adults. Students who desired a job in non-technical services were also highly motivated to stay in their local communities. In contrast, students who wanted a higher education were less likely to want to stay in rural Pennsylvania. No family-related predictors were associated with residential aspirations. However, those who spoke frequently with their peers about where they planned to live were much less likely to want to remain in rural Pennsylvania.

**Table 6: Logistic regression with residential aspirations outcome (n = 248)**

<b>Wants to Live in Rural PA</b>			
	<b>Predictor</b>	<b>Odds Ratio</b>	<b>SE</b>
<i>Demographics:</i>			
	Male	0.81	(0.31)
	9 <sup>th</sup> Grade	0.54 <sup>+</sup>	(0.18)
	Grades on report card	0.99	(0.12)
<i>Family:</i>			
	Two biological parents at home	1.06	(0.43)
	Mother figure works full-time	0.85	(0.35)
	Mother figure graduated from college	1.14	(0.16)
	Frequency talking with mother about goals	1.03	(0.36)
	Father figure works full-time	1.16	(0.65)
	Father figure graduated from college	0.83	(0.11)
	Frequency talking with father about goals	1.38	(0.48)
	Mother-child positive relationship	0.72	(0.20)
	Father-child positive relationship	0.87	(0.24)
<i>Peers:</i>			
	Best friend educational aspirations	1.28	(0.20)
	Frequency talking with peers about goals	0.66 <sup>*</sup>	(0.14)
	Best friend grades on report card	1.10	(0.13)
<i>Other factors:</i>			
	Overall satisfaction with community	3.07 <sup>**</sup>	(0.71)
	Wants a job in health	1.28	(0.59)
	Wants a job in professional or technical services	0.71	(0.38)
	Wants a job in other services	13.82 <sup>**</sup>	(10.07)
	Educational aspirations	0.66 <sup>**</sup>	(0.11)
	Depression and anxiety score	1.30	(1.43)
	Family impacted by COVID-19	0.94	(0.26)
		Pseudo R-Squared	0.22

Notes: \*\* p< 0.01. \* p< 0.05. + p<0.10. Standard errors (SE) in parentheses. Odds ratios shown.

### **School Opportunities and Engagement**

The student survey asked about student involvement in 17 various school and community activities. Across grades, 26.3 percent of students reported no involvement in any of the activities. Another 25.9 percent were involved in only one activity. However, it is possible for students to be involved in multiple activities in the same category. For example, they could play

multiple school sports or be a member of several school-sponsored clubs. The most common activities of 11<sup>th</sup> grade students were, in order, school sports, hunting, and religious or church youth groups. For 9<sup>th</sup> graders, the top three most reported activities were school sports, hunting, and school music, art, or dance.

A follow-up question in the survey asked students to indicate what, if any, factors were a barrier to their participation in school and community activities. These are listed in Table 7. As shown, having other responsibilities like schoolwork or a job was the most frequently reported barrier for both grades. Among 9<sup>th</sup> graders, 33.8 percent also reported that lack of interest was a barrier to being more involved. This figure was lower for 11<sup>th</sup> grade students at 26.4 percent. More than 20 percent of students in each grade noted that they do not want to be further involved at school or in their communities. Approximately 10 percent of students across grades felt there were insufficient opportunities for involvement at school and 9 percent felt there were insufficient opportunities in the community. Cost was a perceived barrier for similar percentages in each grade.

**Table 7: Student involvement barriers (n = 509)**

Perceived Barriers	9 <sup>th</sup> Grade		11 <sup>th</sup> Grade	
	N	Proportion	N	Proportion
I don't want to be involved	56	21.1%	52	24.5%
I'm not interested in activities available	90	33.8%	56	26.4%
I don't feel safe where activity takes place	10	3.8%	3	1.4%
Transportation	35	13.2%	28	13.2%
My friends aren't involved	69	25.9%	32	15.1%
Cost	32	12.0%	21	9.9%
Parents won't allow me to participate	12	4.5%	9	4.2%
I have other responsibilities	90	33.8%	84	39.6%
Few or no activities available at my school	32	12.0%	18	8.5%
I'm worried about getting hurt	10	3.8%	5	2.4%
Few or no activities available in community	24	9.0%	18	8.5%
Health problems or concerns	14	5.3%	10	4.7%
I don't feel accepted by or in the activity	46	17.3%	25	11.8%

Notes: N refers to the number of students in a particular grade selecting the indicated response. Students could select multiple perceived barriers. Percentages will not total 100. Data Source: 2020/21 Rural Youth Survey.

This project investigated how family, peer, and other factors might be related to whether students were engaged or involved in their communities. Table 8 displays the results of an ordinary logistic regression model testing for these associations. Odds ratios are shown. An odds ratio greater than one indicates that a predictor was associated with higher odds of student engagement. Race had to be omitted from this model since student engagement and race were perfectly correlated. Very few factors were associated with student engagement. Male students were 73 percent less likely to be engaged than female students. Those with a close friend with high educational aspirations were 1.5 times more likely to be engaged themselves. However, the students' own educational goals were unrelated to engagement. There were no associations with factors like parents' engagement in the community, occupational interests, or emotional state.

**Table 8: Logistic regression with engagement outcome (n = 251)**

	Student Engaged	
	Predictor	Odds Ratio SE
<i>Demographics:</i>		
Male	0.27*	(0.17)
9 <sup>th</sup> Grade	0.86	(0.46)
Grades on report card	1.09	(0.17)
<i>Family:</i>		
Two biological parents at home	0.59	(0.34)
Mother figure works full-time	2.65 <sup>+</sup>	(1.54)
Mother figure graduated from college	0.70	(0.15)
Mother's involvement in community	1.53	(0.63)
Father figure works full-time	1.41	(0.93)
Father figure graduated from college	1.10	(0.23)
Father's involvement in community	1.75	(0.71)
Mother-child positive relationship	0.99	(0.41)
Father-child positive relationship	0.97	(0.38)
<i>Peers:</i>		
Best friend educational aspirations	1.51*	(0.30)
Best friend grades on report card	1.19	(0.20)
<i>Other factors:</i>		
Overall satisfaction with community	1.76 <sup>+</sup>	(0.53)
Positive views of school and teachers	0.76	(0.41)
Wants a job in health	0.73	(0.61)
Wants a job in professional or technical services	0.78	(0.63)
Wants a job in other services	2.28	(2.28)
Educational aspirations	1.18	(0.27)
Depression and anxiety score	3.67	(5.79)
Family impacted by COVID-19	0.70	(0.34)
Pseudo R-Squared	0.25	

Notes: \*\* p< 0.01. \* p< 0.05. + p<0.10. Standard errors (SE) in parentheses. Odds ratios shown.

### *School Principal Insight: Technology*

When the Covid-19 pandemic hit, everyone was forced to search for alternatives to keep our lives and routines going as much as we could. Schools were not the exception.

Administrators and boards of education members had to look for ways to continue providing education services to all students in the best way possible. One of the first things that

administrators faced was the need of technology, expressed this way by one of the principals, “we've been sparked with this whole Covid go online thing.” They were required to make sure that every student had the technology they needed, and, for some, that meant, “we are one-to-one technology with Chromebook.” For others, the concern was more about connectivity, access to the internet or lack of it, “I do think our technology, our infrastructure is still not there just because of where we live with the whole broadband and all that stuff.” Geographic location becomes an issue when it comes to providing “equal opportunities” to all students. The issue of connectivity and internet access was crucial at the time of the pandemic when the option to continue the learning process and curricular goals was to do it remotely: “Our biggest issue is internet connectivity at the building. We're good here at school, but we know whenever the students leave here, they don't have that. We know they can't access when they're not here.” School administrators needed to be creative in terms of finding resources and the best way to use them: “We need to figure out a solution, and we've looked at everything, from putting school buses and fire halls and things like that with WiFi,” or providing hotspots at specific points. Even some parents who did not see the need to have internet at home before were trying to get access to it for their children who were learning online for a period of time, whether a few weeks or in a hybrid mode for the whole school year. Yet, the efforts in some cases were not enough to reach out to every student. There is an acknowledgement of the progress and achievements, but also knowing there is still room for improvement, as expressed by one principal: “But it does seem to be improving in certain segments of our community where we know we had those blank spaces. It does seem to be getting a little bit better, but it's a long way off.”

