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**NOT ALL TRAILS ARE STRAIGHT: THE EFFECTS OF ATTACHMENT ON RURAL
YOUTH RESIDENTIAL ASPIRATIONS**

By

Zachary Davis

B.S. University of Maine, 2019

A THESIS

Submitted in Partial Fulfillment of the

Requirements for the Degree of

Master of Science

(Resource Economics and Policy)

The Graduate School

The University of Maine

August 2022

Advisory Committee:

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NOT ALL TRAILS ARE STRAIGHT: THE EFFECTS OF ATTACHMENT ON RURAL YOUTH RESIDENTIAL ASPIRATIONS

By Zachary Davis

Thesis Advisors: Dr. Jessica Leahy and Dr. Kathleen Bell

An Abstract of the Thesis Presented
in Partial Fulfillment of the Requirements for the
Degree of Master of Science
(Resource Economics and Policy)

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The out-migration of rural youth is a critical issue for the sustainability of rural communities. Youth out-migration poses challenges for rural communities as they strive to address workforce shortages, population decline, and broader social and economic issues. The departure of youth from rural areas can decrease the diversity of local workforce skills, change the vitality of communities, and undermine community and economic development efforts. In addition, certain groups of young people in rural areas, such as queer young adults, face additional identity-based challenges that can influence their migration decisions and distinguish aspects of their decision-making from other youth. Exploring the residential aspirations of rural youth and queer young adults provides a means for better understanding drivers of youth out-migration and ways to attract and retain youth in rural communities.

We used a mixed methods approach to better understand how different groups of young people living in rural areas, mainly students and queer young adults, experience attachment to the outdoors and form residential aspirations. By analyzing 2,027 survey responses from middle

school and high school rural youth and 17 interviews with queer young adults attending college in a rural area, we advance understanding of how rural youth form their residential aspirations. Some of our results reveal higher outdoor place attachment is related to outdoor recreation engagement and higher chances of rural youth aspiring to live in a rural area. Other results show that queer rural youth desire to live in communities that value diversity, promote acceptance, and have accessible nature. Lastly, our work showed that queer rural youth value nature for more than just outdoor recreation, they also value it as a mental health resource.

Our findings offer insights and recommendations for rural communities on how to attract and retain younger residents. One way is by offering ways to form place attachment in rural youth as they grow up, through maintaining outdoor spaces in the community and providing lots of opportunities for youth to spend time outdoors. Another suggestion is to promote inclusivity visibly within rural communities, an example being using symbols of acceptance such as pride flags in community spaces.

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CHAPTER 1: PROLOGUE

Youth out-migration results in broad social and economic issues for rural communities in the United States, such as greying populations and a smaller workforce. Despite significant concerns about the consequences of youth out-migration for rural communities, the residential aspirations and migration decisions of rural youth remain understudied relative to rural adults. Uncertainty about youth out-migration broadly raises questions about how to maintain the sustainability and longevity of rural communities, and how to attract and retain young people to these communities. Additionally, queer young adults living in rural areas, an often-marginalized group, face a variety of identity-based challenges that often put them at odds with rural living. These challenges for queer young adults create another source of out-migration and population decline for these communities. Using quantitative and qualitative methodologies, this work expands the existing knowledge of rural youth residential aspirations by assessing how various rural youth form and experience outdoor place and community attachment and how these distinct types of attachment, influence residential aspirations. By doing so, we explored the potential significance of nature to the attraction and retention of young residents and to the sustainability of rural communities.

We examined relationships between outdoor place attachment, community attachment, and future residential aspirations of rural youth using quantitative methods and empirical strategies. We focused on the transferability and validity of outdoor place attachment insights based on rural adults to rural youth populations and the differences between outdoor place and community attachment constructs and their relationships with residential aspirations. We analyzed 2,027 survey responses provided by middle school and high school students in the rural areas of Piscataquis County and Northern Somerset County, Maine and Coos County, Oregon.

We used statistical testing and modeling to assess the validity and reliability of outdoor place attachment constructs with youth populations and how place and community attachment were related to the residential aspirations of rural youth.

With a qualitative research approach, we analyzed how queer young adults experiences rural communities, relate to nature, and form their own residential aspirations. We conducted seventeen qualitative interviews with queer rural college students to better understand how their queer identity impacts their outdoor place and community attachment, experiences outside, community perceptions, and residential aspirations. We generated and refined emergent themes through multiple coding strategies and validity tests. The results of this work provide a greater understanding of how rural youth and rural queer young adults form their residential aspirations based on their levels of attachment, experiences outside, and community perceptions.

Together, these two studies advance knowledge and understanding of rural youth residential aspirations and offer insights and guidance for businesses, community stakeholders, rural community development policies and policy makers, formal and non-formal educators, researchers, rural families, those with queer identities, and rural youth themselves. These insights will help rural communities to sustain themselves and reduce the impact of rural brain drain.

CHAPTER 2: OUTDOOR PLACE ATTACHMENT INFLUENCES FUTURE RESIDENTIAL ASPIRATIONS OF RURAL YOUTH

Introduction

Rural community persistence, or the ability of a rural community to maintain a population and viable economy, is a central issue for communities facing youth out-migration. Youth out-migration poses challenges for rural communities as they strive to address workforce shortages, population decline, and broader social and economic issues (Stricker, 2007, Petrin et al., 2011, Brown et al., 2011, Carr et al., 2009, Cromartie et al., 2015). The departure of youth from rural areas who leave for higher education and never return contributes to the phenomenon of rural “brain drain,” and can decrease the diversity of local workforce skills (Stracuzzi, 2009, Stricker, 2007, Carr et al., 2009, Petrin et al., 2011). Rural youth out-migration often contributes to positive feedback loop effects, where youth leave due to a poor economy, which further weakens the economy, and causes more youth to leave.

Youth often leave rural areas to pursue secondary education, skills training, urban culture, or higher-paying employment opportunities in urban areas (Stracuzzi, 2009, Stricker, 2007, Petrin et al., 2011, Bernsen et al., 2022). While past research suggests rural youth believe that there are many barriers to achieving a higher education, many still aspire to acquire education beyond high school and often have to go to urban areas to receive it (Irvin et al., 2011, Howley, 2006, Bajema et al., 2002). Rural communities can also be perceived negatively by youths. Rural youth tend to associate rural communities with farming, hard work, limited employment opportunities, “backwoods” school systems and degraded environments (Davies, 2008, Tieken et al., 2016, Crain et al., 2021). There is also the perception of “failing” by staying in rural areas, as urban areas are perceived to be “cool,” centers for youth culture, and more

highly ranked in terms of social hierarchy (Stockdale et al., 2018, Pedersen et al., 2017, Farrugia, 2018).

Understanding the drivers of future residential aspirations is key to understanding and addressing youth out-migration, and to determining what factors influence whether or not youth desire to return to rural areas someday. A deeper understanding of how attachment impacts the residential aspirations of rural youth may help combat the issue of rural youth out migration. In this paper, we focus on the potential significance of outdoor place attachment to understanding and addressing youth out-migration from rural areas. Community attachment measures have often ignored outdoor place attachment as an individual concept, lumping aspects of environmental and community attachment constructs together. Past studies of outdoor place attachment have not focused directly on youth populations nor investigated the extent to which theory and findings based on adults hold for youth. We also compared the aspirations to return to a rural hometown to living in a different rural area, acknowledging that youth can have rural residential aspirations to places beside their hometown. We designed this research to examine (1) if established outdoor place attachment measures can be applied to rural youth, (2) if outdoor recreation participation is related to outdoor place attachment, and (3) how different kinds of attachment influence rural youth residential aspirations.

Literature Review

Residential aspirations and attachment. Future residential aspirations are influenced by youth perceptions of their communities and the physical environment they are in (Stracuzzi, 2009, McLaughlin et al., 2014, Petrin et al., 2014, Theodori et al., 2015, Bernsen et al., 2022, Bernsen et al., 2022). Determining how attachment and perceptions are formed is critical.

Current literature shows a variety of possible factors that could contribute to the formation of outdoor place attachment and community attachment. Common factors include the presence of friends and family, a sense of community, recreation opportunities and the natural beauty of their surroundings (Cromartie et al., 2015, Johnson et al., 2005, Stracuzzi, 2009). A variety of factors have also been observed to reduce place and community attachment, including poor economies, less jobs, judgmental communities, lack of privacy, drugs, negative perceptions of rural schools, and lack of cultural events (Stracuzzi, 2009, Cromartie et al., 2015, Johnson et al., 2005). Urban areas often have stronger economies, more job opportunities, and more cultural events, which can often be attractive to rural youth. Interestingly, the effect of school performance on residential aspirations has been mixed. While some studies show rural students who performed better in school were less satisfied with their communities and associated less importance with living in that community, other studies found better school performance led to increased aspirations to live in a rural area. (Howley, 1997, Johnson et al., 2005, Chenoweth et al., 2004, Petrin et al., 2011, Wang et al., 2021, Bernsen et al., 2022). Rural youth may also recognize some material, financial, and educational sacrifices that are made by choosing to stay in a rural area, which can drive down attachment (Corbett et al., 2017, Cromartie et al., 2015). Despite lower incomes and worse economies, rural families are more likely to refuse a higher paying job that requires relocation than urban families, which suggests that attachment may be a factor in residential choices of rural residents (Howley, 2006, Corbett et al., 2017, Cromartie et al., 2015).

Outdoor place attachment and rural youth. Outdoor place attachment, a construct that describes the emotional connection to a physical environment, could help explain rural youth residential aspirations and inform community strategies to retain and attract young residents in order to sustain rural communities. Place attachment is conceptualized as a strong bond or

sentimental connection between an individual and the geographical space around them (Jorgensen et al., 2001, Williams et al., 1992, Cross, 2003). To some scholars, place attachment is a construct composed of various ideas, such as place meaning, place dependence, place identity and place satisfaction (Eaton et al., 2018, Eaton et al., 2019, Raymond et al., 2010, Stedman, 2003, Williams et al., 2003, Stedman 2006, Scannell et al., 2017, Brown et al., 2007). Other variations of the concept exist as well, including multiple place attachment and place motivation (Pedersen, 2018, Kyle, 2004). In this research, we focus on outdoor place attachment as being composed of place identity (an emotional connection) and place dependence (a functional connection) (Vaske et al., 2001, Williams et al., 2003). Since rural areas are rich in natural resources, we hypothesize that a relationship exists between outdoor place attachment and the residential aspirations, or where someone wants to live in the future, of rural youth.

Past research has examined the relationship between place attachment and rural resident attitudes and behaviors, though few such studies focus on rural youth. Having high place attachment to a natural environment is associated with pro-environmental behavior, a sense of belonging, relaxation, positive emotions, making cherished memories, a sense of freedom, and entertainment (Halpenny, 2010, Vaske et al., 2001, Scannell et al., 2017). Few studies have examined the place attachment of rural youth, especially using the more natural environment-focused variants of outdoor place attachment measures. Studies focused on adults reveal that outdoor place attachment can be formed by repeat visits to natural areas, living in a rural area, strong community connections and good environmental quality (Williams et al., 1992, Stedman, 2006). Mixed results from prior studies reflect the lack of consensus on whether outdoor place attachment is made up of one or two dimensions (Eaton et al., 2018, Vaske et al., 2001, Williams et al., 2003, Stedman, 2003).

Place attachment and deeper connections to nature are suspected to be more common in rural areas. Rural areas tend to have more outdoor recreational opportunities, abundant natural resources, natural amenities, and aesthetic landscapes that can foster spiritual connections to a natural environment and facilitate the creation of outdoor place attachment more easily (Brown et al., 2007, Kyle et al., 2004, Budruk et al., 2013, Anderson et al., 2008). Most scholars have measured place and community attachment in a way that ignores the rich natural resources context of many rural communities. Studies have found high levels of place attachment between adult homeowners and living near natural amenities (Jorgensen et al., 2001, Stedman, 2006). These studies only surveyed adult homeowners, and while they found high levels of place attachment, it may not be a good indicator of how youth attach values to natural environments. Some studies looked at rural youth and place attachment in the context of economic perceptions and primary education experiences (Johnson et al., 2005, Stracuzzi, 2009), but not in the context of natural resources and outdoor recreation. Overlooking the rich natural resources context of rural regions ignores the potential importance of outdoor recreation opportunities to place attachment as well as youth residential aspirations.

