# Unpacking the Rural Opportunity Gap: <br> A Literature Review on Factors Impacting College Access \& Choice for Rural Students 

Tara Hardy, M.A.<br>Boston University

## Introduction

Although nearly 20 percent of the U.S. population lives in rural regions, limited research has been conducted on rural youth and their educational experiences (Koricich et al., 2018). Within the literature that exists on rural students, most researchers view this population through a monolithic deficit lens (Goldman, 2019; Stone, 2018) and emphasize how the college enrollment rate of rural students is lower than that of their counterparts from other locales (Koricich et al., 2018; United States Department of Agriculture [USDA], 2020). However, while it may be fair to say that rural students in general face certain challenges in obtaining a college education, the rural identity does not impact all rural students in the same way or to the same degree. In addition, despite the challenges rural students experience, data also shows that this group is attending postsecondary institutions in increasing rates (Byun et al., 2012; Nelson, 2016), a trend that reflects the strengths of the rural population in navigating higher education spaces. Thus, to challenge the common narrative around rural students, I will unpack the ideas of rural advantage and disadvantage as they relate to higher education while keeping in mind the complexity of rural students' intersecting identities and backgrounds. I will approach this topic by analyzing the beneficial and detrimental impacts of three factors on rural students' college access and choice: community, family attitudes and attributes, and high school characteristics.

## Defining "Rural" and Positioning Rural Students

What qualifies as "rural"? According to the U.S. Census Bureau (2010), rural places are any areas with a population of less than 2,500 . As of the 2010 census, the majority ( 64 percent) of the rural population in the country was concentrated east of the Mississippi River, with the greatest proportion of rural residents by state population living in Maine and Vermont and the smallest in California (U.S. Census Bureau, 2010). Data has shown that poverty is more prevalent in rural areas than in urban areas, especially among people of color (Koricich et al., 2018). College students in rural areas are also more likely to be first-generation than their peers in other regions, as fewer than 20 percent of rural adults over the age of 25 have college degrees compared to the national average of about 50 percent of adults (Marcus \& Krupnick, 2017). Of the total number of U.S. students enrolled in rural public elementary and secondary schools in 2013 (the most recent data available), 72.4 percent were white, 12.2 percent were Hispanic, and 9.3 percent were Black, compared to the national distributions of 50.3, 24.9, and 15.6 percent, respectively (National Center for Education Statistics, 2013).

While most of the literature on the rural student population highlights the impact of firstgeneration and low-income status on college pathways, the pre-college experiences of rural students who are Black, Indigenous and People of Color (BIPOC) are often erased in the
literature, perhaps because white students make up an overwhelming majority of the rural K-12 population. However, recent research does show that BIPOC living in rural parts of the U.S. are 50 percent less likely to have a college degree than their white neighbors (USDA, 2017). While the educational attainment of racially and ethnically minoritized rural Americans is growing (USDA, 2017), there is still considerable geographic variation in high school and college completion rates within rural areas that disproportionately impacts BIPOC communities. For instance, over half of the rural counties in the United States with low educational attainment (defined as having high school completion rates of 80 percent or less among adults ages 25 to 64) have a Black or Hispanic population of at least 20 percent (USDA, 2020). This data points both to the limited college access and choices available to rural BIPOC students, as well as to the non-monolithic nature of rural communities.

## Findings on College Access and Choice

## Impact of Community

The first factor affecting college access and choice for rural students is their home community. To start, the location of rural communities can act as a barrier to access and choice, as reflected in the finding that "as the share of rural residents increases, the likelihood of a fouryear college or university within a commuting zone decreases, while the likelihood of a community college marginally increases" (Ruiz \& Perna, 2017, p. 99). While other data is limited on the numbers of private versus public institutions in rural areas and the prevalence of for-profit college enrollment among rural students, research has shown that community colleges are the most common source of higher education in rural areas (Boggs, 2019). In addition, 75 percent of the 41 million Americans living in "education deserts," commonly defined as any place located more than 25 miles away from a postsecondary institution, can be found in rural communities (Boggs, 2019). Since proximity to higher education institutions correlates with likelihood of college attendance and selectivity of the institutions where students enroll (Ruiz \& Perna, 2017), it is clear that the lack of colleges and universities in rural communities disadvantages rural students both in their college access and choice.