Despite the recognized needs, there are some benefits gained from the use of technology. Among these accomplishments, administrators mentioned that now they are using Google classrooms to make classes more interactive for those who had to work remotely. Although some teachers were not ready or familiar with the use of technology for instruction delivery, they got up to speed with it, as “it caused us to be creative in how we deliver instruction. It really accelerated the growth of our teachers on how to use technology.” While some teachers struggle with figuring out how to use technology for remote teaching, others stayed in schools partially, or even all the time teaching face-to-face, but also providing various options for parents to be asynchronous online, synchronous online, or fully remote. For any of those options teachers needed to be ready to fulfill the curriculum requirements.

Lastly, another big achievement in terms of the use of technology was the use of email from students, at least from one of the administrators, who had been working on it for a long time: “I can actually email a kid now,” and get a reply “and I can tell you that I've been trying to do that for 15 years. Even though our students are from Generation Z, who had been growing up with the internet and social media, their use of it for educational or learning purposes is somewhat inadequate, as they are not used to communicating through email. Rather, they prefer texting and other social media applications to exchange messages with friends and family. Yet, email is the most common form of professional communication. So, this seems like a great achievement.”

### **District-level Influences on Aspirations**

One aim of this project was to explore whether and how community characteristics might relate to students' educational, career, or residential aspirations. With only four participating school districts, there was not enough variation across school districts regarding most factors

(i.e., district demographics) for a detailed analysis. However, correlations were calculated between district characteristics and the following outcomes: average student educational aspirations, proportion of students wishing to work in healthcare, proportion of students wishing to work in the professional services, science, or technology, the proportion of students wishing to work in other services, and the proportion of students who wanted to remain living in rural Pennsylvania in adulthood. District-level characteristics examined included: percent of residents with a four-year college degree, overall district population, poverty rate, mean income, unemployment rate, median age, student to teacher ratio, graduation rate, average district expenditures per student, and the percent of residents working in healthcare, the professional and scientific services, and other services.

No district-level characteristics were significantly correlated with educational aspirations. The two districts with the most students aspiring to a career in healthcare were also the two districts where the greatest percentages of residents worked in the professional, scientific, or other services. There was no significant correlation between the percent of the district population working in healthcare and the percentage of students wishing to work in healthcare. No other district-level characteristics were associated with occupational aspirations. Only district median income was correlated with residential aspirations. Students living in the district with the highest median income were more likely to say they wanted to remain in rural Pennsylvania than students in the three districts with lower median income. However, with only four districts included in the study, this observation should be interpreted with caution. It is possible there was something unique about the highest-income district that was driving this pattern in results.

## COVID-19

Given the widespread impact of COVID-19, another goal of this project was to document how COVID-19 affected families and how these experiences might have influenced student aspirations for the future. The student survey asked students how, if at all, members of their household had been impacted. These are shown in Table 9. Students in 9<sup>th</sup> and 11<sup>th</sup> grades were impacted similarly. More than half of students in each grade, 53 percent, knew someone who had been diagnosed with COVID-19. Among 9<sup>th</sup> grade families, 15.8 percent of students lived with someone who contracted the virus, and among 11<sup>th</sup> grade families, it was 10.8 percent. More than one third of students in each grade reported that someone in their household was considered an essential worker. Less than 10 percent of students reported parental job loss or job changes.

Students also indicated on the survey whether they had concerns about the long-term impact of COVID-19 on their futures. Their concerns are presented in the bottom panel of Table 9. While 21.4 percent of 9<sup>th</sup> grade students and 14.6 percent of 11<sup>th</sup> grade students did not feel concerned about any of these long-term impacts, the remaining students had concerns related to their educational future, career prospects, and relationships. As examples, about 30 percent of students across grades were worried about their relationships with their friends. One third of 11<sup>th</sup> grade students were concerned about whether they were fully prepared for college; more than 20 percent also worried about being able to go to college or having to delay furthering their education. More than one quarter of both grades expressed concern about their long-term health and GPA. While the full results are listed in Table 9, these findings indicate substantial levels of concern among students about the long-term impacts of COVID-19.

**Table 9: COVID impact (n = 509)**

Household COVID Impact	9 <sup>th</sup> Grade		11 <sup>th</sup> Grade	
	N	Proportion	N	Proportion
I am remote learning	64	24.1%	54	25.5%
My family lost our home or apartment	3	1.1%	3	1.4%
One or both of my parents lost their job	20	7.5%	14	6.6%
I know someone diagnosed with COVID-19	142	53.4%	114	53.8%
One or both of my parents started a new job	26	9.8%	17	8.0%
I live with someone diagnosed with COVID-19	42	15.8%	23	10.8%
Someone in my home is an essential worker	97	36.5%	78	36.8%
COVID-related Future Concerns	N	Proportion	N	Proportion
High school GPA	67	25.2%	59	27.8%
My health	76	28.6%	55	25.9%
Likelihood of graduating high school	46	17.3%	23	10.8%
How much I am prepared for college	53	19.9%	70	33.0%
Whether I will be able to attend college	38	14.3%	51	21.1%
Whether I will have to delay attending college	31	11.7%	47	22.2%
Whether I can get the job I want after school	43	16.2%	49	23.1%
Whether I can participate in community activities	58	21.8%	44	20.8%
Fewer opportunities at school	57	21.4%	50	23.6%
My finances	29	10.9%	40	18.9%
Accessing school materials and instruction	36	13.5%	40	18.9%
Relationship with friends	79	29.7%	65	30.7%
Relationship with my family	41	15.4%	37	17.5%
No concerns for the future	57	21.4%	31	14.6%

Notes: N refers to the number of students in a particular grade selecting the indicated response. Students could select multiple COVID impacts and multiple COVID-related concerns. Percentages will not total 100. Data Source: 2020/21 Rural Youth Survey.

This study investigated whether family, peer, or other factors were associated with whether students' families were impacted by COVID-19 in one way, multiple ways, or not at all. No such associations were found. The impact of COVID-19 on students' families spanned demographic subgroups. Frequency of negative emotions and COVID-19 impact on the family were highly correlated ( $r = 0.62$ ), suggesting that COVID-19 had a strong negative impact on students' emotional well-being.

As might be expected, the school representatives interviewed for this research all discussed COVID-related topics at length. Moreover, although the researchers planned to ask specific questions about challenges faced by school districts during COVID, the topic came up

organically throughout the interviews creating a clear sense of life before and after COVID. Experiences with the pandemic permeated all aspects of school life, affecting people functioning in every capacity academically or otherwise (i.e., its students, the teachers, administrators, support staff and even community members). The most notable aspect of the discussions with all the administrators was that the process of navigating COVID revealed not just negative but also positive outcomes for the school environment.