Outdoor place attachment may not be the only kind of attachment that affects residential aspirations. Community attachment is a similar concept to place attachment but is instead focused on a sentimental connection to a specific community, usually due to loved ones or culture, rather than a type of physical environment. As such, literature has interpreted community attachment as being “rooted to the built environment” or “rooted to social relationships” with family and friends, and can be something as small as a single home or as large as an entire state (Cross, 2003, Petrin et al., 2011). In addition, studies sometimes use the term place attachment to describe what is, in fact, community attachment. Furthermore, the current literature seems

conflicted on how community attachment can impact residential aspirations. Higher levels of community attachment in rural youth is often associated with residential aspirations to stay in a rural community (Bernsen et al., 2022). However rural youth who perceived a poor future for themselves in their rural communities, despite having high community attachment, were still more likely to leave (Theodori et al., 2015, Stracuzzi, 2009, McLaughlin et al., 2014, Petrin et al., 2014). Thus, youth perceptions of their own community might be integral to their own potential community attachment. Aside from perceptions, other factors such as how long someone has lived in a community, interactions with friends and family, and participation in community activities have all been associated with higher levels of community attachment and wanting to remain in a rural community (Theodori et al., 2010, Cromartie et al., 2015, Petrin et al., 2011, Wang et al., 2021). We hypothesize that the relationship between community attachment and residential aspiration exists and is distinct from that between place attachment and residential aspirations. Considering outdoor place attachment and community attachment concurrently will advance a more robust understanding of how attachment to rural areas is related to rural youth residential aspirations.

Conceptual framework and research questions. Advancing knowledge of the relationships between outdoor place attachment and community attachment, and youth residential aspirations are the focus of this work (Figure 2.1).

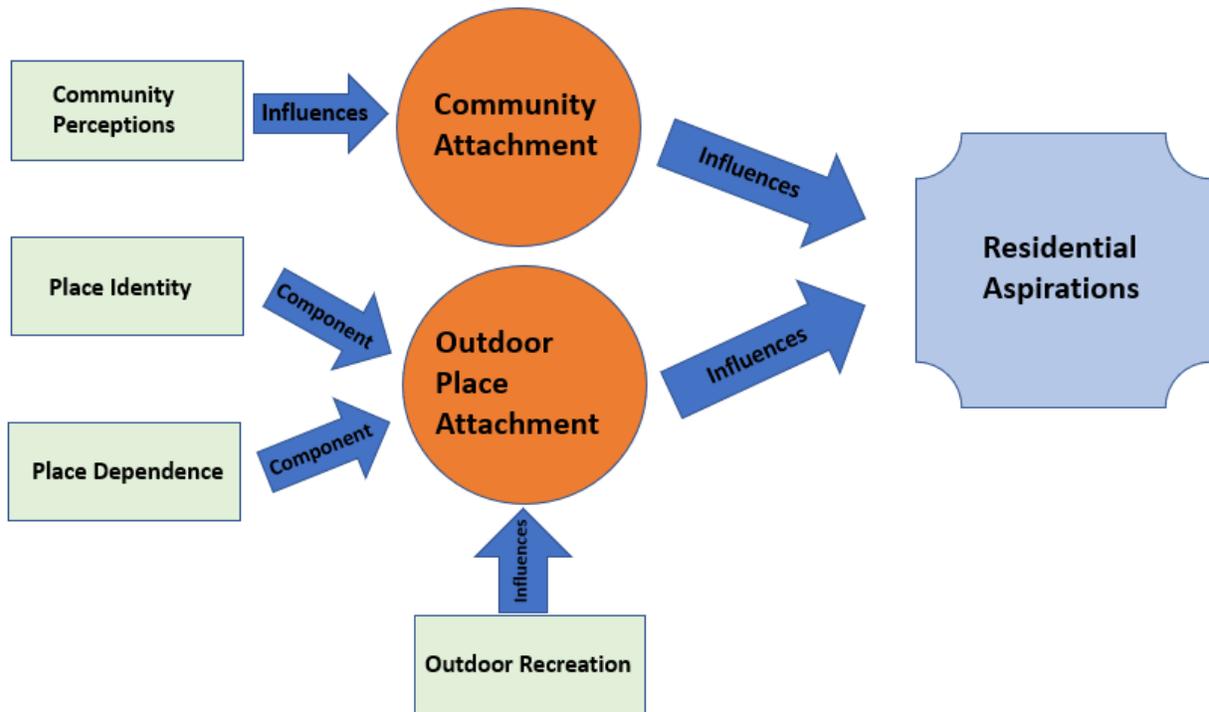


Figure 2.1. Conceptual framework. Flowchart illustrating the relationship of key concepts to residential aspirations in rural youth. Outdoor place attachment is a function of both place identity and place dependence and is influenced by outdoor recreation participation. Community attachment is formed from different community perceptions, and other factors such as the presence of family.

Consistent with this conceptual framework, three research questions focus our empirical work:

(1) Do established outdoor place attachment measures from the human dimensions of the natural resources field maintain validity and reliability with rural youth subjects? (2) Does outdoor recreation participation demonstrate a relationship with outdoor place attachment? and (3) How are future residential aspirations of rural youths influenced by their outdoor place and community attachment? To address these research questions, we conducted empirical analyses of survey responses collected from rural youth in middle schools and high schools in Coos County, Oregon and Piscataquis County, Maine. The survey was conducted in partnership with

community stakeholders and schools in both counties; these partnerships allowed us to learn about the research needs of both counties in order to inform the survey development. By understanding rural youths' outdoor place and community attachment, along with why youth intend to either leave a rural area or return to it, we hope to produce information that can strengthen the persistence of rural communities and be useful to businesses, community stakeholders, rural community development policies and policy makers, formal and non-formal educators, researchers, rural families, and rural youth themselves. By providing relevant information to communities, this research offers support and guidance to rural community leaders addressing rural youth out-migration and encouraging attachment.

Methods

Guided by theory and prior work from the fields of human dimensions of natural resources, rural sociology, and economics, we used statistical analyses of survey data to address our three research questions empirically. Survey responses from middle and high school students in rural counties in Oregon and Maine provided the basis for our work. We assessed the validity and reliability of outdoor place attachment measures with rural youth subjects by conducting an exploratory factor analysis and reliability analysis of survey responses to 10 place attachment items. We examined the correlation of outdoor recreation activity to levels of outdoor place attachment. Lastly, we explored the influence of place and community attachment on the future residential aspirations of rural youth by estimating and interpreting the results of a multinomial logit model of stated youth residential aspirations.

Study Area

Our study area consisted of Coos County, Oregon and Piscataquis County, Maine. These counties are considered rural, traditionally depend heavily economically on forestry and forest

products, are heavily forested, and are generally older in population and poorer than other parts of the United States (Table 2.1). While these areas have many similarities, they also have some differences. Notably, public ownership of forest resources is much higher in Coos County, Oregon than it is in Piscataquis County, Maine (Bernsen et al., 2022). Piscataquis County is a landlocked county, while Coos County is located on Oregon's coast (Figure 2.2).

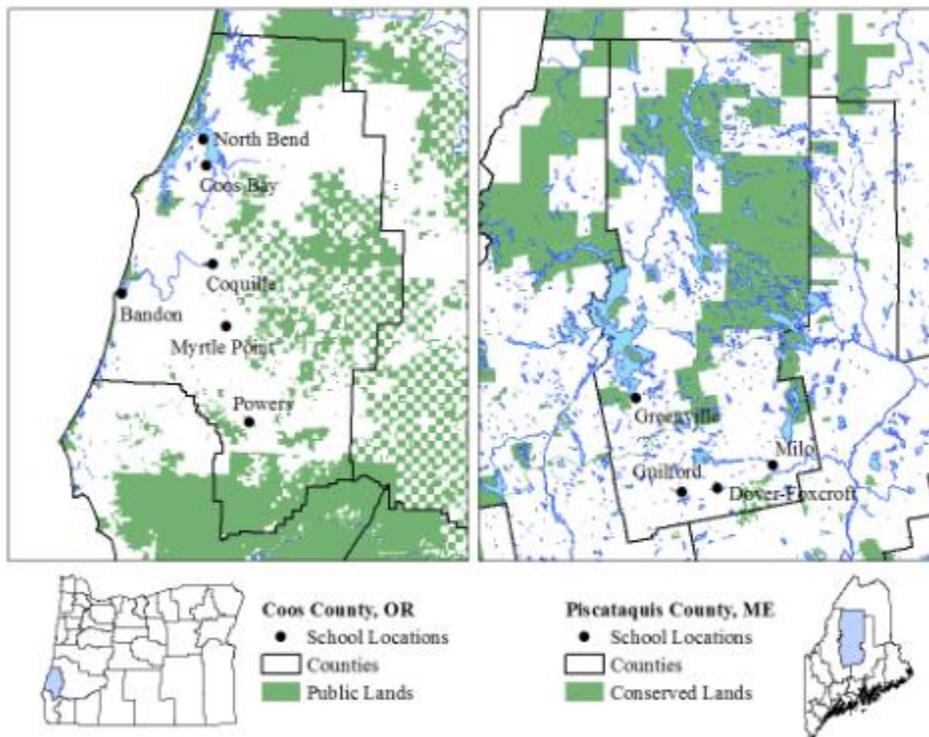


Figure 2.2. Study area. Map of Coos County, OR and Piscataquis County, ME (Bernsen, 2020)

We chose this study area for multiple reasons. First, these rural forested counties are facing common problems present in rural communities nationwide, including concerns over declining youth and younger adult populations, and aging populations. Other issues include economic uncertainty and lack of resources (Bernsen, 2020). We also received support from stakeholders and community partners in both counties (Appalachian Mountain Club and Coos Watershed Association), which greatly helped us in performing research in both counties.

Table 2.1. Demographic data of Coos County, OR and Piscataquis County, ME (U.S. Census Bureau, 2020)

	Piscataquis County, ME	Coos County, OR	United States
Population, 2020	16,800	64,929	331 m
% Forested	95%	85%	33%
% Employment Rate	45.8%	48.1%	59.6%
Median Age	51.5	48.7	38.2
Median Household Income	\$42,083	\$49,445	\$64,994
% of Population in Poverty	17.3%	16.1%	12.8%

Sampling and Survey Study Design

Sampling approach. Between the two rural counties that were studied, a total of 12 (5 in Maine, 7 in Oregon) schools with grades 6-12 had surveys administered to them. Youth in middle schools and high schools were chosen because they are at an age when youth begin thinking about their own futures, and can also perceive and understand problems in the community and local economies. Schools in rural areas were chosen due to the large amount of natural resources

present in rural areas, which could help us identify a connection between youth and close proximity to the environment. A total of 2,027 survey responses from rural students were collected, with 1,401 from Oregon and 590 from Maine.

Survey design. The survey was developed based on prior work on place and community attachment, following best practices in survey design (Stedman, 2003, Dillman et al., 2014, Vaske et al., 2001). The survey collected information from rural youth regarding their attachment to the outdoors and their local rural communities, outdoor recreation engagement, their current residential aspirations about where they would want to live in the future, their educational aspirations, and demographic information including gender, home state, ethnicity and grade. The survey used different question styles such as Likert-type scales, multiple choice, and open ended to collect this critical information. The data used in this study was approved by the university's IRB.

Survey administration. The survey was administered as an online survey using Qualtrics software between February 2019 and May 2019. Students completed the survey during a designated class or free period, such as homeroom. Community stakeholders and school faculty helped to facilitate distribution of the survey to students. Participation was voluntary, so participants do not feel pressured to answer every question. We chose an online survey for the study because it was easily delivered to middle and high school youth. Youth in Maine schools have computers issued to them for use in school and at home, while Oregon schools have computer labs used for computer literacy and other classes.

Data and Measures

To address our three research questions, we created a variety of measures and variables based on the survey responses. Our initial analyses of outdoor place attachment and outdoor recreation required variables measuring both of these items. We supplemented these measures with additional variables, including measures of residential aspirations and community attachment, to set up the multinomial logit analysis of residential aspirations. We used IBM SPSS Software for data cleaning and analyses.

Outdoor place attachment. We measured outdoor place attachment following the convention established by Stedman (2003). We collected responses to Likert-type scale questions consisting of 10 items asking participants how they felt about the outdoors and natural resources around them (Table 2.2). To receive a score, participants must have answered at least five of the belief statements. The 5-point scale ranged from strongly agree (5) to strongly disagree (1) and included a “Don’t Know” option. We excluded “Don’t Know” responses from the scores. We coded outdoor place attachment as a continuous variable. Composite scores were created for each participant by averaging their answers to 10 different belief statements. Outdoor place attachment scores range between one and five.

Outdoor recreation. We assessed outdoor recreation activity by asking youth to report participation in 21 different outdoor recreational activities in the last year. Based on these responses, we then created measures of participation for specific activities and for overall recreation activity in the last year. Specifically, we created 21 binary variables indicating participation in specific activities (e.g., coded as 1 for participation in a given activity and 0 for non-participation in a given activity) and an additional binary variable indicating participation in

at least one of the 21 activities (coded as a 1 for participation in any activity and 0 for no participation in any activity).

Residential aspirations. We measured residential aspirations by classifying responses into 3 categories (rural hometown, another rural area, urban area); these categories are based on responses to the question, “Where do you want to live when you are 30 years old?” We maintained “rural hometown” responses, grouped “another rural area in this state” and “rural area in another state” responses to create another rural category, and grouped “city in this state” and “city in another state” responses to create the urban category. We excluded “another country” responses and missing responses. We coded residential aspirations as a categorical variable in SPSS.