On the other hand, certain aspects of rural communities, such as their close-knit nature, can serve as a support to students' college access (Means et al., 2016). Because it is typical for rural residents to know most of their fellow community members, rural students often have a vast extended-support network to whom they can turn for advice on how to apply for college and how to choose between different college options (Nelson, 2016). However, this support may not be distributed equitably to all rural students, as researchers have noted that community members are more likely to devote their resources to students with strong academic performance than low-achieving youth (Koricich et al., 2018; Nelson, 2016). Thus, the students who need the most support unfortunately may not be the ones who are receiving it, which points to the differences in how rural students experience aspects of the rural identity as they navigate the college application and selection process.

Poor economic conditions and limited career options within rural communities also affect the decisions rural students make about where to attend college. Many residents of rural areas are not qualified for "skilled" labor due to low educational attainment, meaning that companies in high-tech industries are less likely to settle in those regions and create new jobs (Koricich et al.,
2018). As a result, rural areas experienced lower economic growth after the 2007-2009 Great Recession than urban and suburban areas (Koricich et al., 2018), and rural household income is currently 20 to 25 percent lower than urban household income on average (USDA, 2020). This trend of stagnant economic advancement has led to the perception among many rural students that career opportunities in their hometowns are limited either to industries like mining and agriculture that have been historically located in rural areas (Koricich et al., 2018), or to other low-skill options such as fast-food restaurants and retail stores (Means et al., 2016). Even further, supply chain limitations and market fluctuation incurred by the ongoing coronavirus pandemic have negatively affected the farming industry (Gavazzi, 2020; University of Arkansas, 2021), causing even more jobs to disappear within rural communities over the past year. Thus, the prospect of obtaining more opportunities (Goldman, 2019), a fulfilling career (Stone, 2018), and affluence (Byun et al., 2012) motivates rural students with the means to do so to leave home, sometimes for college, and not return.

This phenomenon of "rural brain drain" is not only an effect of struggling economies in rural communities, but it also causes financial resources to dwindle in these regions. As more and more highly skilled and well-paid residents depart their rural hometowns, the overall tax revenue of these communities continues to decline (Koricich et al., 2018). As a whole, this process constitutes a self-perpetuating cycle that keeps poor rural areas poor. Entrenched poverty in rural communities has clear implications for college access among low-income students, as families with fewer financial resources may not be able to afford the cost of higher education. This issue particularly affects youth of marginalized racial identities, as these communities "experience[s] notably higher rates of poverty compared to White residents" in all types of locales but especially in rural counties (Koricich et al., 2018, p. 299). Thus, not only do these trends highlight a need for increased financial aid for rural students, but they also underscore the importance of using an intersectional lens to understand how the combined impact of race and cyclical poverty affects college access for the rural population in different degrees.

## Impact of Family

Throughout the literature, rural youth describe family as another influential factor in their college application and decision process, but the impact of family can vary greatly between students. For example, some students noted how their families motivated them to attend college so they could have greater opportunities for social mobility and a better life; in turn, students wanted to obtain postsecondary education "to give back to their family" (Goldman, 2019, p. 21) and serve as role models for younger siblings (Stone, 2018). The value of family is especially salient in certain cultures, such as in Native/Indigenous communities (Goldman, 2019). However, in some cases the strong value placed on family also limited college choice, as in Means et al.'s study (2016) where students expressed "concerns about who would take care of their families if they went a further distance for college" (p. 557). These anxieties led the students in question to consider only in-state colleges. College counselors have also described rural parents' skepticism of postsecondary education as a challenge to students' college access and choice, as parents express concerns that their children will leave for four years to go to school and never return (Gettinger, 2019). Furthermore, a report by the Pell Institute noted that rural parents in general have lower expectations of degree completion for their children than
urban and suburban parents; since parental expectations serve as a predictor of college enrollment, this trend has implications for college access and choice between two- and fouryear institutions for rural youth (Ruiz \& Perna, 2017).

The impact of family on rural students' ability to navigate the college application process also differs based on whether students' family members have previously attended college, a point that further emphasizes how the rural student population is not monolithic. For example, some first-generation rural students have noted that although their parents "were indirectly supportive [of their college plans] through encouragement, emotional support, and material provisions," they were not able to help them fill out applications or financial aid forms due to lack of knowledge about procedures and terminology (Nelson, 2016, p. 262). In addition, a focus on affordability among parents of first-generation rural students may limit these students' college choices, whereas parents of continuing-generation students may be more likely to encourage their children to apply to more selective private institutions due to their knowledge of financial aid potential at these schools (Nelson, 2016). This trend is reflected in the findings that highachieving low-income students from rural areas apply to selective colleges in much smaller numbers than their urban peers (Hoxby \& Avery, 2013), and that college-going rural youth are more likely than non-rural students to attend less selective four-year institutions (Ruiz \& Perna, 2017).