### *Positive Aspects of COVID*

*Role of Technology.* The most common positive aspect of COVID related to the role of technology. Most respondents indicated a limited or even non-existent understanding of or ability to use technology, but without technology there was no way for the school to effectively operate. For instance, one respondent reported: *It really accelerated the growth of our teachers on how to use technology...it caused us to be flexible, to be creative. It prepared us to deliver education and different methods which I think opened the teachers' eyes to what the impact of technology could be outside of a kid using it to type a paper or give a presentation, so I think those things were positive.* The respondent argued that the push into greater use of technology was a positive change: *That's been the positive of it...we were forced to grow. So as a... professional, I was forced to do things that are uncomfortable. I didn't even have a Zoom account before. I have a Google account now. I can I do all those things. So I think it's forced us to grow in ways that we probably wouldn't have done before. I don't know that we would have invested the money in it but it forced us to do that and we are a much better place because of that. So I think it's been, it's been positive.*

*Community Valuing Education.* Another consistent positive aspect of COVID revolved around the way in which everyone in the community – that is, all the stakeholders including

students, teachers, parents and members of the larger community – came to recognize the value of education in the community. For instance, one respondent considered how the community came to understand the challenges the school faced as they had to manage masking and social distancing, along with the complex challenges facing the different student populations such as children with special needs, families without internet access, and low-resource families, in general, all compounded by being a rural setting where technology access could already be limited. One respondent indicated: *Most of our overwhelming majority, even though they may have disagreed with the larger political environment, understood why we were doing what we were doing.* This respondent also noted how parents helped manage the problem the district had in finding substitutes during the pandemic: *One of the ways that parents got involved this year was our expanded guest teacher program because we were hurting so badly for subs. So, we started doing in-house guest teacher program. And we had several of our parents who were like, stay at home moms, stay at home dads. But they have bachelor's degrees and said, yeah, I can sub a couple of days a week. And so that's really involved them in more ways.* Finally, another respondent outlined how COVID made the views of the community more apparent: *I think COVID forced them to realize maybe the importance of education. And, or I think it has changed, it has changed the way we look at it. I think it's valued differently. Our communities always really supported education. But the way it has been looked upon as much, I'm telling you, when I hear people are like, I need my kid in school, that's amazing to me.*

*Benefits of Rural Setting.* It was also noted that COVID allowed people to appreciate some of the benefits of living in a rural setting. The most significant benefit, at least from an academic perspective, was that it allowed for more opportunities to have the students learn in-person. The school setting was able to manage COVID requirements in a way that, although

COVID outbreaks may have occurred in the community, the schools were not the point of origin for those outbreaks. This point comes through in the following statement from one respondent: *But honestly, being so small and so rural helped us in that regard because we were here every day.*

*Government Mandates were Helpful.* All the administrators indicated in some way that the government mandates, especially surrounding student masking and school closure, created a more manageable environment for schools to develop protocols for teaching and learning. Essentially, the mandates absolved the school of needing to be in charge of the protocols; rather, they could simply state that they had to follow state laws and rules. This also gave them more “social capital” to structure their own strategies for how to deal with the actual teaching and learning components of their work. For instance, one respondent indicated the value of state mandates to push-back on people wanting to share social media posts against COVID strategies: *Well, actually, the state was helpful. The mask orders were helpful, because then we were able to say, look, we're just following the state order.*

*Recognized Individual Variability among Students.* Finally, COVID opened a window into a greater awareness of the challenges many students confront both before and after the pandemic. The school was forced to notice that there were many different types of students needing assistance and not just those with special needs or from low-income households. This speaks to the value of creating inclusive classrooms and school settings and how all students benefit from these types of inclusive environments. For instance, one respondent talked about the different needs of students and finding ways to support them: *I think that's going to be a hardship for teachers. They want things to be normal. And I don't know that we'll ever have it back to the way it was before. I think kids...some can be very successful with it. And some*

*parents and families did great with it. So that's what we have to figure out and that's, that's the mind shift that we had to get to. We discovered some really good things. We discovered that some 18-year-olds that are seniors don't need to be in this building all day or any day because they've got full time jobs; if their career goal is to be a welder and they are 18, went out and got a full-time job, why would I make them come back for History and English when I can get that to them in some other way. So those are the things that I think it's changed...we've been forced to think about. I think we have to think about what that looks like for high school kids.*

#### *Negative Aspects of COVID*

*Impact of Volatile Cultural Context on Community Relations.* A consistent theme emerged in relation to COVID that reflected the divisive nature of politics as schools tried to create safe learning environments for students. Multiple respondents articulated the conservative nature of the communities in which their school districts were located. There was a challenge of trying to create policies and protocols for safe learning environments in a context of division or sometimes hostility about rules imposed from outside sources. Administrators were working to develop protocols that were effective but not viewed as interfering with someone's personal rights or that would endanger the health and/or safety of anyone interacting with the school setting. For instance, one respondent reported: *Community supported previous president, so challenges related to masking and basic mitigation practices--lots of community push-back. COVID affected everything they did.*

*Lost Year of Learning.* One concern expressed was that the coming year would require reviewing last year's content. There was an awareness that much of the attempt to teach in 2020 did not necessarily translate into actual learning so teachers would need to go back over content. This connects to one of the positive outcomes outlined above: Recognizing individual variability.

Specifically, there is likely no consistency in which students need to catch-up in specific subjects. Rather, there is likely tremendous variability across students and across subjects. The heightened awareness among school personnel of the variability in crisis-related adaptation skills was positive, yet the uniqueness of student needs creates significant challenges for schools and teachers in finding pathways forward for how to assist all students in learning in the period of the pandemic and in its aftermath. For instance, one respondent considered teachers' desire for things to be normal again but that the first few weeks of school would be an indicator of what should happen next: *What we do those first six weeks of school, I mean, we might not even be able to be review. We might have to go back to reteach what we should have, what we missed. I think that's going to be part of that. I think that's going to be a hardship for teachers. They want things to be normal. And I don't know that we'll ever have it back to the way it was before.*

*Anxiety about School as "COVID hotspot".* In some ways, this aspect of COVID may simply be an aspect of the negative impact of politics on educational settings. Thus, this could be discussed as part of the first negative theme related to COVID. However, it does reflect a specific concern of parents and community members that could be perceived as legitimate and worthy of both attention and a necessary point of communication by school administrators. For instance, one administrator acknowledged the role of the school in managing COVID anxiety among parents and community members. They had a role in communicating directly with parents and the larger community. It was noted that the school was not a point of origin for COVID outbreaks, and clear and effective communication was essential during this period. For one respondent, their concerns were reflected in a commencement speech they were working on at the time of the interview: *I said that August 25 was the scariest day of my life, because that was the day before we came back. And I was horrified. And like I said, throughout the year, we had a couple of*

*outbreaks. Before Thanksgiving, we had a pretty significant outbreak. And again, I don't know if the spread was happening in the building, can't prove that it was or wasn't, of course. I honestly believe again, as a follower of science, I honestly believe that it was not happening within the building because we were able to keep them distanced. Whenever they left here, and they all went to somebody's house and hung out all evening as the spread was happening. Yeah, there were times that it got scary, but overall, we just managed to keep pushing through it.*

Although none of the respondents remarked specifically on their role in communicating with small communities about the pandemic, they clearly could be a powerful source of information to parents, both directly and indirectly, through their students, as well as to the larger community through school board meetings. In addition, all the respondents mentioned the powerful role of the school, generally, as a hub of activity and cohesion for their small rural communities. School sports were a central activity for many community members including those without children in the district. Other activities included school music concerts and theater productions. When COVID required these activities be halted or significantly scaled back, school administrators needed to find effective ways of communicating not just the changes, but the need for the changes.

Thus, the conversations with rural school administrators clearly reflected the interdependence of schools and the communities in which they reside. Each needs the other and needs the other to be successful.

### **Changes Since 2010**

A remaining goal of this project was to compare the results of the 2020/21 Rural Youth Survey with the previously conducted Rural Youth Education Project (RYE). The RYE was a longitudinal study that began in 2006 and concluded in 2010 (Center for Rural Pennsylvania,

2010). In its final year, the youngest cohort of students in the RYE was enrolled in 11<sup>th</sup> grade. The older cohort was three years past high school. This comparison will focus on the youngest cohort as a direct comparison to the 11<sup>th</sup> grade students included in the current project.