Community attachment. We measured community attachment using 13 scale-items measuring opinions and perceptions about the participants’ rural community (Table 2.3; Stracuzzi, 2009). The 5-point scale ranged from strongly agree (5) to strongly disagree (1) and included a “Don’t Know” option. We excluded “Don’t Know” responses from our analysis. We coded community attachment as a continuous variable in SPSS. Composite scores were created for each participant by averaging their answers to 13 different belief statements. To receive a score, participants must have answered at least six of the belief statements. Community attachment scores range between one and five.

College aspirations. We measured college aspirations of rural youth using responses to the questions of “What is the highest level of education you want to complete?” We coded college aspirations as a binary indicator variable in SPSS. Responses were classified into 2 different categories, the desire to get a bachelor’s degree or higher (coded as 1) or less than a bachelor’s degree (coded as 0).

State. Participants were asked to indicate which state they lived in, Maine or Oregon. We coded State of residency as a binary indicator variable in SPSS (1=Maine; 0=Oregon).

Gender. We measured gender by distinguishing students who identified as male and female. Participants who identified as transgender or non-binary were dropped from the analysis due to a low sample size (n = 22). Participants who answered, “None of the above” (n = 9) and “Choose not the Respond” (n = 33) were also excluded from the analysis. We coded gender as a binary indicator variable in SPSS (1=Male; 0=Female).

Ethnicity. Youth were asked to indicate the ethnicity they identify with. The options included Latino or Hispanic (n = 102), Black or African American (n = 25), Asian (n = 22), Native American (n = 93), two or more ethnicities (n = 201) or White (n = 1099). We measured ethnicity as being either white only or non-white, due to a small sample size of non-white participants. We created a binary indicator variable coded as 1 for a white only ethnicity and 0 otherwise.

Middle School. We used our middle school measure to distinguish middle and high school students. Youth were asked what grade in school they were currently in (between 6th and 12th grade). Participants were coded as either being in middle school or high school based on their grade. We coded middle school as a binary variable in SPSS (1=middle school; 0=high school).

Analysis

We used multiple empirical approaches to analyze our survey data and respond to our three research questions. We conducted all analyses using IBM SPSS Statistics.

Outdoor place attachment validity and reliability analysis. To determine if currently established place attachment measures from the human dimensions of natural resources fields hold with rural

youth subjects, we performed exploratory factor and reliability analyses. We used factor analysis to see if the items used to evaluate outdoor place attachment for different groups in other studies could be used effectively with rural youth. We performed analyses on the full sample, as well as groups separated by state, and type of school (i.e., middle versus high school). For these different groupings, we determined the number of associating factors, the percent of variance, Cronbach's alpha, and the overall mean outdoor place attachment score for all participants. We assessed the validity by looking at the number of returned factors and comparing it to previous literature, mainly Stedman 2003. Similar to what Stedman found, our analysis also returned a single-factor solution (Table 2.4). We assessed the reliability by using the Cronbach's alphas produced for each analysis.

Recreation activity contributions to outdoor place attachment analysis. For each of the 21 recreation activities, we compared the average outdoor place attachment scores for those who participated in each activity in the past year to those who did not. We used independent t-tests to determine if there was a statistically significant difference in outdoor place attachment between those who recreated in the last year and those that did not.

Multinomial logit model of rural youth residential aspirations. To assess how future residential aspirations of rural youth are influenced by the presence of outdoor place attachment and community attachment, we developed and estimated a multinomial logit model of our three categories of residential aspirations. The dependent variable for the models is the discrete residential aspirations variable indicating future desires to live in their rural hometown, another rural area or an urban area. We estimated four specifications of the same model that vary in terms of explanatory variables. Consistent with our research question, our focal variables are outdoor place attachment score, community attachment score, and engagement in any

recreational activities for each participant. Additional control variables included youth college educational aspirations, home state, ethnicity, gender, and whether the participant was in middle school or high school (Table 2.6). We assigned the desire to live in an urban area as the reference category for the multinomial logit model.

We focused on four model specifications involving distinct combinations of the focal outdoor place attachment, community attachment and outdoor recreation variables. The first specification uses the outdoor place attachment score variable, the second specification uses the community attachment score variable, the third specification uses both the outdoor place attachment score variable and community attachment score variable, and the fourth specification uses both attachment scores and the outdoor recreation engagement variable. In addition to our focal variables, we included the same set of control variables in all four model specifications. We reviewed the parameter estimates, associated odds ratios, and their statistical significance and signs. We also recorded multiple goodness of fit measures including Pearson r-squared, AIC, BIC and log-likelihood values. We assessed the overall model fit as well as the sign, magnitude, and significance of the odds ratios in order to ascertain which focal and control variables were statistically correlated with rural youth residential aspirations.

Results

There was a total of 2,027 survey responses collected, for an end response rate of 87%. Maine comprised 30% of the survey responses (590 responses), while Oregon comprised 70% of the survey responses (1,401 responses). High school students made up 69% of respondents, while middle school students made up the remaining 31% of respondents. Descriptions of variables used in the multinomial logit model are listed in Table 2.6, along with the percentage of

survey respondents associated with each category. Figure 2.3 shows the current distribution of residential aspirations of rural youth for when they are 30 years old, where the majority of participants indicated that they aspire to live in an urban area in the future.

Outdoor place attachment validity and reliability analysis. The factor analysis of outdoor place attachment items returned a single factor solution for all groups, aligning with and confirming prior results based on adult response (Stedman, 2003) (Table 2.4). We conducted the analysis using our full sample and multiple sub-samples to assess the robustness of this finding (Table 2.4). Additional sub-samples divided the full-sample by state and middle and high-school students by state. These different subsamples were used to see if there were any significant differences in place attachment validity between different age groups and between rural youth on different sides of the country. The percentage of variance all ranged between 64%-69%. Cronbach's alphas for all groups ranged between 0.937-0.950. Mean response scores for each group are shown in Table 2.4 below. All groups showed slightly positive mean scores, indicating minor positive outdoor place attachment in all groups. Maine youth showed slightly higher outdoor place attachment than Oregon youth. Middle school students in Maine showed higher outdoor place attachment than high school students, while the opposite was true in Oregon. The highest outdoor place attachment was reported from Maine middle school students.

Table 2.2. The ten items used to evaluate the outdoor place attachment of rural youth from a scale of strongly agree to strongly disagree, based on the work of Stedman 2003, and the percent of survey respondents indicating agree or strongly agree.

Survey Item	Percent Agree and Strongly Agree
Everything about the outdoors here is a reflection of me.	36.3%
As far as I am concerned, there are no better places to be than outdoors.	33.7%
For the things I enjoy most, nothing else can compare to the outdoors here.	31.7%
The outdoors here reflect the type of person I am.	25.2%
The outdoors here is my favorite place to be.	22.7%
I really miss the outdoors here when I am away too long.	20.6%
I feel safe in the outdoors here.	20.5%
The outdoors here is the best place to do the things I enjoy.	19.3%

I feel happiest when I am outdoors here.	15.1%
In the outdoors here I feel that I can be myself.	8.3%
Cronbach's Alpha	0.942

Table 2.3. The thirteen items used to evaluate the community attachment of rural youth from a scale of strongly agree to strongly disagree. Reported percentage is the percentage of respondents who indicated "agree" or "strongly agree."

Survey Item	Percent Agree and Strongly Agree
I can get a good job in this area when I'm an adult.	33.9%
Community leaders listen to youth.	27.9%
People can be trusted.	24.7%
This community has a lot of outdoor activities.	18.6%
I feel like I am part of my community.	17.2%
This community is safe.	16.8%

Table 2.2 cont.

This is a good place to grow up.	15.1%
I like this community.	13.6%
People get along with each other.	12.2%
People are willing to help their neighbors.	10.7%
This is a close-knit community.	9.0%
I care about my community.	7.3%
I like the natural beauty of this community.	7.3%
Cronbach's Alpha	0.887

Table 2.4. Results of exploratory factor analysis and reliability analysis to determine if established place attachment measures hold with a population of rural youth subjects from Maine and Oregon. Mean response scores to 10 place attachment items are also shown.

Group	Factors Found (% of Variance)	Cronbach's Alpha	Place Attachment Score	N
Both States	1 (66.19%)	0.942	3.399	1,529
Maine	1 (68.83%)	0.949	3.481	475
Maine MS	1 (69.39%)	0.949	3.551	229
Maine HS	1 (69.43%)	0.950	3.441	246
Oregon	1 (65.07%)	0.939	3.361	1,054
Oregon MS	1 (64.51%)	0.937	3.242	245
Oregon HS	1 (64.59%)	0.937	3.374	809

Recreation activity contributions to outdoor place attachment analysis. The independent t-tests performed were statistically significant for 17 out of the 21 outdoor recreation activities tested (Table 2.5). Participants who engaged in outdoor recreation activities tended to show significantly higher outdoor place attachment in the form of higher outdoor place attachment scores. Table 2.5 compares the average outdoor place attachment scores of youths who participated in each activity in the past year and those who did not.

Table 2.5. Independent t-tests results. Comparison of average outdoor place attachment scores for 21 different outdoor recreation activities between those who participated in the activity over the past year and those who did not.

Recreation Activity	Average Place Attachment Score for Those Who Participated	Average Place Attachment Score for Those Who Did Not Participate
ATV Riding	3.55****	3.20****
Bird Watching	3.51*	3.30*
Camping	3.41****	3.18****
Kayaking	3.54****	3.22****
Clamming	3.57****	3.22****
Cross Country Skiing	3.60	3.31
Downhill Skiing	3.56****	3.28****
Fishing	3.54****	3.17****
Golfing	3.46**	3.28**
Hiking	3.42****	3.20****
Horseback Riding	3.48**	3.28**

Hunting	3.62***	3.21***
Mountain Biking	3.72***	3.25***
Rafting	3.59***	3.26***
Recreating in the Dunes (Oregon Only)	3.59***	3.26***
Skateboarding	3.31	3.32
Snowmobiling	3.53	3.31
Snowshoeing	3.62	3.31
Surfing (Oregon Only)	3.61***	3.27***
Visiting Beaches	3.36*	3.25*
Wildlife Viewing	3.56***	3.19***

*P-values: * = significant less than 0.05, ** = significant less than 0.01, *** = significant less than 0.001*

Multinomial logit model of rural youth residential aspirations.

Outdoor place attachment and community attachment were statistically significant across all four specifications run, indicating they are correlated with aspirations to live in one's rural

hometown or another rural area relative to an urban area (Table 2.7). Model four is the preferred specification because it includes all of the variables of interest.

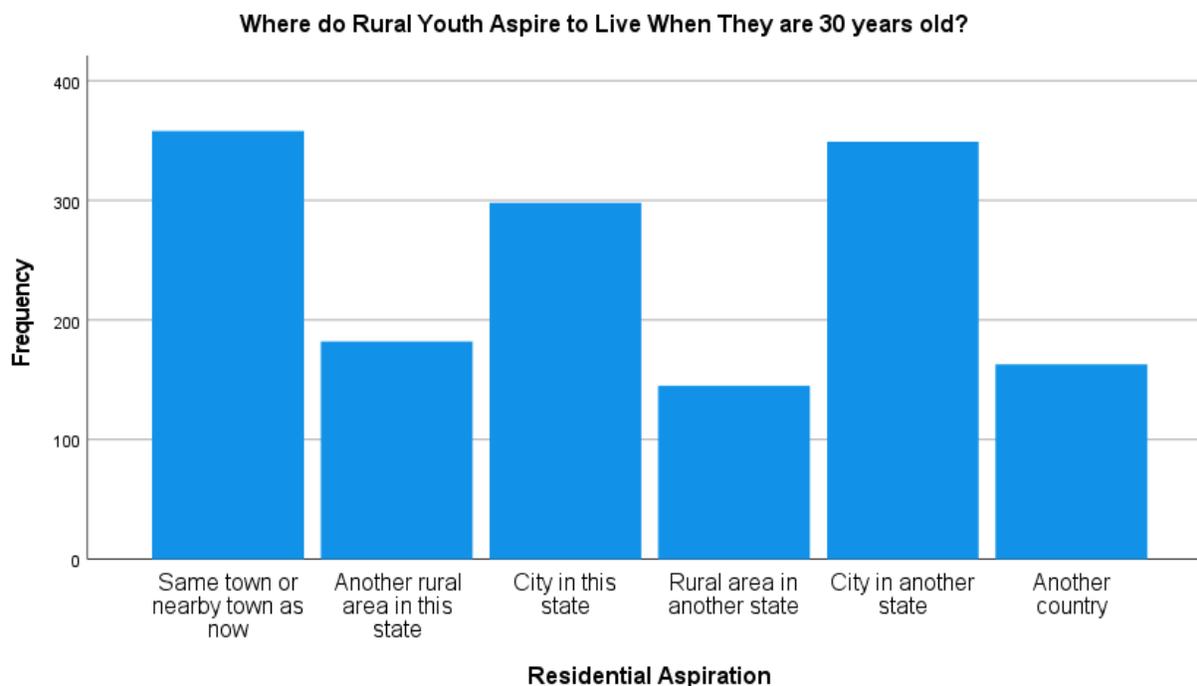


Figure 2.3. Stated residential aspirations of rural youth participants. Distribution of answers from rural youth for the question: Where do you want to live when you are 30 years old?