While concerns about the cost of college are not solely specific to rural first-generation students, it is still important to note due to the number of first-generation students coming from rural locales. However, it is also worth mentioning that the possible barriers to access presented by first-generation status can be partially mitigated if students have older siblings and/or extended family who have attended college, since their knowledge of the college application process and financial aid options represents increased family cultural capital. If one applies Yosso's Community Cultural Wealth Model (2006) to the first-generation rural student population (especially in looking at BIPOC students from this group), one could also argue that these students have strong navigational capital that allows them to enter and move through spaces not designed for them, such as higher education. Thus, students with access to this capital will have a greater chance of success in navigating the college application and admissions process.

## Impact of Rural High School Characteristics

Just as family can serve as both a barrier and a support to rural students' college access and choice, the environment and attributes of these students' high schools can also help and hinder rural youth in their pathways to college. Two factors that can negatively impact access are small student populations and the remote locations of rural high schools, as college recruiters often would rather visit areas with greater concentrations of schools and greater numbers of students for higher recruitment payoffs (Gettinger, 2019). Research has also shown that recruiters are more likely to visit high schools in wealthy areas and that admissions staff at private colleges tend to favor students from private high schools (Gettinger, 2019). Thus, the lack of private schools in rural regions combined with increased poverty in these areas (compared to urban and suburban locales) also restricts college recruitment of rural students. These disadvantages contribute to the findings of multiple studies that rural students are more likely to enroll in public and nonselective colleges than their urban and suburban peers, a trend
known as undermatching (Byun et al., 2012; Koricich et al., 2018). Because recruiters often do not visit rural high schools, the burden ultimately falls on students to visit colleges themselves, which can mean traveling long distances due to the limited number of postsecondary institutions in rural areas. Research universities in particular rarely have rural campuses, and visiting these institutions is not always feasible due to the high cost of transportation. Thus, rural students' college choice is impacted by inadequate recruitment efforts. Furthermore, despite being academically qualified to attend four-year schools, many rural students undermatch by enrolling in two-year degrees, since the large concentration of community colleges in rural areas makes this option the most accessible choice for their postsecondary education (Koricich et al., 2018).

Although the small size of rural high schools can discourage college recruitment efforts, it can also benefit students' college access in that it tends to foster a "one big family" climate of encouragement and support for the high-school-to-college transition among students, teachers, and staff (Means et al., 2016, p. 558). Along the same lines, "access to school social capital" is more available to all students at small schools as compared to larger ones found in urban and suburban areas, as the ratio of staff members to students generally increases at small schools despite understaffing problems (Nelson, 2016, p. 270). Students at small rural schools also have more opportunities to participate in extracurricular activities, especially athletics, compared to students in other schools where spots are more competitive. As a result, participation is greatly encouraged, as exemplified by this account from a rural student: "At the school I went to everybody is recruited to play soccer because we don't really have enough players" (Nelson, 2016, p. 270). One could posit that this increased participation in school activities is a gateway to expanded college access, as it makes students' college applications more competitive in the admissions process.

In contrast, however, the limited financial resources available at rural high schools can act as a barrier to college access and choice by limiting students' academic opportunities. As of 2015, nearly 30 percent of rural high schools did not offer any Advanced Placement courses, compared to 5 and 8 percent of suburban and urban schools, respectively (Ratledge et al., 2020). Similarly, research has also shown that rural high school students are less likely to enroll in dual enrollment courses than their urban and suburban peers (Ratledge et al., 2020). One reason for this disparity is that certain remote locales cannot offer salaries high enough to recruit teachers for college preparatory courses (Lavalley, 2018; Marcus \& Krupnick, 2017). This data is also supported by the finding that rural schools on average spend fewer dollars per student than urban and suburban schools (Ruiz \& Perna, 2017). Overall, the lack of opportunities to engage in high-level coursework and gain college credit while in high school disadvantages students in rural high schools, as these students cannot bolster their college applications with competitive transcripts and are unable to increase their sense of preparedness for rigorous college classes (Goldman, 2019).