### *Educational Aspirations*

In 2010, the RYE found that 11 percent of 11<sup>th</sup> graders planned to earn a high school diploma or less while 67 percent hoped to attain at least a four-year college degree (Center for Rural Pennsylvania, 2010). In this project, 27.5 percent of 11<sup>th</sup> grade students indicated that they planned on attaining a high school diploma or less, a 16.5 percent increase since 2010. Similarly, 52.5 percent of 11<sup>th</sup> grade students hoped to earn a four-year college degree or more in the current project, a 14.5 percent decrease since 2010. Rather, more students appeared interested in two-year and vocational or technical degrees than in the previous study.

The RYE found that many family-related factors were associated with educational aspirations, including parents' education and parents working full-time (Center for Rural Pennsylvania, 2010). That was not the case in the current project. In this project, the only family-related factors that seemed to be related to educational aspirations were students' relationships with their parents. Students with more positive relationships with their mothers had marginally higher educational aspirations. Those who had more positive relationships with their fathers had significantly lower educational aspirations. However, these trends aligned with trends in parents' educational attainment.

### *Career Aspirations*

The final wave of the RYE determined that the majority of 11<sup>th</sup> grade students, 59 percent, were interested in professional or managerial work (Center for Rural Pennsylvania, 2010). Although this project used a more nuanced categorization for occupation, some

comparison is possible. Professional, scientific, and technical services remained a common career goal for students, topped only by positions in healthcare. The 6.5 percent of 11<sup>th</sup> grade students who expressed a desire for work in the fields of art, entertainment, and recreation often noted some form of graphic design as a career goal, a field that has rapidly developed since 2010. This project found that the desire for positions in labor and production decreased since 2010, from 11 percent to 8.5 percent.

### *Residential Aspirations*

This project found that 32.4 percent of 11<sup>th</sup> grade students wanted to live in either their hometown or elsewhere in rural Pennsylvania in the future. This is an increase from the 27 percent documented by the 2010 RYE (Center for Rural Pennsylvania, 2010). Fewer students in the current project, 7 percent, wanted to live in urban Pennsylvania compared to 11 percent in 2010. There was little change in the percentage of students who wanted to move outside of Pennsylvania: 34 percent in the current project and 32 percent in the 2010 RYE. As in 2010, approximately two-thirds of 11<sup>th</sup> grade students in the study noted that they liked their community either a lot or some. This project also found that the predictors associated with residential aspirations were similar to 2010. Students who were satisfied with their communities were more inclined to stay, but those with greater educational aspirations were more interested in leaving. Students with career aspirations that involved public service (hair care, automotive work, etc.) were more interested in remaining in their local areas than others.

### **Discussion and Policy Considerations**

The educational aspirations and college enrollment rates of rural youth have traditionally lagged behind those of urban youth (DePaoli et al., 2016). This project found that the percentage of rural Pennsylvania youth hoping to earn a four-year degree has decreased since 2010.

Compared to the 2010 Rural Youth Education Project (RYE), more youth today aspire to earn a high school diploma or less. The COVID-19 pandemic has only exacerbated this concern. According to Best Colleges, the number of rural youth enrolled in dual-credit courses (courses that count for high school and college credit) declined during the pandemic (Dennon, 2021). Rural completion rates for the college Free Application for Federal Student Aid (FAFSA) application, an indicator of intent to enroll, also declined more than those for urban youth (Dennon, 2021). These patterns have the potential to widen rather than narrow the rural-urban education gap unless the Pennsylvania legislature can take steps to mitigate the challenges faced by Pennsylvania youth.

While more youth today, compared to 2010, wish to remain in rural Pennsylvania, those with greater educational aspirations are more interested in leaving to seek opportunities elsewhere. Students today are less interested in jobs related to labor and production or other career options that might motivate them to continue living in rural Pennsylvania. Indeed, older students were less likely than younger students to say they liked their current community, suggesting that frustrations with perceived opportunities might increase with age.

The findings of this project align with the existing research literature on the forces that shape the aspirations of rural youth. As in this project, Agger, Meece, and Byun (2018) found that female students in rural areas had greater educational aspirations and college enrollment rates than male students. Males felt more connected to rural areas and desired jobs that local areas could provide. Further, Agger et al. also observed that students' perceptions of their parents' educational attainment and expectations were associated with their own educational goals. Families and peers remain a significant influence on youth aspirations. In this project, social media use patterns suggest that students are also seeking guidance from online sources.

These trends, and others, indicate several areas where policy and funding may be helpful for rural youth.

### **COVID-19 and Mental Health**

A key contribution of this project was documenting the impact of COVID-19 on students and their families as well as investigating whether these impacts were associated with students' educational, career, or residential aspirations. While this project found no evidence that COVID-19 was associated with changes to students' aspirations, there was a profound impact on students' well-being. Students whose families were impacted by COVID-19 through job loss, serving as essential workers, or illness reported more frequently experiencing symptoms of depression and anxiety. Students noted worry and concern about many long-term impacts of the pandemic including their preparation for college, their financial stability, their academics, and their ability to be engaged at school and in the community. Other research has determined that rural residents were impacted more negatively, financially in particular, than urban residents as a result of the pandemic (Horowitz et al., 2021; Neel, 2020).

These trends indicate a strong need for emotional support in the coming months and years as rural students return to K-12 schools. In 2020, Governor Tom Wolf announced a mental health initiative entitled Reach Out PA: Your Mental Health Matters. The goal of the initiative is to improve access to mental health care and reduce the stigma associated with mental illness and seeking care. As part of the effort, the Pennsylvania Department of Education has been asked to collaborate with the Pennsylvania Commission on Crime and Delinquency and work towards having a full-time counselor, social worker, and nurse in each school district. The results of this project suggest that these efforts, while laudable, may be insufficient to meet the mental health needs of students living through the COVID-19 pandemic.

## **Social Media**

This project furthered the work of the 2010 Rural Youth Education Project by asking students how they used social media. A quarter or more of the students in this study were using social media to seek out educational opportunities. About the same percentage were using social media to look for jobs or develop their professional networks. These trends suggest an opportunity to engage with students more strategically. This effort also provides, in itself, an educational opportunity. Graphic design was a frequently listed career goal for students interested in the arts, entertainment, and recreation fields. While at least one of the school districts involved in this project offers a course in social media and marketing design, the course focuses on simulation. As schools more strategically develop their social media platforms, courses like these could give students hands-on learning experience instead.

## **Gendered Aspirations**

This project determined that students' aspirations still seem to be sharply divided by gender. Students identifying as male had significantly lower educational aspirations than those identifying as female. Males were far less interested in a career in healthcare than females. Instead, they were more likely to seek a career in the professional, scientific, or technical services. The data collected in this project indicate that youth are still choosing careers that largely align with gender stereotypes. Many female students aspire to be nurses, teachers, or retail staff. Many male students sought careers in the sciences, technology, welding, construction, and manufacturing. Male students were much less likely to be involved in school or community clubs or activities. Males and females were about equally likely, however, to say they wanted to remain living in rural Pennsylvania.

These persistent trends suggest that efforts to encourage diversity in the workplace or in hiring decisions need to be supplemented by earlier efforts to break down gender barriers and encourage youth to consider careers that may not be considered gender typical. Modeling and mentorship may be particularly important in this process. This project determined that students who had a strong positive relationship with their mothers had similar educational aspirations to their mothers. The same was the case for students who had strong positive bonds with fathers. A key difference, however, was that mothers in this study had higher educational attainment, so students who were close with their mothers had higher educational aspirations and students closer to their fathers had lower educational aspirations. While having a strong bond with either parent is important and beneficial in most cases (Akers, 2009; Bandura, 1977), these patterns suggest that students may need more exposure to and interaction with adults who can demonstrate other career and educational possibilities. It is very difficult to aspire to a career or education pathway when a student has never seen a person like themselves in that role.