Outdoor place attachment was significantly associated with the rural aspiration choices (relative to the urban reference category) in all of the specifications (Table 2.7). Notably, the introduction of community attachment diminished the magnitude of the effect, indicating that outdoor place attachment is positively associated with rural youth wanting to live in rural areas. Another explanation could be that community attachment encapsulates a portion of the overall attachment connection to residential aspirations, with the rest being encapsulated by outdoor place attachment. As we controlled for additional variables, the magnitudes of the odds ratios decreased. In the results Table 2.7, any value greater than one indicates that variable is related to increased odds of living in a rural area, while a value less than one indicated a variables related

to decreased odds of living in a rural area. For the preferred specifications used in model four, the odds ratios show that rural youth with higher outdoor place attachment, community attachment and college aspirations are more likely to aspire to live in their rural hometowns relative to an urban area. From the same model, the odds ratios show that rural youth from Maine, and those with higher outdoor place attachment, were more likely to want to live in a different rural area than in an urban area. Engagement with outdoor recreation, gender, ethnicity and grade in school were not significant in the preferred model specification (4).

Community attachment was significant in increasing the odds a rural youth will want to live in their rural hometown, but was only significant for another rural area in one of the three models the variable was included in. When outdoor place attachment and community were used in separate models, community attachment had larger odds ratios than outdoor place attachment. When outdoor place attachment and community attachment were included in the same model, outdoor place attachment had the larger odds ratios.

Of the control variables, state (i.e., Maine relative to Oregon) was significant for wanting to live in a different rural area across all four models. College educational aspirations were significant for wanting to live in your rural hometown across all four models, meaning that rural youth likely feel the need to leave their communities for additional educational resources but still have a desire to live in their rural hometowns relative to urban areas.

Table 2.6. Descriptions of the variables used in the multinomial logit models

Variable Name	Description	Percentage of Respondents Associated with Each Variable Level
Residential Aspirations	Categorical – Where a respondent stated they would want to live when they are 30 years old.	26.9%
	1 = Rural Hometown	24.5%
	2 = Another Rural Area	48.6%
	3 = Urban Area	
Place Attachment	Continuous – Composite score calculated by averaging 10 belief statements about a respondent’s connection to the outdoors. Respondents had to answer at least five of the statements to receive a score. Scores ranged between 1 and 5.	
Community Attachment	Continuous - Composite score calculated by averaging 13 belief statements about a respondent’s connection to their community. Respondents had to answer at least six of the statements to receive a score. Scores ranged between 1 and 5.	
College Aspirations	Binary – How much education a respondent stated they would like to receive.	67.1%
	1 = B.S./B.A. or higher	32.9%
	0 = Less than a B.S./B.A.	

Table 2.6 cont.

Outdoor Recreation	Binary – Variable indicating if a respondent engaged in outdoor recreation in the last year	
	1 = Engaged in Outdoor Recreation in the Last Year	75.9%
	0 = Did not Engage in Recreation in the Last Year	24.1%
Maine	Binary – What state the respondent lived in.	
	1 = Maine	29.6%
	0 = Oregon	70.4%
Male	Binary – What gender the respondent identified with.	
	1 = Male	47.4%
	0 = Female	52.6%
White	Binary – Whether a respondent stated if they identified as white or non-white.	
	1 = White	71.3%
	0 = Non-White	28.7%
Middle School	Binary – Whether a respondent was a middle school or high school student.	
	1 = Middle School	31.1%
	0 = High School	68.9%

Table 2.7. Multinomial Logit Model of Rural Youths' Residential Aspirations as an Adult (Odds Ratios; Urban is Reference Category).

	1 (PA)		2 (CA)		3 (PA, CA)		4 (PA, CA, OR)	
	Rural Hometown	Another Rural Area	Rural Hometown	Another Rural Area	Rural Hometown	Another Rural Area	Rural Hometown	Another Rural Area
Place Attachment	2.042***	1.555***			1.804***	1.536***	1.827***	1.543***
Community Attachment			2.500***	1.487**	1.635**	1.129	1.637**	1.129
Outdoor Recreation							0.749	0.914
Maine	0.756	0.676*	0.777	0.676*	0.799	0.681*	0.797	0.679*
College Aspirations	0.284***	1.078	0.293***	1.169	0.263***	1.022	0.263***	1.023
Male	0.232	0.756	0.843	0.745	0.826	0.760	0.831	0.761
White	0.829	0.954	0.921	0.976	0.838	0.936	0.829	0.933
Middle School	0.688*	1.038	0.881	1.175	0.772	1.047	0.772	1.047

Table 2.7 cont.

Pearson	1027.289 (0.346)	1063.986 (0.646)	1743.069 (0.488)	1741.148 (0.515)
Goodness of Fit (p-value)				
AIC	1358.782***	1407.955***	1755.965***	1759.538***
BIC	1425.985***	1475.306***	1832.714***	1845.881***
Log- Likelihoods	1330.782***	1379.995***	1723.965***	1723.538***
N (Valid Obs)	898	905	895	895

*P-values: * = significant less than 0.05, ** = significant less than 0.01, *** = significant less than 0.001*

Discussion

The purpose of this study was to better understand how the residential aspirations of rural youth are impacted by engagement with the outdoors, and youth's personal connection to their rural outdoor environment and community. Another goal of the study was to contribute to the ongoing conversation of the dimensions of place attachment. Overall, our analysis indicates that outdoor recreation is related to greater outdoor place attachment in rural youth, and that higher attachment can increase the chance of a rural youth aspiring to live in a rural area when they are older.

Outdoor place attachment validity and reliability. The results of the exploratory factor analysis show that the 10 belief statements used to describe outdoor place attachment represent

one dimension among a rural youth population. This held true for both states, and all grade levels of youth surveyed. This aligns with the prior work of Stedman, who also found that place attachment can be represented by a single dimension (Stedman, 2003). However, other prior studies have returned results showing place attachment is made up of two dimensions, contrasting our results (Eaton et al., 2018, Vaske et al., 2001, Williams et al., 2003). The two dimensions found are usually defined as place identity and place dependence, representing a spiritual and functional connection to the environment. This highlights the future need for research on the dimensions of outdoor place attachment and variation in outdoor place attachment across age cohorts.

Recreation activity relationship to outdoor place attachment. Our findings also show that outdoor recreation participation is associated with higher outdoor place attachment in rural youth. This follows the results of Anderson et al (2008) who found a similar relationship between recreation and outdoor place attachment among visitors to waterfowl production areas. Other work has shown that this relationship may not be fully understood, and that it may be outdoor place attachment that actually influences recreation engagement (Budruk et al., 2013). While the two concepts seem to bear some association, a deeper understanding is necessary. Although our results show that outdoor recreation is associated with higher outdoor place attachment in rural youth, there may be other factors that contribute to this relationship as well. Future research could look at how other rural factors impact attachment in youth, or how outdoor recreation impacts other kinds of attachment, like community attachment. Community stakeholders can benefit from the knowledge of this association by encouraging rural youth to engage with the outdoors, thus potentially increasing their place attachment and the chance of them permanently residing in a rural community in the future. This can be done by offering more

chances for rural youth to be outdoors, such as daily time outside in school or organized outdoor events within the community.

Rural youth residential aspirations, outdoor place attachment, and community attachment. This study contributes to the body of work aiming to better understand how outdoor place attachment and community attachment impacts residential aspirations. Our findings highlight an association between outdoor place attachment and an increased desire to live in a rural area relative to an urban area, and an association between community attachment and wanting to live in one's rural hometown instead of an urban area. These findings are supported by prior work as well (McLaughlin et al., 2014, Petrin et al., 2014, Theodori et al., 2015). These findings with a rural youth population also reflect similar results done by studies focused on an adult population (Williams et al., 1992, Jorgensen et al., 2001, Stedman, 2006). Yet some studies have also seen high attachment to a community still not being enough to retain residents (Stracuzzi, 2009). The results of our multinomial logit analysis shows that outdoor place attachment, community attachment and educational aspirations beyond high school are associated with rural youths' aspirations to live in a rural area as an adult. These observed associations will be relevant to rural communities trying to draw in younger residents, as they can work to foster both kinds of attachment in youth to encourage them to live rurally. This could be done by offering more outdoor recreation and opportunities to be outside to rural youth, as well as community and cultural events that bring together the community. Rural communities should also not be discouraged by their youth population leaving for college and other higher education opportunities, as our data shows that aspirations for additional education are actually indicators of youth wanting to live in a rural area as an adult. Thus, perhaps by encouraging and supporting youth in their educational goals, rural communities can cause youth to return

permanently after they leave for a few years to attain additional education and skills that could also benefit the rural community and economy. Rural substitution is another concept supported by the data that can help rural communities can use to attract younger residents, as some young people that grew up rural may want to continue living rurally but not in the hometowns they come from.

Limitations and Future Research

One of the main limitations in this study is that the sample may not be representative of all rural youth populations, as this study only looked at rural youth from certain parts of Maine and Oregon. Further research should be done on other rural youth groups to see if similar results occur, or if there are notable differences. This study also only looked at how a few factors, including outdoor place attachment and community attachment, can influence the residential aspirations of rural youth, when there are potentially more factors at play. Future research could continue this line of work by looking into other concepts that could be influencing the residential aspirations of rural youth, such as family dynamics, perceived economic opportunities, queer and other minority identities. While we focused on a definition of outdoor place attachment that consisted of place dependence and place identity, other definitions exist and may be worth exploring in this context. A limitation of this study is the assumption that the rural youth are truthful and will follow through with their stated aspirations. The rural youth surveyed were also asked where they wanted to live when they are 30 years old, which is potentially subject to change when they are older. This could mean that the stated aspirations used in our data analysis may not be entirely accurate to what happens with these youth in the future. We also asked rural youth about the amount of education they want to receive, which is also subject to change as they get older. As previously stated, the findings of this study and prior literature have yet to come to

a conclusion on certain issues, such as the number of dimensions that comprise place attachment. Thus, future work is needed to continue this conversation within the literature.

Rural communities are rich in natural amenities and natural beauty, and can foster a deep connection with the natural environment. But at the same time, they can often lack important resources and opportunities that are becoming increasingly popular and necessary. While young people often migrate to urban areas to seek out these missing resources, many have aspirations of one day living in the rural area they grew up in, or a rural place that is similar to the one they grew up in. Attachment to the outdoors and connection to community could be possible reasons that these aspirations exist, according to our results, but future research into this relationship is encouraged. By fully understanding how the residential aspirations of rural youth are influenced by common factors associated with rural areas, like outdoor recreation and outdoor place attachment, the sustainability of rural communities in the future could be maintained.

CHAPTER 3: NOT ALL TRAILS ARE STRAIGHT

Introduction

The sustainability of rural communities is a critical issue. Maintaining populations in rural areas is a central component to sustainability. While there is research on rural young adults residential aspirations, certain marginalized groups of young people in rural areas, such as queer young adults, are understudied. The intersecting identities present in this population, being both queer and rural, can sometimes create additional tensions for this group (Conner, 2021, Conner et al., 2021). For some queer young adults, they experience difficulty expressing their queer identity in rural areas, and also experience difficulty expressing their rural identity in urban areas (Conner, 2021, Conner et al., 2021). The tensions brought about by having this combination of identities could potentially influence the formation of outdoor place attachment, community attachment, or residential aspirations of queer young adults. The factors that determine queer young adult residential choices are largely unknown, while outdoor place attachment and community attachment have been shown to influence residential choices made by rural young adults (Johnson et al., 2005, Stracuzzi, 2009, Bernsen, 2020). It is unclear how these factors are affected by a queer identity. Rural queer people are typically depicted as having a strong desire to live in urban areas and wanting to escape rural areas due to fears of discrimination and a desire to be with people similar to them (Conner, 2021). Studies have shown that rural young adults believe in the perception of “failing” by staying in rural areas, and perceive urban areas to be “cool”, centers for youth culture, and higher on a social hierarchy (Stockdale et al., 2017, Pedersen et al., 2018, Farrugia, 2016). However, this narrative is being questioned. While some queer people do indeed migrate to urban areas, many end up returning to rural areas (Conner, 2021). With around 3.8 million queer people living in rural areas, queer rural people are an

important group with a narrative that requires further research (Slepyan, 2021). Understanding how to keep this marginalized population in rural areas or have them return to rural areas is important to addressing the declining and greying populations of these areas, provide more options for queer young adults, and improve the longevity of rural communities themselves. This study takes a qualitative approach and separates the concepts of outdoor place attachment and community attachment to better understand if they influence the residential aspirations of queer young people who attend college in a rural area.