Similarly, insufficient tax revenue in rural areas, which stems from high poverty rates, also results in underfunded K-12 schools (Koricich et al., 2018). The lack of funding has created a routine understaffing problem at these schools, including in college counseling offices. College counselor shortages have a negative effect on all students in rural schools, but they can disproportionately impact Hispanic students, whose decisions about applying to college are generally more influenced by the expectations of school personnel (Byun et al., 2012). Similarly, Means et al.'s (2016) study of rural students in a predominantly Black high school found that the
limited access students had to college counseling services left them without clear direction about post-high school academic options and contributed to misinformation about college costs and financial aid. As a result, these students were "more likely to see the cost of college attendance as risky" and were less likely to enroll than their urban and suburban peers (Means et al., 2016, p. 564). These examples indicate the importance of taking rural students' diverse backgrounds and identities into consideration when studying the college access and choice of this group.

In closing, it is worth noting that the negative impact of limited college counseling can be mitigated for some students by pipeline programs like Upward Bound, which provide students with information about college applications and financial aid. Other federal TRIO programs that offer financial and academic support can also help minoritized rural students succeed in college once they arrive on campus (Goldman, 2019). However, these programs are not formally open to undocumented students, many of whom live in rural communities due to the prevalence of seasonal farmwork and factory jobs available in these areas (Gonzales \& Ruiz, 2014). This point further demonstrates the need to go beyond a monolithic view of rural students when considering factors that affect college access for this population.

## Recommendations for Policy and Future Research

Based on the literature, one can propose several recommendations for policy changes to help improve rural students' college access and expand their college choices. To start, more funding should be provided to rural K-12 schools so they can attract and hire guidance counselors in greater numbers. Since rural students are "disproportionately more likely to be first-generation and to come from lower-income families than their metro counterparts" (Byun et al., 2012, p. 479), they likely do not receive as much information about college from their parents and are more reliant on financial aid to attend college. Thus, it is essential to have staff who can support students in navigating the college search and application process by providing resources and spreading awareness of scholarship and grant opportunities.

In addition to counselors, rural schools could use increased funding to hire more teachers and therefore expand the academic offerings available to students. In particular, students would benefit from the opportunity to take Advanced Placement and dual enrollment courses to prepare them for the academic rigor of college coursework and allow them to obtain college credit before even leaving high school. If students transition into college feeling confident that their rural background will not prevent them from succeeding academically (and in some respects may even help them succeed), they may also feel a greater sense of belonging in the college environment, which in turn can increase their likelihood of degree completion.

Apart from expanding rural high schools' financial resources, policymakers should also encourage higher education institutions to change their approach to rural recruitment to expand college access and choice among the rural population. Specifically, college admissions offices need to invest more time and funding into visiting rural high schools and community centers and bringing rural students to their campuses, rather than expecting students to find their own means to travel long distances to colleges. One possible measure to support rural high school students currently implemented by Texas A\&M University is providing bus transportation for prospective students to attend open houses and other events on campus (Ruiz \& Perna, 2017). This approach can be particularly effective in recruiting and increasing college access and
choice for undocumented rural students, who are legally prohibited from obtaining driver's licenses in 40 U.S. states (Gonzales \& Ruiz, 2014; Park, 2015). Virtual recruiting events have also become more popular during the coronavirus pandemic and can serve as a helpful tool for informing rural students of their college choices. However, it's important to note that virtual recruitment options are not a be-all and end-all solution to expanding college access and choice for rural students due to the sizable percentage of rural Americans who lack high-speed internet access (Boggs, 2019; Headden, 2019).

Overall, lackluster recruitment efforts in rural communities represent a clear roadblock to college access and choice for all students in these areas-a roadblock that is magnified for lowincome youth and their families who can neither afford the cost of transportation nor take time off from their jobs to make college visits. By making all rural students, but especially those of minoritized racial, ethnic, and social class backgrounds, more of an institutional priority in the recruitment and admissions process, universities will begin to address the issue of inequitable college access among this population. Furthermore, they may also start to see rural students as a valuable asset for meeting their enrollment targets. Lastly, by showing rural students that other higher education options are available to them in addition to their local community colleges, undermatching will decrease and college choice will expand for this population.