Some researchers explain this pattern through the lens of Social Cognitive Career Theory (Serra et al., 2019). This theory is that individuals choose careers based on three factors: 1) whether a person believes they will be successful and their confidence in their abilities; 2) what a person expects will happen if they choose a particular career; and 3) goals held by the person. People gravitate towards activities and careers where they believe they can complete tasks successfully and competently and that bring positive benefits like improved self-esteem, reliable income, or social status. Each of these factors is strongly influenced by social support, including family aspirations and peer interests (Betz, 2007). Families and educators can shape child expectations by controlling the activities presented to children as viable or acceptable.

## Policy Considerations

- Youth in rural Pennsylvania would benefit from an expanded effort to include and mandate mental health education in public schools. The State of New York, as a comparative example, now requires that mental health education be integrated with existing health education for all K-12 students (New York State Assembly, 2018). Skills taught as part of the curriculum include recognizing the signs and symptoms of mental health problems, identifying resources and services, stigma reduction, and self-care. In the short-term, rural school districts in Pennsylvania may need funding to assess the mental health and emotional well-being of students upon their return to school post-COVID. As an example, some school districts have sent anonymous surveys to students and parents to better gauge student emotional needs. Doing so on a wider scale would allow the state legislature, and the Pennsylvania Departments of Education and Health to direct funding so that additional counselors and services can be offered to areas in need. Schools may need assistance developing surveys or other instruments, analyzing results, and then determining which personnel or other resources can be directed to student needs.
- The Pennsylvania Departments of Education and Labor and Industry can identify and promote local opportunities for rural youth who are starting their careers. Spreading news of these opportunities through social media may help students identify opportunities they may not have noticed otherwise through an outlet (social media) they are already using. School districts can use their own social media platforms to advertise and spread news of these opportunities to their own students.
- Schools may be able to offer live-stream classes in specialized topics that might otherwise be unavailable. This could involve training in a specific topic, help with job

seeking, or tips on how to find a good-fitting educational opportunity. Question and answer chat sessions on specific topics are another example. By using social media, these sorts of educational opportunities can be provided to students across areas, even those without the funding or personnel to do so themselves. Small grants through the Departments of Education or Labor and Industry could be used to develop these opportunities.

- Much like participating in a class that develops a school yearbook, schools can also have students develop and work on school social media platforms as a learning experience. Doing so would align coursework with career goals. Rural schools may need funding from the Department of Education for IT support, better internet access, and computer technology to enable these courses and facilitate student participation.
- The Department of Labor and Industry, in collaboration with the Department of Education, may be able to reduce gender-related barriers to career choice by funding school efforts to establish mentoring programs, bring in speakers from industries in local areas, and develop curricular content that demonstrates success in industry by those in male- or female-dominated fields. Efforts like these could be more directly integrated in the Academic Standards for Career Education and Work (CEW) already required in Pennsylvania K-12 schools. This project found gender differences extended beyond STEM fields, indicating that encouraging female students in STEM is insufficient to reduce gender barriers in career choice and educational aspirations.
- Rural youth college aspirations, enrollment, and graduation rates may be increased by expanding the College Advising Corps (CAC) of Pennsylvania. As of 2021, the CAC had 29 advisors serving 29 high schools in counties including Adams, Blair, Cambria,

Carbon, Centre, Chester, Clearfield, Dauphin, Delaware, Franklin, Huntingdon, Lancaster, Luzerne, Philadelphia, and York. This program could be expanded to include more rural communities, particularly through use of the CAC virtual model. The virtual model can connect successful college graduates and advisors to high school students in any area of the state.

- Rural youth community engagement and opportunities for youth can be improved and expanded through use of Youth Participatory Evaluation (YPE). YPE involves youth in evaluating the programs, schools, and other community-based organizations that serve them (Powers & Tiffany, 2006). Rural youth can participate in many ways, including developing research questions, identifying samples for study, developing surveys and data collection tools, analyzing data, and making policy recommendations themselves. YPE can be incorporated into school curriculums as class projects. Rural schools may need grant funding from the Pennsylvania Department of Education to facilitate community-school research collaborations for youth.

### **Conclusions**

The results of this project indicate that the educational aspirations of rural youth have decreased since 2010. More youth today aspire to a high school education or less while fewer aspire to a four-year college degree. Their aspirations are strongly linked to their relationships with their parents. When youth have a positive relationship with a parent with higher educational attainment, they are more likely to have high aspirations as well. Although more youth today wish to live in rural Pennsylvania in adulthood, youth who want to go to college are more likely to leave their rural communities to seek opportunities elsewhere. Youth today are less interested in jobs that might draw them to or motivate them to remain in their local areas. The findings of

this project show that youth largely aspire to careers that are gender-normative, contributing to a gender divide in both educational and residential aspirations.

COVID-19, although unrelated to youth aspirations in this project, has had a profound impact on rural youth and their families. Many youth expressed concern about their health, future education, and relationships as a result of their pandemic experiences. While the four school districts studied are not representative of all of rural Pennsylvania, the results of this project suggest that today's rural youth need additional support from their schools and, indirectly, the Pennsylvania legislature to help close gender gaps and rural-urban gaps in youth aspirations and achievement.

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## Appendix 1: 2020 Rural Youth Survey (Paper Version)

A researcher will explain to you what it means to be a volunteer for this study. After they explain, please choose one of the following:

\_\_\_\_\_ I do not agree to be part of this study—please hand this survey to your teacher

\_\_\_\_\_ I agree to be part of this study (complete survey and information below)

Grade: \_\_\_\_\_ (9<sup>th</sup> or 11<sup>th</sup>)

### A. Tell Us About Yourself

*Please circle your answer unless otherwise indicated*

A1. Are you

- |           |                          |
|-----------|--------------------------|
| a. Male   | c. Other gender identity |
| b. Female | d. Prefer not to answer  |

A2. What year were you born? \_\_\_\_\_

A3. Which of the following describe your race/ ethnicity? Please circle any that apply.

- |  |  |
|--|--|
| a. White or European American          | d. Asian or Asian American             |
| b. Black or African American           | e. American Indian or Alaskan Native   |
| c. Hispanic, Latinx, or Spanish origin | f. Native Hawaiian or Pacific Islander |

A4. Are you a U.S. citizen or permanent resident?

- |        |       |
|--------|-------|
| a. Yes | b. No |
|--------|-------|

A5. How many people, other than yourself, live with you in your home?

\_\_\_\_\_

A6. Who currently lives with you? Please circle all that apply.

- |                |   |
|----------------|---|
| a. Mother      | i. Grandparent                            |
| b. Father      | j. Other relative                         |
| c. Stepmother  | k. Friend                                 |
| d. Stepfather  | l. Your child or children                 |
| e. Brother     | m. Your boyfriend, girlfriend, or partner |
| f. Sister      | n. Other non-relative                     |
| g. Stepbrother |   |
| h. Stepsister  |   |

A7. Thinking about your natural parents (biological or adoptive):

	Father	Mother
Were your parents born in the U.S.?	a. Yes b. No	a. Yes b. No
If not born in the U.S., where they were born?	Country: _____	Country: _____
Are your parents U.S. citizens or permanent residents?	a. Yes b. No	a. Yes b. No
Do your parents speak a language other than English at home?	a. Yes b. No	a. Yes b. No
If your parents speak a language other than English at home, what language(s) do they speak?	Language(s): _____	Language(s): _____

A8. Have you lived with both natural parents (biological or adoptive) since birth?

- a. Yes
- b. No → If no, what was the reason? (circle all that apply)
  - i. Death of a parent
  - ii. Separation or divorce of parents
  - iii. Parent in prison or jail
  - iv. Parent in drug or alcohol treatment
  - v. Homelessness
  - vi. Other reason: \_\_\_\_\_

A9. Were you born in the United States?