Goals and Objectives

The goal of this study is to better understand *the residential aspirations and migration intentions of queer young adults, an important marginalized population, who currently go to college in a rural area in order to provide advice to rural communities on maintaining their populations or attracting new, queer residents. This study will advance knowledge about the relationship between a queer identity and rural residential choices.* In order to learn more about the range and construction of factors that influence what kinds of communities, rural or urban, queer young adults want to live in after finishing their post-secondary education, *we aim to better understand how outdoor place attachment and community attachment are related to queer rural college student residential aspirations.* Lastly, we wish to better understand how outdoor resources and natural amenities are related to rural residential aspirations as these areas are often rich in natural resources, we also examine *how the presence of nature or a connection to the outdoors influences someone with a queer identity.* We focus on queer young adults who currently attend college and live in rural Maine, regardless of whether their hometown was rural or urban. The following research questions guided this project:

1. How does attachment to a hometown influence where someone with a queer identity aspires to live?
2. What kind of community factors can encourage someone to aspire to live in a rural area?
3. What connections exist between nature experiences and a queer identity?
4. In what ways does outdoor recreation and/or a connection to nature influence where someone with a queer identity aspires to live?

Justification and Significance

The rationale for our study is to further understand how identifying as queer influences the presence of outdoor place attachment and community attachment, and how these factors impact the residential decisions of queer rural college students. This research will expand the outdoor place attachment and rural migration literature by including a commonly understudied marginalized group. Most prior work in this area of study focuses on rural adults, while a few focus on rural youth. Very little past research has focused on queer rural youth. By using qualitative interviews with queer rural college students in Maine, we hope to learn about their outdoor and community experiences before leaving their hometowns for college, their aspirations in terms of where they want to live in the future and why, how having a queer identity has influenced these decisions, and how nature may have influenced their queer identities. The themes discovered through the qualitative interviews shed light on how queer young adults perceive rural areas, and what may be driving them towards or away from rural residential aspirations.

This study will prove valuable to stakeholders and community members from rural areas. Some stakeholder groups that may be interested in the results are queer young adults groups from rural areas, local policy makers, rural business owners, schools, guidance counselors and queer young adults themselves. The results can be used to further understand how queer young people become attached to their hometowns and nature, and how they generally feel about rural areas in general. With “brain drain” of young people being a common issue in rural areas (Stracuzzi, 2009, Stricker, 2007, Carr et al., 2009, Petrin et al., 2011), the results of this study can be communicated to stakeholders to show the factors involved in queer young adult residential aspirations. It is possible that the factors to have rural residential aspirations would be common factors among other rural young adults. The results can allow stakeholders to devise solutions to draw queer and non-queer young adults back into rural communities, possibly by working on amenities that lead to enhanced inclusiveness, promote outdoor recreation opportunities, and develop community attachment.

Literature Review

Previous studies have attempted to understand the impact of a queer identity on an individual. For example, young adults who identify as a member of the queer community are shown to have greater vulnerability to mental health and physical health issues compared to heterosexual young adults (Cochran et al., 2002). A high proportion of homeless young adults also identify as queer, with roughly 1/3 of the 700,000 homeless young adults in the United States identifying as a member of the queer community (Montano, 2019). Transgender young adults are found to be at a higher risk of victimization than other members of the queer community (Kosciw et al., 2009), resulting in higher rates of suicidal thoughts and actions among this population (Grossman et al., 2007). In the workforce, members of the queer

community often face discrimination when associations with queer activities are known or when working in typical male or female dominated industries (Ahmed et al., 2013, Gorsuch, 2019). Queer youth in rural areas sometimes face additional challenges compared to urban queer youth including increased stigma and victimization, and difficulty accessing inclusive or queer resources (Rand et al., 2021, Wike et al., 2021). It is possible that many of the issues for the queer community previously studied could have an impact on residential decisions of queer young adults.

While there are many studies that have uncovered negative aspects associated with a queer identity, some studies focus on how to alleviate these issues, as well as some of the benefits of having a queer identity. Kull et al (2016) found that school districts that include sexual orientation and gender identity protections in their anti-bullying policies reported higher school safety and less victimization of queer students than districts with more generic policies. Multiple studies have identified that support from families and friends are significant factors in a smooth young adult transition for queer young adults, ones that also lower the risk for mental health issues for this population (Snapp et al., 2015, McConnell et al., 2015). Wilber et al (2006) identified a list of factors that can create a safe and inclusive environment for queer young adults, including prohibiting the use of jokes based on sexual orientation and gender identity, frequently displaying queer posters/symbols, and facilitating dialogue opportunities about diversity and queer issues. Queer youth also seem to possess a resiliency against difficult life situations, often due to their own experiences with complex problems related to their identities (Schmitz et al., 2018, Wike et al., 2021). Obtaining a better understanding of how queer youth perceive safety and acceptance, and how they handle situations where they may be unsafe, may help shed light on what kinds of communities queer youth favor.

Experiencing different kinds of attachment, such as outdoor place attachment or community attachment, may be a significant factor in decision making about residential choices. Outdoor place attachment is a construct that describes the emotional connection to a physical environment. Jorgensen et al (2001) defined outdoor place attachment as a positive bond that develops between groups or individuals and their environment and is a strong emotional or sentimental bond to a place. Williams describes outdoor place attachment as physical space or geographical locales having meaning attached to it by the people who experience it (Williams et al., 1992). Prior work reveals that outdoor place attachment can be formed by repeat visits to natural environments with good environmental quality, living in a rural area, and strong community connections (Williams et al., 1992, Stedman, 2006). Other studies have found high levels of place attachment between adult homeowners and living near natural amenities (Jorgensen et al., 2001, Stedman, 2006). These studies only surveyed adult homeowners and may not be a good indicator of how young adults, specifically queer rural young adults, form outdoor place attachment. Outdoor place attachment and deeper connections to nature are suspected to be more common in rural areas. Rural areas tend to have more outdoor recreational opportunities, abundant natural resources, natural amenities, and aesthetic landscapes that can foster spiritual connections to a natural environment and facilitate the creation of outdoor place attachment more readily (Brown et al., 2007, Kyle et al., 2004, Budruk et al., 2013, Anderson et al., 2008). These studies are among the many to look at outdoor place attachment in adult populations. However, outdoor place attachment may be influential to where someone with a queer identity wants to live as well, and there are few studies exploring this relationship.

Community attachment is another type of attachment that is instead focused on a sentimental connection to a specific community, usually due to the presence of loved ones or

culture, rather than a type of physical environment. Like outdoor place attachment, it may factor into the decisions queer young adults make about their residential choices. Previous literature has interpreted community attachment as being “rooted to the built environment” or “rooted to social relationships” (Cross, 2003). The community that someone becomes attached to is entirely up to the individual, as a community can be something as small as a single home or as large as an entire state (Cross, 2003). The current literature also seems conflicted on how community attachment can impact someone’s residential aspirations. Theodori et al (2015) found that high community attachment in rural young adults led to residential aspirations of staying in a rural community, while Stracuzzi found that rural young adults perceived a poor future for themselves in their rural communities despite having high community attachment (Stracuzzi, 2009). Factors such as how long someone has lived in a community, interactions with friends and family, and participation in community activities have all been associated with high community attachment (Theodori et al., 2010). Bernsen et al (2022) also found that negative community perceptions were negatively related to educational aspirations, which could keep rural youth from leaving their communities in pursuit of education beyond high school. These studies highlight how rural youth can become attached to their community, but there are currently only a few studies on how queer rural young adults relate to their community.

Spending time outside can provide a variety of benefits and may have an influential impact on someone’s residential aspirations. Spending time outdoors can create feelings of belonging, positivity, relaxation, entertainment, and freedom (Halpenny, 2010, Vaske et al., 2001 Scannell et al., 2017). These positive feelings can create outdoor place attachment amongst people, which could influence residential aspirations in some way. Queer youth may specifically benefit from spending time outdoors. Fenton (2018) saw that outdoor wilderness camps for queer

youth promoted positive identity development and feelings of inclusion. More work may need to be done, however, to fully understand the unique experiences of queer people and nature, along with what benefits it may provide them.

More general studies about rural young adults have shown that poorer economies, less job opportunities, more judgmental communities, less privacy, easier access to drugs, lower perceptions of rural schools and less cultural events in the community all decrease attachment in rural young adults (Stracuzzi, 2009, Cromartie et al., 2015, Johnson et al., 2005, Bernsen, 2020). Many of these reasons for lower attachment in rural areas are perceived as not as frequent in urban areas, which could help explain some of the reasons queer rural young adults often migrate to the city (Conner, 2021). Other studies have shown that while rural queer students and urban queer students are equally likely to be “out”, rural students often faced more frequent victimization and hostile school climates (Kosciw et al., 2009, Kosciw et al., 2015). Poorer school experiences and perceptions of increased judgment could lead queer young adults to choose to live in urban areas over rural areas. Thornsteinson et al (2020) found that queer young adults were more than twice as likely as heterosexual young adults to move either domestically or abroad, usually to live in a place they felt could better develop their queer identities and have a smoother progression through life stages. Community attachment in queer young adults seems to be stronger when there is more frequent contact with family, low community religiosity, close queer friendships in the community, and the presence of at least one queer organization in the community (Oswald et al., 2011). The connection to family and friends lines up with the findings of Cromartie et al (2015) in their study of reasons why rural young adults return to their rural communities as adults. While these studies begin to shed light on the relationship between

residential decisions and a queer identity, there is still a significant gap in the literature to be filled.

This study aims to further the understanding of how a queer identity in rural college students might influence their residential aspirations. This population was chosen to study as college students are a significant population that rural areas often struggle to entice. Similarly, the queer population is another significant group that rural areas often struggle to retain. Through qualitative interviews, this work will shed light on how queer young adults make residential choices and simultaneously help to fill a gap in the current literature. Figure 3.1 illustrates the variety of concepts and factors that may be influencing the residential aspirations of queer young adults.

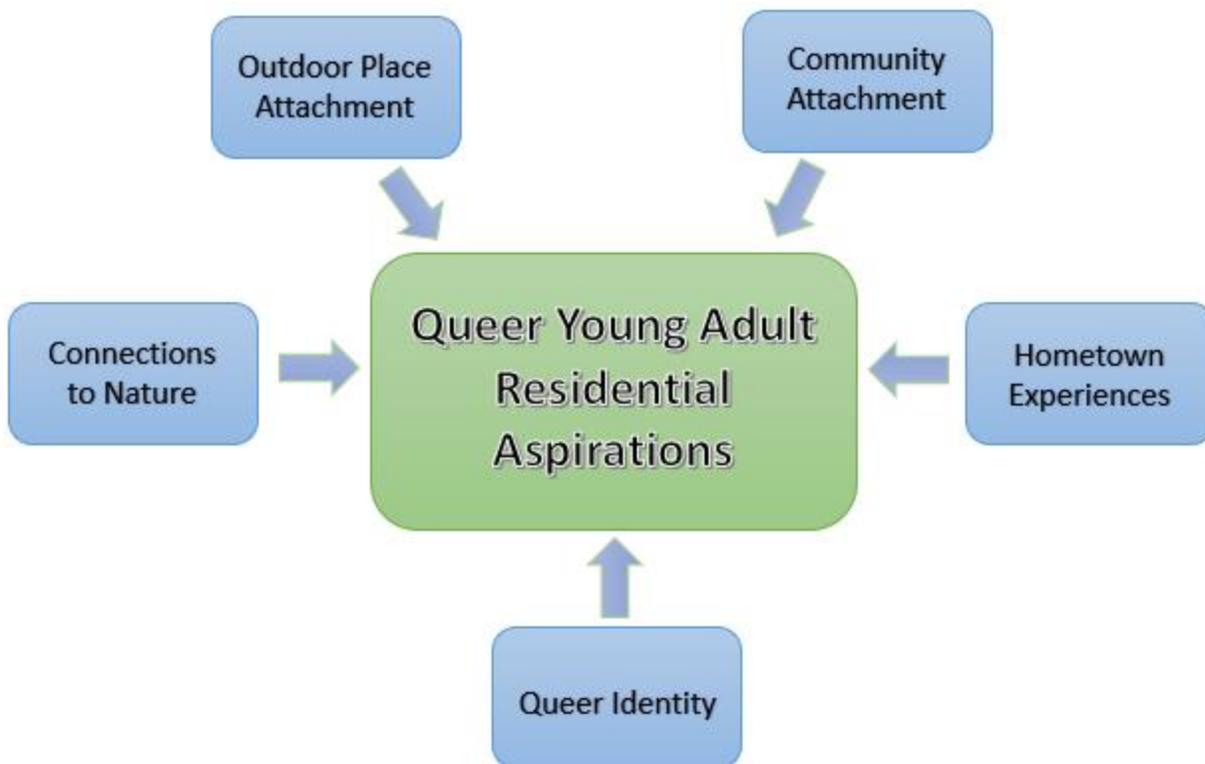


Figure 3.1. Conceptual framework. Conceptual model illustrating some of the possible influences on queer young adult residential aspirations.

Methods

Using a semi-structured, qualitative interview approach, this study looks at how a queer identity might influence different attachment values and residential aspirations. Data were collected from queer college students at a rural university in Maine who self-elected to participate and share their experiences. Open coding (Creswell et al., 2018, Seidman, 2019) was done for data analysis to generate themes in response to the research questions.