In looking towards future research on this topic, scholars could benefit from bringing a more intersectional perspective by analyzing how race and ethnicity work with social class to impact college access and choice for rural students. For example, there is limited research on how the values of Native American/Indigenous youth combine with the history of forced assimilation in "Indian" boarding schools and the effects of intergenerational poverty in their communities to impact rates of Native college enrollment. Researchers could also look more closely at how racial identities intersect with rural culture to inform prospective students' college decision-making processes. For instance, one small-scale qualitative study found that Black rural students do not want to attend predominantly white institutions (PWIs) because they do not see other students of their race at those colleges (Means et al., 2016). While this attitude may not be unique to rural students in particular, it's not clear if Black rural students prioritize visibility and representation more than their Black peers from other locales, perhaps because of the value that rural individuals place on community. More targeted studies on the diversity of the rural population can better inform student affairs educators and practitioners' approach to supporting the unique needs of these students and helping them succeed in their higher education journeys.

Lastly, given the rise of distance education in the age of the coronavirus pandemic, scholars could also conduct more research on how rural students' perceptions of online courses affect their college choices, if at all. Looking to existing research on online education can inform areas of inquiry surrounding this topic. For example, in previous studies, online students have reported high satisfaction with the convenience of their classes (Platt et al., 2014). Given the prevalence of education deserts in rural communities, rural students in particular may be wellpositioned to value the convenience of distance learning, as this delivery format can open up a new world of higher education possibilities for those unable to commute long distances. Rural students who are concerned about abandoning family responsibilities may also appreciate the ability to earn a degree without having to leave home, as long as they have reliable Internet access. However, research has also shown that rural students are more likely than their
(sub)urban peers to have limited technological experience and greater hesitancy in learning new applications (Hartley et al., 2015). Such factors could lead this population to perceive online education as inconvenient. Even if both perceptions are true, it is not clear which one has more of an influence over rural students' college choice. More research on how this population uses their perceptions of online postsecondary education to make decisions about where to apply and enroll could help uncover the answer to this question.

## Conclusion

Although perceptions of rurality have been confined to negative stereotypes of ignorance and inferiority (Marcus \& Krupnick, 2017), rural youth are complex individuals with many of the same dreams and ambitions as their urban and suburban counterparts. Despite the challenges that rural students can face, such as minimal recruitment efforts from colleges, under-resourced schools and communities, lack of knowledge about the college application process, and limited college options within commuting distances, they also experience unique advantages in accessing postsecondary education due to their close-knit communities, strong family support, high levels of self-motivation, and meaningful teacher-student relationships. These benefits contribute to the findings that rural high schools on the whole have higher graduation rates than the national public-school average (Lavalley, 2018; Marcus \& Krupnick, 2017), and that firstyear rural students perform just as well or even better than their peers in college courses (Nelson, 2016).

Thus, it's clear that rural students can and often do succeed in college. The challenge, however, lies in filling the rural opportunity gap-in other words, helping rural students navigate structural and institutional barriers (or, better yet, removing those barriers altogether) to get them to college in the first place, while preventing undermatching in the process. As researchers examine how this challenge has been further exacerbated by the coronavirus pandemic, it is especially important that they acknowledge the impact of rural students' manifold identities rather than erasing this complexity and ignoring intersectionality in favor of one monolithic rural identity. With this acknowledgment, along with a recognition of the inherent strengths of rural students, higher education professionals and policymakers will become better equipped at dismantling the negative stereotypes that characterize deficit models of rurality, as well as expanding college access and choice for our nation's millions of rural youth.

## References

Boggs, B. G. (2019). Planting the seeds, working the land: Postsecondary programs in rural areas [PDF]. National Conference of State Legislatures. https://www.ncsl.org/Portals/1/Documents/educ/Rural_Areas_PostSecondary_Programs_V2.pdf
Byun, S., Irvin, M. J., \& Meece, J. L. (2012). Predictors of bachelor's degree completion among rural students at four-year institutions. The Review of Higher Education, 35(3), 463-484. doi:10.1353/rhe.2012.0023
Gavazzi, S. M. (2020, April 27). Why COVID-19 will make it tougher for rural students to go to college. Forbes. https://www.forbes.com/sites/stephengavazzi/2020/04/27/rural-youth-to-college-it-depends-on-how-their-families-are-doing/?sh=12cd8aae61dd