- a. Yes
- b. No

### **B. Computer and Internet Use**

*Please circle your answer*

B1. Do you have access to broadband (high-speed) internet at home?

- a. Yes
- b. No

B2. Where do you typically access the internet? Please circle all that apply.

- a. School
- b. Home
- c. Local library
- d. Friend's house
- e. Relative's house
- f. Local business with Wifi
- g. Work
- h. None of the above

B3. Do you have cell service at home?

- a. Yes
- b. No

B4. What devices do you have access to at home? Please circle all that apply.

- a. Smartphone
- b. Smart home device (Alexa, Google Home)
- c. Cellphone that is not a smartphone
- d. Desktop computer
- e. Laptop computer
- f. Tablet (iPad, Kindle)
- g. Virtual reality headset
- h. Wearable device (Fitbit)
- i. Gaming console with internet connectivity
- j. None of the above

B5. How many hours outside of school per day do you use the internet to do the following?

	How many hours per day? (Please write in)
School work	
Look for schools/ educational opportunities	
Games	
Social media	
Communicate with friends or family (outside of social media)	
For work	
Look for jobs	
Shopping	
Movies or television	

B6. Why do you use social media (Instagram, Facebook, Snapchat, etc.)? Circle all that apply.

- a. I don't use social media
- b. To post and share pictures
- c. To communicate with my friends
- d. To communicate with my family
- e. To learn
- f. To get noticed
- g. To connect with people for work or job opportunities
- h. To explore schools or educational opportunities
- i. Games
- j. To find things to do in my area
- k. To see what other people think or do
- l. To watch videos, television, or movies
- m. For news
- n. To express myself
- o. To connect with people who like the same things I do

B7. How often in the last 30 days did you see content on social media that made you feel...  
 (Place a check mark or X to indicate your answer)

	Frequently	Sometimes	Hardly ever	Never
Angry				
Inspired				
Bullied				
Amused				
Depressed				
Connected				
Self-conscious				
Lonely				

### C. Tell Us About Your School Plans

*Please circle your answer*

C1. How far do you want to go in school? (select only one)

- a. I don't want to finish high school
- b. I want to graduate from high school
- c. I want to go to vocational, trade, or business school
- d. I want to graduate from a 2-year community college or get an Associate's degree
- e. I want to graduate from a 4-year college
- f. I want to go to graduate school

C2. Why? (circle all that apply)

- a. I don't know
- b. It will get me the job I want
- c. My parents/guardians want me to
- d. My teachers have encouraged me to
- e. My friends have the same goals
- f. It will get me the income I want
- g. I want to give back to my community
- h. I want to live somewhere else
- i. I want to learn more
- j. I have family responsibilities
- k. I want to go further in school than my parents/ guardians

C3. What could prevent you from going as far in school as you would like? (circle all that apply)

- a. Nothing
- b. It costs too much
- c. My parents/guardians don't want me to go that far in school
- d. I need to work right after high school
- e. I'm not smart enough
- f. I don't have good enough grades
- g. I don't want to work hard enough
- h. I have family responsibilities
- i. My health problems
- j. My friends are doing something else
- k. Not enough educational opportunities nearby
- l. It won't get me the job I want

C4. Using the scale below, please write in how you think your parents or guardians would feel if:

	<b>Mother (or female guardian)</b>	<b>Father (or male guardian)</b>
	<b>1 = Very unhappy</b> <b>2 = Somewhat unhappy</b> <b>3 = Neutral</b> <b>4 = Somewhat happy</b> <b>5 = Very happy</b> <b>6 = Does not apply</b>	<b>1 = Very unhappy</b> <b>2 = Somewhat unhappy</b> <b>3 = Neutral</b> <b>4 = Somewhat happy</b> <b>5 = Very happy</b> <b>6 = Does not apply</b>
you didn't graduate from high school?		
you didn't attend a vocational or training school after high school?		
you moved away from this community?		
you didn't graduate from college?		
you moved away from Pennsylvania?		
you didn't find a job right after high school?		

C5. How far do you think your best/ closest friend wants to go in school? (select only one)

- a. They don't want to finish high school
- b. They want to graduate from high school
- c. They want to go to vocational, trade, or business school after high school
- d. They want to graduate from a 2-year community college or get an Associate's degree
- e. They want to graduate from a 4-year college
- f. They want to go to graduate school

**D. Tell Us What Your Expectations Are**

*Please circle your answer unless otherwise indicated*

D1. Do you think the people in your community are trying to make your community a better place for people your age to live?

- a. Yes
- b. No

D2. How much do you like living in the town/community where you currently live?

- a. A lot
- b. Some
- c. A little
- d. Not at all

D3. What kind of job do you want to have when you are 30 years old?

D4. How determined are you that you will be doing this kind of job?

- a. Very sure
- b. Somewhat sure
- c. Somewhat unsure
- d. Not sure at all
- e. Not planning to work

D5. How much education do you think you need for the job you expect to have when you are 30 years old?

- a. No high school
- b. Some high school
- c. High school diploma
- d. Less than two years of vocational, trade or business school
- e. Two years or more of vocational, trade or business school
- f. A degree or certificate from a vocational, trade or business school
- g. Some college education
- h. 2-year college degree
- i. 4- or 5-year college degree
- j. Graduate degree (Master's or Ph.D.)
- k. Professional degree (J.D. or M.D.)
- l. Not planning to work

D6. How often do you talk to the following people about your educational or career goals? What do you talk about? Place a check mark or X to indicate your answer.

	Never	Occasionally	Often	All the time	What do you talk about? (write in)
Your father					
Your mother					
Guardian					
A sibling					
Another relative					
Guidance counselor					
A teacher					
A coach					
Friends your own age					
Other adult you respect					

- D7. Where do you WANT to live when you are 30 years old? (select only one)
- Same town as now
  - Nearby town
  - Somewhere else in rural Pennsylvania
  - Small city in Pennsylvania (e.g., Williamsport, Lancaster, Altoona, Franklin, etc.)
  - Large city in Pennsylvania (e.g., Harrisburg, Pittsburgh, Philadelphia, etc.)
  - Small city in another state
  - Large city in another state (e.g., Los Angeles, Chicago, New York, etc.)
  - Rural area in another state
  - Another country (Canada, Mexico, etc.)
  - I don't know

D8. Why (circle all that apply)

- |                               |                                 |
|-------------------------------|---------------------------------|
| a. I don't know               | i. To experience something new  |
| b. It's where I grew up       | j. To start a business          |
| c. Income                     | k. Scenery or look of the area  |
| d. Job opportunities          | l. To give back to my community |
| e. Recreational opportunities | m. To be independent            |
| f. Social opportunities       |                                 |
| g. Climate (weather)          |                                 |
| h. To be close to family      |                                 |

D9. How often do you talk to the following people about where you hope to live as an adult? Place a check mark or X to indicate your answer.

	Never	Occasionally	Often	All the time
Your father				
Your mother				
Guardian				
A sibling				
Another relative				
A guidance counselor				
A teacher				
A coach				
Friends your own age				
Other adult you respect				

D10. In the left column indicate how satisfied you are with the resources in your **current community**. Next, in the right column, indicate how important these resources would be in your **ideal community**. Place a check mark or X to indicate your answer.