Study Design and Procedure

Qualitative interviews were chosen for this study to better account for the experiences, meanings and perspectives of each participant (Eshrati et al., 2021, Hammarberg et al., 2016).

The study population was queer college students at a rural university in Maine. For many students attending the university, this was the first time in their lives that they have lived in a rural area. For many students, the surrounding areas also feel rural despite a relatively large population (8,000 residents) due to the college. Therefore, many in the study population self-identify as living in a rural area. The interview was also designed to see if going to college in a rural area may be one way to encourage young, queer people to move to a rural area permanently after graduation. The selection criteria for interview participants were that they be between the ages of 18-22, be currently enrolled at the university, be currently living in rural Maine, and identify as queer. These criteria were presented on all recruitment materials, and all recruitment materials were IRB approved. For recruitment, flyers and emails were used to spread information about the study to potential participants. Flyers were hung around the university campus and distributed at a seminar at the on-campus queer resource center. Department wide emails and advertising at various undergraduate classes were also used to spread information to participants, where the flyer was included electronically. Lastly, “snowball” sampling was used, where participants were asked to encourage anyone else they thought may be interested in the study to participate. In order to be considered for an interview, potential participants first had to fill out a brief online survey that could be accessed either from a QR code on the flyer or a hyperlink. This allowed participants to self-elect into participating in the project. The survey began with an informed consent form that was IRB approved and asked basic demographic questions that allowed us to see if the participant was eligible based on the selection criteria described above. The survey also asked interested participants for their preferred email address to be contacted at if selected to participate in the study. Once a participant was deemed eligible for the survey, they were emailed to set up a time to conduct the interview. Included in the email was a separate

informed consent form specifically for the interview. Throughout the survey, interview script, and all recruitment materials, the term “queer” was used as opposed to a term like “LGBTQ+”. This was chosen after working with an on-campus queer support group in order to make sure the language used in the study was as inclusive as possible and to ensure participants were not selected solely for their individual characteristics or identities.

Interviews were semi-structured, as they followed a pre-written script but were flexible enough to allow time for discussion of additional questions and topics if they arose. The interview questions were divided into four sections: questions about the hometown, questions about living in rural Maine and the university, questions about their current residential aspirations, and wrap-up questions that asked broadly about many of the key topics this study is trying to understand. While participants had the choice to have the interview take place in-person or over Zoom, all interviewees chose to do the interview over Zoom. This was likely out of convenience, and due to the influence of the COVID pandemic that was occurring at the same time of this study. Interviews started with a brief overview of the study, an introduction by the PI, and a confirmation that the participant fully understood and did not have any remaining questions about the informed consent form or the interview proceedings. Interviews lasted anywhere between 30 to 60 minutes. All interviews were recorded, but only the audio recordings were retained. Recordings were de-identified during the transcription and data analysis steps so that confidentiality was maintained for participants. An incentive of a \$20 digital Amazon gift card was also offered to participants for taking part in the interview. All interviews were fully conducted from beginning to end, no interviews were ended early by the participants.

The main concepts of this study are outdoor place attachment, community attachment, queer identity, and residential aspirations. Interview questions were used to explore how these

concepts are impacted by the presence of a queer identity in participants. Interviews took place between February 2022 and April 2022. This study was fully approved by the IRB of the University of Maine. Since this study asked questions about topics that could be potentially sensitive to interview participants, mental health resources were included in the informed consent form for the interview. Participants were ensured that their responses to the interview questions would be anonymous, and that all recordings and transcripts would be de-identified immediately so as to remain anonymous and confidential.

Researcher Positionality

For qualitative studies, it is important to know how the researchers are positioned with respect to the topics being studied and how the data is handled. In this study, one researcher conducted all of the interviews, performed all of the transcription, and was responsible for creating the codebook and the codes within. The primary researcher is a white, gay, cis male who grew up in a suburban town and has attended the rural college in Maine as both an undergraduate and graduate student for the last six years. An intercoder reliability focus group was utilized to assess the validity of the codes created and the coding consistency of the PI, who handled all of the coding.

Data Analysis

Transcripts were generated from the recorded audio files from the interviews. A combination of Zoom software and Otter.ai were used to generate the transcripts. After the transcripts were created, they were cleaned and simplified to make them easier to code and to de-identify them. In terms of simplification, transcripts were read through carefully to ensure that all words, sentences, and stories were grammatically correct and captured correctly based on the

context and consistent with the interviews themselves. Certain statements and passages that were not relevant to the research questions were deleted from the transcripts. These included the introduction from the PI, the farewell portion of the interview, and other sections of conversation that were not responses to any of the questions. Other words, like “um” and “so” that the transcription software frequently picked up were also deleted for simplification. Lastly, transcripts were de-identified by removing any mention of the participant’s or anyone else’s name, and any other information that could have compromised the confidentiality of the participant.

Taguette, a browser-based coding software, was used to organize the codebook and code the transcripts. For this study, open coding was used (Creswell et al., 2018, Seidman, 2019). Thus, codes were not pre-determined prior to the start of coding and all codes were generated as coding took place. Coding was focused on identifying examples of both positive and negative outdoor place attachment, community attachment, rural perceptions, urban perceptions, and current residential aspirations. As transcripts were read and reread, the codes were continually refined and clarified. Using an intercoder reliability focus group, made up of the PI and four volunteers, the accuracy and validity of the coding was assessed. Volunteers were introduced and given background to the study, and then given a smaller codebook to code a subset of the transcripts used in the study. The coding done by the participants was, on average, 62.50% accurate to the coding done by the PI. Some examples of codes that were used include HT PA + and HT PA - (to indicate positive and negative instances of outdoor place attachment to hometowns in participants), and HT CA + and HT CA - (to indicate positive and negative instances of community attachment to hometowns in participants). The four codes used as

examples also made up the smaller codebook used by participants of the intercoder reliability focus group. The full codebook used for this study is included in the appendix (Appendix A).

Using the codes generated from the open coding approach, various themes were identified and used to provide an answer to the research questions. A variety of techniques and measures were used to generate and continually refine the themes presented. These include paying attention to the frequency of codes, memoing, and incorporating feedback from expert review. To support the themes suggested, various quotes and stories from participants are showcased and contextualized.

Results

A total of 17 interviews were conducted for this study. All participants were current students at the university and between the ages of 18 and 22. Participants indicated that they live on campus within the university, or in the surrounding rural areas. Of the 17 participants, nine identified as female, three identified as male, and five identified as non-binary. For the sexual orientations of the participants, nine identified as queer, three identified as lesbian, three identified as bisexual, one identified as pansexual, and one identified as transgender. When asked about their hometowns, eight participants stated they grew up in a rural area, six participants stated they grew up in an urban area, and three participants stated that they had both a rural and urban hometown. Race or ethnicity were not collected. The university's student population is 80% white, and the state's population is 91% white. Further characteristics of the participants are summarized below (Table 3.1).

Table 3.1. Table of participants. Summary of participant characteristics, including age, gender identity and sexual orientation.

<i>Participant Number</i>	<i>Age</i>	<i>Gender Identity</i>	<i>Sexual Orientation</i>	<i>Hometown</i>
<i>1</i>	21	Female	Pansexual	Urban
<i>2</i>	21	Female	Bisexual	Urban
<i>3</i>	19	Non-binary	Queer	Rural
<i>4</i>	21	Female	Bisexual	Rural
<i>5</i>	18	Female	Lesbian	Rural
<i>6</i>	20	Female	Lesbian	Urban
<i>7</i>	22	Female	Lesbian	Rural
<i>8</i>	21	Non-binary	Queer	Rural and Urban
<i>9</i>	21	Female	Queer	Urban
<i>10</i>	20	Male	Queer	Rural and Urban
<i>11</i>	20	Male	Queer	Urban
<i>12</i>	20	Non-binary	Queer	Rural
<i>13</i>	21	Non-binary	Queer	Rural
<i>14</i>	21	Female	Bisexual	Urban
<i>15</i>	21	Female	Queer	Rural
<i>16</i>	20	Non-binary	Queer	Rural and Urban
<i>17</i>	19	Male	Transgender	Rural

Themes

We identified four themes that showed how attachment, nature, and different community attributes related to queer young adults residential aspirations: (1) Community Attachment Not Influential to Rural Residential Aspirations, (2) A Place to be Myself, Visible Diversity, and Feeling Accepted, (3) Nature as a Mental Health Resource and Safe Space, and (4) Desire to Live Somewhere with Accessible Nature.

Community Attachment Not Influential to Rural Residential Aspirations

While attachment to a hometown has been shown to impact someone's residential aspirations in the literature, our interviews indicated that community attachment may not be one of the influential forms of attachment for queer young adults. Many participants shared aspirations to live in a rural community despite viewing their rural hometowns negatively in many aspects. Of the 17 participants, 11 of them stated that they currently aspired to live in a rural community in the future. Even though community attachment may not be positively influencing the rural residential aspirations of queer young adults, other forms of attachment may be doing so. Specifically, outdoor place attachment may be more of a driver for queer young adults to aspire to live in a rural area in the future than community attachment. Throughout the interviews, the majority of participants indicated positive outdoor place attachment to their hometown, and negative community attachment to their hometown. Despite participants from rural hometowns showing signs of not being very fond of the communities they grew up in, many still shared aspirations of wanting to live in a rural community in the future.

For example, when one participant was asked if they felt attached to their rural hometown, they stated that "I would never go back. When people say, where do you want to go?"

I'm not going back there". The participant cited reasons for their dislike of the community, including a lack of diversity, homophobia, racism, and an unaccepting family. Despite the lack of community attachment, the participant stated that one of the things they actually enjoyed about their community was "living rural, is what I liked about it, I guess". The participant explained that they spent a lot of time outdoors, recreating in various ways like horseback riding, farming, fishing, hunting, and skiing. When describing what sorts of things they missed about their rural hometown while going to college, they said "I missed the agriculture. I mean, it's funny to say that I've missed corn fields, but I do miss corn fields and dairy farms". Due to their love of the outdoors and farming, the participant aspires to live in rural Maine after they finish college. When asked again how their hometown experiences may be influencing their residential aspirations of being in rural Maine, the same participant explained:

Because I don't need a real connection with the [rural] community. I don't really care that there's not too much of a community here, because I'm more into the outdoors and more into being independent I don't care so much there's not a community so it definitely allows me to live in rural Maine, if I wanted community and I felt like I needed community, then I definitely wouldn't want to live in rural Maine.

For this participant, the primary driver of future residential aspirations seems to be their outdoor place attachment to their rural hometown seems to be more influential than their negative feelings about their community of origin. Thus, they are willing to continue living in a rural community so they may continue to enjoy the outdoors that formed their outdoor place attachment to begin with.

A similar situation can be seen with participants who grew up in urban hometowns. One participant from an urban hometown noted that despite the benefits of living in an urban area, such as good schools and mental health resources, they expressed a dislike for the community due to the minimal diversity, presence of drugs, lack of acceptance, and the gossipy community culture. When asked if they felt attached to their urban hometown, they said “No... I used to count down the days till I graduated because I never wanted to go there initially, I just wanted to find somewhere that wasn’t that”. They also described the community as “a nice environment, if you took out the people”. However, they noted the presence of a hiking trail and a forest within their hometown that they enjoyed spending time in, as well as the opportunities they had growing up to get involved in environmental volunteer work. These places and opportunities may have formed this participant’s perception of the environment, and their positive outdoor place attachment. The participant had this perception of the natural environment:

If I had to humanize it, it would be someone that I’d want to care for and just take care of because I’m like, you are so, so giving and like so cheery and like there’s no judgment within that. Like I’m not going to be judged when I’m in the middle of the mountains... like there’s nothing, no pressure. There’s comfort in the environment, I think, and I just find peace there and I feel like I’m aligned with the environment.

Despite the slightly different way their positive outdoor place attachment may have formed, this participant still aspires to live in a rural community after they finish college. They expressed wanting to live somewhere “secluded”, and a place where they could “live very peacefully and as quietly as possible”. The participant continued by saying that they felt “trapped” in their urban hometown, and now that they are in a position where they can choose where they want to live they aspire to “live in a quiet place” where they “don’t have to think about how anyone is

perceiving me”. Despite having less access to natural amenities growing up, urban queer young adults also seemed to be more influenced by outdoor place attachment when thinking about their residential aspirations.

Despite the trend of outdoor place attachment being a more influential driver of residential aspirations, some participants did express positive experiences in their communities that were driving their decisions. One participant from a rural community mentioned that they had access to a queer drop-in space during their time in high school. Being able to be a part of an identity-affirming group within their hometown allowed this participant to “really feel like I had a community there. Had I not had that, I think I would say that I didn’t enjoy growing up there, but because I had that I really enjoyed it”. Since this participant had good experiences both with their community and queer identity, their residential aspirations are focused on finding a place where they can keep being who they are. This participant currently aspires to live in an urban area, their reasoning being that rural areas are not “queer friendly and open and accepting” enough. They also mentioned that while nature is important to them and their identity, if they “were to live in an urban setting I would be able to travel to get the nature that I appreciate, so it wouldn’t be enough to influence me to live in a rural setting”. For this particular participant, community attachment may be more influential to their residential aspirations than outdoor place attachment.