Gettinger, A. (2019, March 6). One reason rural students don't go to college: Colleges don't go to them. National Public Radio. https://www.npr.org/
Goldman, A.M. (2019). Interpreting rural students' stories of access to a flagship university. Rural Educator, 40(1), 16-28. http://search.ebscohost.com/login.aspx? direct=true\&db=eue\&AN=134891381\&site=ehost-live
Gonzales, R. G., \& Ruiz, A. G. (2014). Dreaming beyond the fields: Undocumented youth, rural realities and a constellation of disadvantage. Latino Studies, 12(2), 194-216. doi:10.1057/Ist.2014.23
Hartley, M. M., Ludlow, B. L., Duff, M. C. (2015) Second life: A 3D virtual immersive environment for teacher preparation courses in a distance education program. Rural Special Education Quarterly, 34(3): 21-25.
Headden, S. (2019). In rural America, too few roads lead to college success. Lumina Foundation. https://focus.luminafoundation.org/in-rural-america-too-few-roads-lead-to-college-success/
Hoxby, C., \& Avery, C. (2013). The missing 'one-offs': The hidden supply of high-achieving, lowincome students. Brookings Papers on Economic Activity, 2013(1), 1-65. https://www.nber.org/papers/w18586
Koricich, A., Chen, X., \& Hughes, R. P. (2018). Understanding the effects of rurality and socioeconomic status on college attendance and institutional choice in the United States. The Review of Higher Education, 41(2), 281-305. doi:10.1353/rhe.2018.0004
Lavalley, M. (2018). Out of the loop [PDF]. National School Boards Association Center for Public Education. https://education.wsu.edu/documents/2018/12/center-public-education-rural-schools-report.pdf/
Marcus, J., \& Krupnick, M. (2017, September 27). The rural higher-education crisis. The Atlantic. https://www.theatlantic.com/
Means, D. R., Clayton, A. B., Conzelmann, J. G., Baynes, P., \& Umbach, P. D. (2016). Bounded aspirations: Rural, African American high school students and college access. The Review of Higher Education, 39(4), 543-569. doi:10.1353/rhe.2016.0035
National Center for Education Statistics. (2013). Rural education in America. https://nces.ed.gov/surveys/ruraled/tables/B.1.b.-1.asp
Nelson, I. A. (2016). Rural students' social capital in the college search and application process. Rural Sociology, 81(2), 249-281. https://doi.org/10.1111/ruso. 12095
Park, H. (2015, March 29). Which states make life easier or harder for illegal immigrants. The New York Times. https://www.nytimes.com/interactive/2015/03/30/us/laws-affecting-unauthorized-immigrants.html
Platt, C. A., Amber, N. W., \& Yu, N. (2014). Virtually the same?: Student perceptions of the equivalence of online classes to face-to-face classes. Journal of Online Learning and Teaching, 10(3), 489.
Ratledge, A., Dalporto, H., \& Lewy, E. (2020, September). COVID-19 and rural higher education [PDF]. MDRC. https://www.mdrc.org/sites/default/files/Covid_Rural_HigherEd_final.pdf
Ruiz, R., \& Perna, L. W. (2017). The geography of college attainment: Dismantling rural 'disadvantage' [PDF]. The Pell Institute. http://pellinstitute.org/indicators/downloads/dialogues-2017_essays_Ruiz_Perna.pdf
Stone, A. (2018). Small-town values: How understanding the values of rural students can
influence recruitment strategies. College and University, 93(3), 14-22.
http://search.ebscohost.com/login.aspx?
direct=true\&db=eric\&AN=EJ1188703\&site=ehost-live
United States Census Bureau. (2010). Rural America.
https://mtgis-portal.geo.census.gov/arcgis/apps/MapSeries/index.html? appid $=49 \mathrm{~cd} 4 \mathrm{bc} 9 \mathrm{c} 8 \mathrm{eb} 444 \mathrm{ab} 51218 \mathrm{c} 1 \mathrm{~d} 5001 \mathrm{ef6}$
United States Department of Agriculture. (2017, April). Rural education at a glance [PDF]. https://www.ers.usda.gov/webdocs/publications/83078/eib-171.pdf
United States Department of Agriculture. (2020, May 28). Rural education. https://www.ers.usda.gov/topics/rural-economy-population/employment-education/ruraleducation/
University of Arkansas. (2021). Farmers and stress: COVID-19 adds fuel to the fire. https://www.uaex.edu/life-skills-wellness/health/covid19/farmers-and-stress.aspx
Yosso, T. J. (2005). Whose culture has capital? A critical race theory discussion of community cultural wealth. Race Ethnicity and Education, 8(1), 69-91.