How SATISFIED are you with these in your <b>current</b> community?				Community Resources	How IMPORTANT are these for selecting your <b>ideal</b> community?			
Very Dissatisfied	Somewhat Dissatisfied	Generally Satisfied	Very Satisfied		Not at all Important	Somewhat Important	Important	Very Important
				Good paying jobs				
				Clean environment				
				Places to hang out				
				Quality schools and teachers				
				Good library, bookstores				
				Good stores and shopping facilities				
				Cultural opportunities, like concerts				
				Lots of places to eat				
				Many chances to get ahead				
				Indoor entertainment (like movies)				
				Agencies to help people solve problems				
				Land for hiking, hunting, etc.				
				Access to high-speed internet				
				Cell phone coverage				
				Organized outdoor activities like softball				
				People in the community work together				

## **E. Your School and Community Activities**

*Please circle your answer*

E1. Are you participating in any of the following activities during the current school year? Please circle all that apply.

- |                                    |   |
|------------------------------------|---|
| a. Student newspaper               | j. Community sports team                |
| b. Student yearbook                | k. Hunting                              |
| c. School sports team              | l. Youth leadership program             |
| d. School music, art, or dance     | m. Grange or agricultural club          |
| e. Student government              | n. Boy scouts or Girl scouts            |
| f. College prep program or club    | o. Other community club or organization |
| g. Other school club               | p. Volunteer work in the community      |
| h. Other school activity           | q. Other community activity             |
| i. Religious or church youth group |   |

E2. Do any of the following keep you from being involved (or more involved) in school or community activities? Please circle all that apply.

- a. I don't want to be involved
- b. I'm not interested in the activities available
- c. I don't feel safe where the activity takes place
- d. Difficult to get transportation
- e. My friends aren't involved
- f. Activities cost too much money
- g. Parents won't allow me to participate
- h. I have other responsibilities that take up my time (i.e., school work, job)
- i. There are few or no activities available in my school
- j. I'm worried about getting hurt during the activity
- k. There are few or no activities available in my community
- l. Health problem(s)
- m. I don't feel accepted by/ in the activity

## F. Your Attitudes

F1. Please indicate how important each of the following is to you in your life.  
Place a check mark or X to indicate your answer.

	<b>Not Important</b>	<b>Somewhat Important</b>	<b>Important</b>	<b>Very Important</b>
Being successful in my line of work				
Having lots of money				
Having strong friendships				
Being able to find steady work				
Helping other people in my community				
Being able to give my children better opportunities than I've had				
Living close to parents				
Living close to relatives				
Getting away from this community				
Starting a business				
Having children				
Religious or spiritual beliefs				
Getting married				
Being healthy				
Helping my parents				
Having leisure time				
Getting a good education				
Living close to friends				

F2. Please indicate how much you feel the following describe your community.  
Place a check mark or X to indicate your answer.

	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Agree</b>	<b>Strongly Agree</b>
This area is a good place to raise a family				
I can stay in this area and get a good education				
I can get a good job in this area when I'm an adult				
There are enough jobs in this area for the people who want them				
I will need to move away to get the education I want				
I would have to move away to get the job I want				
My family can afford to buy the things that other families can buy				
Everyone knows your business in this community				
People in this community don't like you if you are different				
It takes a long time for people in this community to accept newcomers				
My parents want me to stay in this community				
My family feels it is part of this community				
People in this community trust people my age				

## G. Your Feelings

G1. How often you have felt these emotions in the past month? Place a check mark or X to indicate your answer.

	None of the time	Some of the time	Most of the time	All of the time
Very nervous or anxious				
Calm and peaceful				
In control of my life				
Healthy				
Downhearted and blue				
Happy				
Pleased with my appearance				
Confident of what I was doing				
Overwhelmed				
So down in the dumps that nothing could cheer me up				

## H. Tell Us About Your Parents/Family

*Please circle your answer unless otherwise indicated*

H1. What is the highest level of education your mother/father or guardian reached? Select only one choice for each parent.

<b>Mother or female guardian</b>	<b>Father or male guardian</b>
a. Did not finish high school	a. Did not finish high school
b. Finished high school	b. Finished high school
c. Went to school after high school, but not college	c. Went to school after high school, but not college
d. Went to college, but did not graduate	d. Went to college, but did not graduate
e. Graduated from college or more	e. Graduated from college or more
f. Don't know	f. Don't know
g. I don't have a mother/ female guardian	g. I don't have a father/ male guardian

H2. Does your mother/father or guardian work outside the home for pay? Select only one choice for each parent. If you don't know, just leave their column blank.

<b>Mother or female guardian</b>	<b>Father or male guardian</b>
a. Yes, at a full-time job	a. Yes, at a full-time job
b. Yes, at a part-time job	b. Yes, at a part-time job
c. Not working now, but looking for a job	c. Not working now, but looking for a job
d. Does not have a job	d. Does not have a job
e. I don't have a mother/ female guardian	e. I don't have a father/ male guardian

H3. What kind of job does your father or male guardian do? Leave blank if you don't know or don't have a father or male guardian.

H4. What kind of job does your mother or female guardian do? Leave blank if you don't know or don't have a mother or female guardian.

H5. Please indicate if your parents or guardians are involved in any of the following community activities. Place a check mark or X to indicate your answer. Leave the column blank if you don't have a male/ female parent or guardian.

	<b>Mother or female guardian</b>			<b>Father or male guardian</b>		
	Yes	No	Don't Know	Yes	No	Don't Know
My school (PTO or PTA)						
Our place of worship						
Civic organizations (i.e., Lions, Rotary Club)						
Small business owner or investor (entrepreneur)						
Local government, as an elected official or serving on local government committees						
EMS/ Fire Department						
Youth activities (scouts, sports leagues)						
Any volunteer group in the community (i.e., hospital, senior center)						

H6. In general, how important is it to YOU that you:  
 (Place a check mark or X to indicate your answer)

	<b>Not Important</b>	<b>Somewhat Important</b>	<b>Important</b>	<b>Very Important</b>
Treat your parents or guardians with respect				
Do well for the sake of your family				
Follow your parents' or guardians' advice				
Make sacrifices for your family				
Help your parents or guardians financially in the future				
Help your parents or guardians financially now				
Live near your parents or guardians when you are an adult				
Have your parents or guardians live with you when they get older				
Make your parents or guardians happy				

H7. How often do YOU think you should do the following?  
 (Place a check mark or X to indicate your answer)

	<b>Never</b>	<b>Almost Never</b>	<b>Sometimes</b>	<b>Frequently</b>	<b>Always</b>
Spend time at home with your family					
Help with chores outside the home (i.e., going to the store)					
Volunteer in the community					
Help out around the house					
Help care for other family members					
Eat meals with your family					

H8. How often do each of the following occur?  
 (Place a check mark or X to indicate your answer)

	<b>Never</b>	<b>Almost Never</b>	<b>Sometimes</b>	<b>Frequently</b>	<b>Always</b>
My parents or guardians need my help with work or finances					
Responsibilities at home get in the way of my schoolwork					
My parents or guardians expect me to spend free time helping around the house					
My parents or guardians need my help taking care of family members					

### I. Your School Experiences

*Please circle your answer unless otherwise indicated*

11. What kind of grades did you get in school on your last report card?
- a. Mostly A's
  - b. A's and B's
  - c. Mostly B's
  - d. B's and C's
  - e. Mostly C's
  - f. C's and D's
  - g. Mostly D's
  - h. D's and F's
  - i. I don't know

15. How much do you agree or disagree with each of the following statements about your school and teachers? Place a check mark or X to indicate your answer.

	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Agree</b>	<b>Strongly Agree</b>
Students get along well with teachers				
Most students are active in at least one club, sport, or other school activity				
Discipline and rules are fair				
Parents are involved in the school				
Disruptive students get in the way of learning				
Most of my teachers care about me				

I get bullied by other students at school				
I like school				
I feel safe at school				
My school is preparing me for my future				

I6. Please think about the past month when answering the following questions. Place a check mark or X to indicate your answer.

	None	1-2	3-4	5 or more
During the past month, how many total days of school have you been absent for ANY reason?				
During the past month, how many of these absences were because you were home sick?				
During the past month, how many times were you late for school?				