A Place to be Myself, Visible Diversity, and Feeling Accepted

Another subset of important community attributes for those who are thinking about their residential aspirations were those related to the freedom of self-expression. Of the 17 participants, 14 mentioned that their residential aspirations would be influenced by their

perception of how safe and accepting a community is to queer people. This could take the form of visible diversity in a community's population, the use of queer symbols like pride flags, or acceptance from the community. Overall, queer young adults felt, regardless of if they aspired to live in a rural or urban community, it was important to be able to express either their sexual orientation or gender identity within their community without fear for their own safety.

Being able to visibly witness diversity within a community was important to queer young adults when forming their residential aspirations. Over half of the participants expressed that a lack of diversity, or lack of acceptance to the diversity present, was something they did not like about their hometowns. One participant from a small, rural community described their hometown as "very homophobic, racist, classic small town no representation of anybody, but straight, white, hetero people". A different participant from another rural community mentioned how hard it was to find other people like them, they disliked "the fact that it's hard to find people who are similar to me, it's hard to find a queer community in such a small area". One participant who grew up in the suburbs also experienced a dislike for the lack of diversity, describing the area and population as "a lot of monotony". One participant, who grew up in a diverse urban area, emphasized the importance of this attribute when they mentioned that they would not "be able to make it psychologically, if I was not living in a diverse area". Despite diversity holding such importance for queer young adults, many of them still aspire to live in rural areas, which are not well known for their diversity. A participant, when describing their ideal community to live in, had this to say:

The diversity of living in a big place and the, I guess, peacefulness of living in a quiet place. Anywhere that just combines those together. I like the amount of people, the number of people I'm fine with, just the type of people not so much... Because I feel like

life is way more fulfilling the more perspectives you have on it, you're able to learn a lot more and really broaden your horizon, it doesn't matter how many people, like how large the population or small population is of a place, it doesn't matter you just, have to have the right people in it.

Similarly, even the participants who aspired to live in urban areas also noted that diversity is important to them. One participant who had aspirations of moving to a big city expressed that some of the benefits of urban living was the “vast differences of people ” and inclusivity, which included “people of color and disabled people”. Queer young adults often feel distinct to those around them due to their marginalized identity. This could be one of the reasons queer young adults value diversity as a community attribute.

Another important community attribute to queer young adults is the freedom to express their marginalized identity without fear for their own safety or harassment. Perceptions of the communities queer young adults grow up in can contribute to the desire to live in an accepting and safe community in the future. Twelve of the seventeen participants characterized their hometowns as either being not accepting of queer people or as having typical conservative beliefs. One participant who grew up in a rural community said that they “did not like the fact that you can't escape people who have bigoted mindsets. It's a small town, so if you don't get along with somebody you tend to run into them, like in the grocery store”. Another participant expressed their reasons for not wanting to move back to their hometown because of the people there, stating that “most of the people in that community definitely voted for Trump, and you know they go to church. And very, very stereotypically conservative community and so that's not really somewhere where I would like to be now”. Since queer young adults often felt unable to express their identities freely growing up, this could be a possible explanation for why they value

safety and acceptance in their residential aspirations. However, this attribute seems valuable to queer young adults regardless of where they aspire to live. A participant who currently aspires to live in an urban area shared that they are “very expressive with my style, so the city is just more accepting. While here at home, I’d stand out way too much”. Another participant who has urban aspirations shared why they favored living in an urban area over a rural one:

I think I would pick urban because at this point in where we're at in the world, and how much I embrace my queerness, I would forego the sense of community and favor feeling safe. I really love rural communities, I just value more the feeling of safety that you get in a more urban setting, but it's a give and take there. I really feel like I need to be in a space where my gender identity and my sexual orientation are accepted.

Those with rural aspirations also expressed a desire to be in a safe, accepting community. One participant with rural aspirations stated that they “would really struggle without like-minded people” in their community, and a different participant with similar aspirations mentioned that they “definitely don’t want to be neighbors with someone who is petitioning for things like the ‘Don’t Say Gay’ bill to happen”. One more participant reflected on the issue of safety and residential aspirations more broadly:

I think there's probably a lot of people, like me, where one of the biggest factors that influences where they want to live is the beliefs of the community that they're looking at. I think we are people who experience a lot of microaggressions in their day-to-day life and that's just sort of inevitable in the world we live in but finding a place where those can be minimized as much as possible is probably something that factors into that decision.

Regardless of where or what kind of community they aspire to live in, the marginalized population of queer young adults prioritize their own safety. Queer young adults desire to express their true identities within the communities they want to call home; therefore, minimizing the risk of harassment is important

Nature as a Mental Health Resource and Safe Space

Those with a queer identity may hold a special and unique connection to nature. For many of the queer young adults participants in this study, nature seemed to hold an additional role in their lives aside from being a place to recreate. For many of them, nature acted as a mental health resource for them to use to help them process and accept their queer identity. Nature also appeared to act as a safe space for some queer young adults, allowing them a way to escape non-accepting families and communities for a short while.

Many participants indicated that being within nature gave them an opportunity to self-reflect on their identities, an opportunity that seemed non-existent for them in other places. One participant shared that when they were “figuring things out, what I would do is, I would go and take walks outside and I just disappear into the woods for a while”. For others, nature allowed them to escape being judged by their communities and self-reflect without being constantly perceived negatively by others. One participant described being outside as “a good catalyst for allowing me to explore who I am without the outside influences of people who might tell me that I can't be that, or that I'm not that, you know”. Nature is valued by queer young adults for its perceived lack of judgment on individuals, becoming a place where they can learn about themselves and experiment with different attributes of their own identities. One participant

shared how their relationship with nature influenced their perception on the world around them and their own identity:

Once you kind of get to that point with your connection in nature, you realize that nothing is as binary and concrete, as it seems, everything is much more fluid. When I got to realize just how open and non-linear and really just like how comforting and loving nature is. I realized that gender doesn't matter. Orientation doesn't matter really, just none of that really matters to the planet. So you can just do whatever you want or is just natural to you, that's how you should live and so I'm living pretty naturally to me now.

Other participants described the outdoors as a “place of peace”, a place that provides “a lot of escapism”, somewhere that you don’t have to “worry about other people”, and a place that “expands your ideas of what you’re comfortable with”. According to our interviewees, the process of learning about, understanding and accepting one’s own sexuality or identity can be a very long and mentally draining process. However, these queer young adults described a resource, the natural environment, that helped them ease this process for themselves. For many of these queer young adults, using nature as a mental health resource was as simple as taking a walk through the woods or their own backyard.

Some participants did mention how they didn’t see a connection between nature and their queer identities, or that they never saw nature as a mental health resource. One participant stated that they “don't think there's anything specifically connecting the two”, when asked if they thought nature was related to their queer identity. The same participant continued to say “I mean, I can't say there's absolutely no correlation, but I think it's just two different pieces of my identity”. A different participant mentioned how nature was “part of my life growing up”, but

that “it wasn’t any sort of like escapism thing for me”. One last participant shared that “Nature is incredibly important, but I don't think that it has to do with my identity”. While some queer youth value nature as a place to safely express themselves, others value nature as an entity separate from their queer identities.

Desire to Live Somewhere with Accessible Nature

Queer young adults described having easy access to nature and recreation opportunities as important attributes to have in a community, and therefore that desire may be influencing their residential aspirations. Thus, these attributes could be critical for queer young adults when forming their residential aspirations for rural areas. This could be especially true for queer young adults who recreated frequently growing up or spent a lot of time outdoors.

Being able to easily be around nature was very important for participants when they were describing their ideal community. For some participants, knowing that they would have a place to do outdoor recreational activities, like hiking or skiing, in their future communities was critical. One participant mentioned that if they had to live in a place where they couldn’t recreate, like in a city, they would “really struggle with that”. Another participant from an urban area mentioned how a lack of recreation was driving them away from living in their hometown:

I would like to be near somewhere that's like a hiking place, like Acadia, where I can climb rocks and ladders and things... but they don't have a lot of those near my hometown so I'm like, not going to be there.

While being able to engage in the hobbies they enjoy is a requirement for some participants, others simply wish for a place where they can see nature and feel connected to the outdoors. One

participant described how they needed to have “somewhere where there was green” where they were living because “all concrete everywhere, all the time, makes me sad”. Another participant shared that sentiment, sharing that the “gray of concrete or stone... it brings you down”. For these participants, it seems urbanization has an impact on their emotional well-being, which could be why they also aspire to live in a rural area in the future. Other participants also expressed an emotional need to have accessible nature. One participant related nature to being a fundamental part of their own identity:

To me, it's an essential part of my life. It's what makes me who I am and if I was disconnected from it, like if I had to live in a city or something I think... That's what gives me the most nauseous feeling, stagnation. Sure it had access to the outdoors and everything, but everything felt so bordered and controlled with boundaries. Nature to me is a very fundamental part of who I am and it's just such a big part of my life that it wouldn't feel like my proper individual life if I didn't have it there.

For some participants, accessible nature as a community factor serves a recreational purpose. For others, accessible nature seemed to provide a sense of comfort or contribute to the formation of a personal identity.

Another reason for desiring accessibility of nature in a community was related to a rural upbringing. Some participants related their aspirations to live in a community with lots of natural amenities because they grew up having that kind of access. For one participant, it was as simple as needing to live in a place that has “more nature than people”. Another participant wanted to live near accessible outdoors because they felt a connection to the woods, and when thinking about why that might be they said, “maybe it's just because I was outside so much when I was

younger, that I feel connected to it”. One participant reflected more broadly about how a rural upbringing influences the desire to be surrounded by nature:

I think, because I grew up in a place that had the outdoors and the stars, and an insane amount of mosquitoes. I think that it's important that I live in a place like that. I think people who grow up with a lot of access to the outdoors and who enjoy going outside, I think that that always remains important to them. Yeah, I think, so I could never live in like the suburbs, where there are all houses, no trees.

The readily available natural amenities of rural areas could be one of a communities greatest strength when it comes to retaining a population of queer young adults, as it seems the presence of nature in their childhood has greatly impacted these participants.

Not all participants put a heavy weight on the accessibility of nature when forming their residential aspirations. One participant who grew up in a rural area and doesn't describe themselves as an “outdoorsy person”, mentioned how their rural hometown has “literally like nothing to do”. This participant aspires to live somewhere urban so that they “have stuff to do” for entertainment and so they don't have to travel 30 minutes for basic necessities. A few other participants who mentioned that they don't spend time outdoors and don't consider themselves to be “outdoorsy” also mentioned that urban areas appeal to them due to the wider variety of ways to spend their time. While a lot of queer youth value the presence of nature in a community, others have different interests that influence where they aspire to live.

Discussion

Queer young adults face many unique challenges compared to other young adults, such as facing safety concerns in their communities and additional mental health challenges. This also includes the tensions created from having multiple, intersecting identities. Through the use of qualitative interviews, queer college students reflected on their past, present and future places of residence. This helped to provide a better understanding of how this marginalized population makes decisions about where to live, how they relate to nature, what community attributes are most valuable to them, and help expand the minimal literature studying queer young adults in rural areas. Altogether, four themes were identified that help expand the knowledge we have about queer young adult residential aspirations. Queer young adults seem to value the natural amenities in their own hometowns more so than the local cultural climate they grew up in. Therefore, queer young adults may prioritize having similar natural amenities available in their future communities rather than finding somewhere with a similar culture and community as their hometown. While nature seemed to play a role in helping queer young adults decide where they want to live, it also appeared to help queer young adults come to terms with their own identity and provided them a safe space to be alone with their thoughts and away from a judgmental society. Queer young adults also indicated that feeling safe to self-express their identity and see themselves and others as accepted were important community attributes that they consider before moving somewhere. Having a queer identity itself may change how someone values different community attributes, with a priority on the protection and expression of that queer identity. As queer young adults in rural areas face marginalization as a result of their intersecting identities, it is important to find ways to make them feel safe and accepted in a variety of different communities.

Our results mostly reflect those found in prior studies. Interviews reinforced results that show rural areas to be great places to form outdoor place attachment thanks to their abundant nature and recreational options, as most participants from rural hometowns showed high outdoor place attachment (Brown et al., 2007, Kyle et al., 2004, Budruk et al., 2013, Anderson et al., 2008). However, our results show that outdoor place attachment is more influential to rural residential aspirations than community attachment. This does contrast with some prior work, such as Theodori et al (2015), who suggests the opposite relationship. Interviews also added support for welcoming and accepting communities being indicated by visible symbols of support like pride flags (Wilber et al., 2006). Our findings regarding the mental health benefits of being outside also add to the existing literature about the positives of being outdoors (Halpenny, 2010, Vaske et al., 2001, Scannell et al., 2017). Specifically, our results also continue to echo the positive relationship between nature connectedness and queer identity development (Fenton, 2018). This body of work will hopefully continue to expand and provide more benefits to both rural communities and queer young adults.

Implications

The themes identified could help suggest a way for rural communities with shrinking young adult populations to attract queer young adults who highly value accessible nature as a community attribute. The interviews have also shown some reasons why queer young adults move away from or avoid rural areas. Queer young adults themselves seem to have a perception of rural areas as being very conservative and not accepting of anything outside a cis-gendered, heterosexual majority. To attract future residents and provide a more welcoming atmosphere for current residents, rural communities can address these perceptions by showing visible signs of acceptance of different genders and sexual orientations in places such as town halls, businesses,

schools, parks and other community spaces. Diversity, in general, was valued by the interviewees, suggesting that efforts to be inclusive of all races, ethnicities, and abilities are also important. Despite the majority of queer young adults interviewed already aspiring to live in a rural area, this could help alleviate their remaining fears and encourage others to have similar aspirations.

Accessible nature is an important aspect communities can utilize to attract queer young adults. Participants who aspire to live rural and those who aspire to live urban both mentioned how having access to nature was important to them. The themes also imply that the ability to go out into nature may be beneficial to the mental health of queer young adults. This should encourage communities, both rural and urban, to maintain and provide more outdoor spaces for people to either recreate or improve their mental health. From a youth development standpoint, this could also encourage queer young adults to get outdoors more, as they might not have thought of nature as a safe space or resource in this way before. Likewise, this could also draw support for programs that have a specific aim to get queer young adults out in nature. Hopefully these results also draw more attention to marginalized queer young adults in general, as well as the variety of mental health issues that are associated with having a queer identity.

Limitations

This study only conducted interviews with queer college students who attend one rural university. It is possible that queer young adults who do not attend college do not share the same views and aspirations as our study population. Views and aspirations could also differ for other queer college young adults who attend college in different parts of the country, such as those who go to college in the city. There was also minimal racial and ethnic diversity in the sample, with the majority of the participants presenting as white. Queer young adults of other races may

have different experiences in hometowns and perceptions of rural and urban areas that could impact their residential choices. Rural areas may be less safe for queer young adults of color and other non-white races, so further research on a more diverse population may be needed. Many participants also inquired about how this study was dealing with the experiences of those who are “straight passing”, which refers to queer young adults who often appear heterosexual to others based on physical appearance and clothing choices. While this study does not explicitly account for this phenomenon in the queer community, it should be addressed, as queer young adults who appear queer at a glance could have differing experiences in communities than those who do not appear queer.

Future Research

Future research should continue looking into this marginalized group. While nature was shown to help queer young adults with identity acceptance, it is possible being outdoors could help with other mental health issues such as anxiety or depression. Future research could look into how nature impacts the mental health of other young adult groups as well. Future research could continue the work to find ways to improve the perception of how queer young adults view rural communities, and how they make residential decisions. While not recognized as a full theme in this study, there were some trends that show potential for future research into how attending college in a rural area can increase the chances of young adults having rural residential aspirations. Many of the participants in this study currently aspire to live in a rural area, but all seemingly indicated that they are willing to live in a rural area since they all chose to come to a rural college. Future work looking at how attending college in a rural area could impact rural perceptions is also suggested.

Conclusion

Queer young adults are an important and very marginalized population. They are also a population who more often than not feel judged by the people and community surrounding them, especially when those communities are rural. Despite the often-negative perceptions queer young adults have on rural areas, rural areas can readily offer nature as a resource to this population. This is a distinct advantage rural communities have over urban ones, which they could leverage to help them attract queer young adults to their communities. This could both help to increase the sustainability of rural populations, enhance the diversity of people living in those communities, and better support the queer youth living there. We assert that rural communities that take steps to maintain or enhance their outdoor amenities and community inclusion efforts may be attractive to queer and non-queer young adults alike.

CHAPTER 4: EPILOGUE

Taking a mixed methods approach to the issue of rural youth residential aspirations allowed this work to showcase valuable insights about how young people relate to their communities and how they make important life decisions, such as where to live. With a broader, quantitative approach we were able to better understand how outdoor place attachment is represented among a rural youth population and how their engagement with the outdoors influences how attached they become to nature. A better understanding of how rural residential aspirations are formed and influenced was also gained from this work. Then with a narrower, qualitative approach we were able to learn firsthand from rural queer young adults about their relationship with identity, ruralness, and nature. The stories shared showed the unique role that nature plays in the formation of attachment and new identities. The stories also helped to show what attributes rural queer young adults value within a potential community. Hopefully this work opens the door for future research to continue investigating the relationships between rural youth, queer young adults and other marginalized rural groups and their communities.

From our quantitative analyses, we detected support for transferring insights about outdoor place attachment from rural adult to youth populations and observed differing influences on residential aspirations by outdoor place and community attachment. Specifically, our findings show that outdoor place attachment can be represented by a one-dimensional factor with the tested rural youth population, and that engaging in outdoor recreation is associated with higher outdoor place attachment among rural youth. Our analysis suggests positive correlations between outdoor place attachment, community attachment, and youth aspirations to live in rural rather than urban areas. Our qualitative research helped to show how queer young adults in rural areas experience attachment and value different communities. Specifically, our findings show that

outdoor place attachment may be more influential to residential aspirations than community attachment among queer rural college students, and that this population also values diversity, accessible nature, and the freedom to safely express their identities as important community attributes. Lastly, queer young adults may have a unique relationship with nature by utilizing it as a mental health resource.

Our findings offer guidance for future research and theory development that could inform businesses, community stakeholders, rural community development policies and policy makers, formal and non-formal educators, researchers, rural families, those with queer identities, and rural youth themselves. This will enhance the understanding of the significance and development of outdoor place and community attachment, and their relationship with rural communities. Other guidance includes information on the unique relationship nature may have with those who have marginalized identities, and ways to better support the young people who fall into this category and live rurally. Most crucially, however, is that our findings will help rural communities sustain themselves with additional information on what youth value most about the rural communities they grew up in, and what factors are both pulling and pushing them away from permanent rural living.

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APPENDIX

APPENDIX A: CODEBOOK

HT = Codes in reference to the participant's hometown

RA = Codes in reference to the participant's residential aspirations

UM = Codes in reference to the participant's rural Maine college

WU = Codes in reference to the participant's answers in the wrap-up portion of the interview

HT Diversity +

They enjoy the amount of diversity in their hometown

HT close community +

They enjoy the fact that their hometown is "close knit"

HT lots of resources +

They describe their hometown as having lots of resources, resources close by, many opportunities.

HT Urban

They come from a urban hometown

HT things to do +

Their hometown had lots of things to do and ways to spend free time, positive.

HT Schools -

They did not enjoy the schools in their hometown

HT experience/enjoyment +

Overall, they had a good experience growing up in their hometown

HT few rec options

They described their hometown as having few places to recreate

HT did recreate

They did recreate outdoors when they lived in their hometown

HT PA +

Place attachment to the hometown, positive

UM many rec options

They describe the rural Maine university area as having lots of places to recreate outdoors

UM things to do -

They describe the rural Maine university area as having few ways to spend free time

HT accepting

They consider their hometown accepting of queer people, inclusive of other things

HT queer experiences +

They had good experiences relating to their queer identity in their hometown

HT Diversity -

They wish their hometown had more diversity

HT PA -

Place attachment to the hometown, negative

HT Schools +

They enjoyed the schools in their hometown

HT Rural

They are from a rural hometown

HT not accepting

They describe their hometown as not accepting of queer people, not inclusive

HT close community -

They don't like the fact that their hometown is "close knit"

HT did not recreate

They did not recreate outdoors while they lived in their hometown

HT experience/enjoyment -

Overall, they had a bad experience growing up in their hometown

HT many rec options

They describe their hometown as having many places to recreate outdoors

HT not many resources -

They describe their hometown as not having lots of resources, resources far away, few opportunities.

HT queer experiences -

They had bad experiences relating to their queer identity in their hometown

HT things to do -

Their hometown had few things to do, not a lot of ways to spend free time, negative.

HT CA +

Community attachment to the hometown, positive

HT CA -

Community attachment to the hometown, negative

UM Diversity +

They enjoy the amount of diversity present in the rural Maine university area

UM Diversity -

They wish the rural Maine university area was more diverse

UM PA +

They express attachment to the rural Maine university area nature, positive

UM PA -

They do not express attachment to the rural Maine university area nature, negative

UM accepting

They consider the rural Maine university community accepting of queer people, inclusive

UM not accepting

They describe the rural Maine university area as being not accepting of queer people, not inclusive

UM close community +

They describe the rural Maine university area as being close knit, or they have a close knit community

UM close community -

They either express a dislike for the close community, or feel as though they are not apart of it

UM did not recreate

They do not recreate outdoors while in the rural

Maine university area

UM does recreate

They state they recreate outdoors while in the rural Maine university area

UM experience/enjoyment +

Overall, they enjoy living in the rural Maine university area

UM few rec options

They describe the rural Maine university area as having few places to recreate outdoors

UM lots of resources +

They describe the rural Maine university area as having lots of resources, resources close by, many opportunities.

UM not many resources -

They describe the rural Maine university area as not having lots of resources, resources far away, few opportunities.

UM queer experiences -

They have negative experiences with being queer in the rural Maine university area

UM queer experiences +

They have had positive experiences with being queer in the rural Maine university area

UM things to do +

They describe the rural Maine university area as having lots of way to spend free time

UM CA +

They have an attachment to rural Maine university area community, positive

UM CA -

They express a lack of attachment to the rural Maine university area community, negative

RA Diversity +

They aspire to live in a place with lots of diversity

RA many rec options

They aspire to live in a place with many options or places to recreate outdoors

RA things to do +

They aspire to live in a place with lots of ways to spend free time

RA Urban

They aspire to live in an urban area

RA Rural

They aspire to live in a rural area

RA jobs

They aspire to live in, or will base their decision around, where they can get a job in their field

WU: sexism/discrimination -

I want to be in a place where I can avoid discrimination

WU: urban more accepting

Overall perception that urban areas are more accepting and inclusive than rural areas

WU: CA +

Having a place to form strong community bonds important

WU: accessible nature

Having access to nature easily is important

WU: nature is safe

Nature is safe to me, I feel safe in nature

WU: nature doesn't judge

Nature does not judge me for my identity, so I spend time there

WU: nature = solitude, self-reflection

Nature gave me a place to be alone, and reflect

HT red beliefs

They describe their hometown as having red political beliefs, republican or conservative beliefs.

UM felt rural

They either describe the rural Maine university area as being rural, or came to the area because it felt rural

UM felt urban

They either describe the rural Maine university area as being urban, or came to the area because it felt urban

RA similar to surrounding area

They aspire to live in a community similar to rural Maine college area they live in now

RA accepting

They aspire to live in a place that is accepting and inclusive.

RA near city

They aspire to live in a rural area with a larger city nearby

RA rural Maine +

They aspire to live in rural Maine

RA rural Maine -

they do not aspire to live in rural Maine

WU: rural tends to be red

overall perception that rural areas often have conservative values

WU: not like my HT

Its important to be somewhere that isn't my hometown

HT Poverty

They state the poverty present in their hometown is a negative for them

UM more people

They describe rural Maine university as having a surprisingly high number of people

RA urban then rural

They aspire to live in an urban area first, then permanently move to a rural area

RA somewhere to express myself

They aspire to live somewhere they express themselves freely without fear

RA lots of resources

They aspire to live in a place having lots of resources, resources close by, many opportunities.

RA nature views

They aspire to live in a place with accessible nature or aesthetic views

WU: live somewhere to be myself/explore

Important to live somewhere I can express myself freely and safely

WU: want to feel safe

its important to me to be in an area where I can feel safe

WU: like my HT

Being somewhere like where I grew up is important

WU: rural = connection to nature

Growing up rural gave me a connection to nature I wouldn't have otherwise

WU: grew apart from friends, CA -

They grew apart from friends in their HT, so lost community connection

WU: nature does not = queer identity

Nature is not responsible for me being queer

WU: PA +

Having a place to form strong connections with nature important

WU: nature is healing

Being in nature heals me

HT drugs

They stated that there are problems with drugs in their hometown

WU: rural made me strong against discrimination

Growing up in a rural area made me resilient

WU: minority in rural is empowering

Being a minority in a rural area empowers me, positive

WU: outdoors more important than CA

Willing to sacrifice community connections for access to nature.

WU: nature makes you gayer

The more time you spend in nature, the "gayer" you become

HT Rural and Urban

They claim to have two hometowns, one rural and one urban

RA: CA+

They aspire to live in a place where they can become part of a community

RA not my HT

They do not aspire to live in their hometown

WU: somewhere accepting

Its important to be somewhere accepting and inclusive

RA: other queer people

They aspire to live in a place with other queer people, other people like them

RA peace and quiet

They aspire to live in a place where they can have peace and quiet

RA close to family

They aspire to live close to their family

BIOGRAPHY OF THE AUTHOR

Zachary Davis was born in Mystic, CT. He is a graduate of the Marine Science Magnet High School in Groton, CT. He previously earned a Bachelor of Science in Ecology and Environmental Science with a minor in Economics from the University of Maine. He is a candidate for a Master of Science degree in Resource Economics and Policy from the University of Maine in August 2022.