### J. Your Relationship With Your Family

*Please circle your answer unless otherwise indicated*

J1. Thinking about the things you have done with your parents or guardians in the past month, answer the following questions. Leave the column blank if you don't have a male/ female parent or guardian.

	Mother/ female guardian	Father/ male guardian
Have you gone to them for advice and support?	Yes No	Yes No
Have you had a serious argument with them about your behavior?	Yes No	Yes No
Have you talked with them about your school work or grades?	Yes No	Yes No
Have you worked on a school project together with them?	Yes No	Yes No
Have you talked with them about other things you're doing in school?	Yes No	Yes No

J2. Thinking about your relationship with your mother or female guardian, tell us how much you agree or disagree with the following statements. Place a check mark

or X to indicate your answer. Leave this section blank if you don't have a mother or female guardian that you normally interact with.

	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly Agree</b>
I turn to her for advice and support					
When I'm an adult, I want to be like her					
She accepts me no matter what I do					
She is very important to me					
I feel close to her					
I have a lot of respect for her					
She is the kind of person other people respect					
I really enjoy spending time with her					
Sometimes I think she doesn't like me					

J3. Thinking about your relationship with your father or male guardian, tell us how much you agree or disagree with the following statements. Place a check mark or X to indicate your answer. Leave this section blank if you don't have a father or male guardian that you normally interact with.

	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly Agree</b>
I turn to him for advice and support					
When I'm an adult, I want to be like him					
He accepts me no matter what I do					
He is very important to me					
I feel close to him					
I have a lot of respect for him					
He is the kind of person other people respect					
I really enjoy spending time with him					
Sometimes I think he doesn't like me					

J4. Please think about how often you did the following things in the past week. Place a check mark or X to indicate your answer.

	<b>Not at all</b>	<b>1 time</b>	<b>2 times</b>	<b>3 or more</b>
How many times did you do chores around the house?				
How many times did you just hang out with friends?				
How many times did you play an active sport or exercise (such as basketball or biking)?				
How many times did you go out without your parents knowing where you really were?				
How many times did you have friends over to your house when an adult was not present?				
How many times did you go to a friend's house when an adult was not present?				

J5. In the past TWO YEARS, has your family ever received public assistance, such as welfare or TANF?

- a. Yes
- b. No
- c. I don't know

J6. Many things happen in families that may affect young people. In the last 2 years, have any of the following happened to your family? Please circle all that apply.

- a. My family moved to a new home
- b. My family lost our home
- c. My parents got divorced or separated
- d. One (or both) of my parents got remarried
- e. One (or both) of my parents lost his/her job
- f. One (or both) of my parents started to work
- g. One (or both) of my parents got a better job
- h. One (or both) of my parents went to jail or prison
- i. I became seriously ill or disabled
- j. One of my parents died
- k. A close relative died
- l. One of my brothers or sisters dropped out of school
- m. A family member became seriously ill
- n. A family member became addicted to drugs or alcohol
- o. A member of my family was the victim of a crime
- p. My parents fought a lot

#### **K. COVID-19**

*Please circle your answer unless otherwise indicated*

K1. COVID-19 has affected families in many ways. Have any of the following happened to you or your family as a result of COVID-19? Please circle all that apply.

- a. I am currently in remote learning (school from home)
- b. My family lost our home or apartment
- c. One (or both) of my parents lost his/her job
- d. I know someone who was diagnosed with COVID-19
- e. One (or both) of my parents started a new job
- f. I live with someone who was diagnosed with COVID-19
- g. Someone in my home is considered an essential employee (required to work because their job involves health, safety, food service, or other tasks critical to society)

K2. Do you have concerns about the long-term impact of the COVID-19 pandemic on any of the following? Please select any that apply.

- a. My high school GPA
- b. My health
- c. My likelihood of graduating high school
- d. How much I am prepared for college
- e. Whether I will be able to attend college at all
- f. Whether I will have to delay going to college
- g. Whether I can get the job I want after school
- h. Whether I can participate in activities in the community
- i. Fewer opportunities at school
- j. My finances (i.e. savings, income)

- k. Being able to access school materials, assignments, and instruction
- l. My relationship with my friends
- m. My relationship with people who live with me (my family)
- n. None of the above

K3. Thinking about your life now as compared to before the COVID-19 pandemic, please tell us how much you agree or disagree with the following statements. Place a check mark or X to indicate your answer.

	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly Agree</b>
I feel more lonely					
I have more homework					
I participate in fewer activities					
I am expected to do more to help out at home					
I have a better relationship with my teachers					
I feel less motivated to do my schoolwork					
I feel more anxious					
I have more trouble completing homework					
I am feeling more down or depressed					
I have more time to do what I want					
I stay in touch with my friends more often					
I spend more time with my family					
I exercise more					

## **Appendix 2: School Principal Interview Questions**

1. Please describe your background (education, career path, etc.).
2. What do you see as your role in education?
3. What do you feel is the purpose of education?
4. In what ways does your community support students who want to go to college? Start a career? Start a business?
5. What do you see as the major challenges in this community related to education?
6. How important is a college education in today's world? To the students in your school?
7. What do you think the majority of students at your school will do immediately after high school?
8. How do you feel about the resources your school district has available for education? In what ways are they sufficient? What additional resources do you wish were available?
9. What sorts of college prep resources or opportunities are available to students?
10. What sorts of job or career prep resources or opportunities are available to students?
11. What opportunities are available for youth to engage with the community?
12. Are parents involved in education in your school? In what ways?

### Appendix 3: Parental Notification

Our school is taking part in the Pennsylvania Rural Youth Survey (PRYS), conducted by the Center for Rural Pennsylvania in collaboration with the Pennsylvania State University, Altoona (PSUA). The survey is designed to identify trends and developments in the attitudes and aspirations of rural Pennsylvania youth. Students taking the survey will be asked about their use of computers and internet, their school plans and expectations in the future, school and community activities, attitudes and feelings about themselves and families. The survey will be administered online through a web survey link emailed to students. The survey takes less than one hour to complete.

We would like all 9<sup>th</sup> and 11<sup>th</sup> grade students to take part in the survey. However, the survey is voluntary. Completing the survey will cause little or no risk to your child. The only potential risk is that some students might find the topic of some survey questions to be sensitive, such as questions about feelings. **If your child is not comfortable answering a question, they may skip it.** No action will be taken against the school, you, or your child, if your child does not take part. In addition, students may stop participating in the survey at any point without penalty. A copy of the survey is available for your review by emailing Dr. Lacey Wallace (see below). The survey has been designed to protect your child's privacy. **Students will not be asked to put their names on the survey.** No school or student will ever be mentioned by name in a report of the results.

The Penn State review board has approved the survey. If you have any questions about your child's rights as a participant in this survey, would like to see the survey, or if you feel your child will be harmed in any way by taking part, please contact Dr. Lacey Wallace by phone or email (see below). If you do not want your child to take part in the survey, please email or call Dr. Lacey Wallace. Otherwise, no action is required.

Survey Contact: Dr. Lacey Wallace  
Phone: 540-553-4414  
Email: [LNO106@psu.edu](mailto:LNO106@psu.edu)

## **Appendix 4: Occupational Categories**

Note: All categories based on the coding used by the U.S. Census Bureau and the 2019 American Community Survey

1. Health care and social assistance
2. Manufacturing
3. Retail trade
4. Educational services
5. Professional, scientific, and technical services
6. Finance and insurance, and real estate
7. Accommodation and food services
8. Construction
9. Transportation and warehousing and utilities
10. Other services, except public administration
11. Public administration
12. Wholesale trade
13. Arts, entertainment, and recreation
14. Agriculture, forestry, fishing and hunting
15. Mining, quarrying, and oil and gas extraction
16. Other Industries
17. Military
18. Information
19. Management

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