Place Attachment and Academic Aspirations in Rural Elementary Students

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Abstract

Limited research exists on rural student academic aspirations from a counseling perspective. Much of the existing research focuses on the high school years and their implications for college. This study explores the relationship between place attachment, academic self-efficacy, and academic aspirations in rural elementary students. The sample consisted of 96 students in the 4th through 6th grades across two elementary schools in the northeastern United States. Hierarchical multiple regression analyses indicated that academic self-efficacy was significantly related to academic aspirations after controlling for sociodemographic variables. Contrary to the researcher's hypothesis, place attachment failed to have a significant relationship with academic aspirations after academic self-efficacy was entered into the model. However, place attachment moderated the relationship between academic self-efficacy and academic aspirations. The discussion section further explores these results and their implications for school counselors, counselor educators, and counseling researchers.

Keywords: place attachment, academic self-efficacy, academic aspirations, rural elementary students, counselor education, school counseling, career development

Place Attachment and Academic Aspirations in Rural Elementary Students

While rural students have standardized academic achievement test scores similar to or superior than students from other geographic locations, rural residents achieve lower levels of education and career attainment, including college attendance and completion rates (Byun et al, 2015; Johnson et al., 2014; Koricich et al.,2018). Only about 50% of rural residents attended some form of postsecondary training as compared to 62% of non-rural residents (Geverdt, 2015). Only 21% of rural individuals ages 25-35 earned a four-year degree or higher compared to 34% of people from urban and suburban backgrounds (Provansik et al., 2007). Even when rural people achieve equal levels of education to non-rural residents, they average significantly lower salaries (Showalter et al. 2017). Rural individuals earning a bachelor's degree average salaries of $42,269 versus $54,597 for non-rural residents. This gap widens to $54,513 versus $72,348 between rural and non-rural individuals who achieved graduate degrees (United States Department of Agriculture (USDA), 2019). In fact, rural residents earning graduate degrees actually average lower salaries ($54,513) than non-rural people who simply earn a bachelor's degree ($54,597) (USDA, 2019).

Rural Academic Aspirations

Academic aspirations refer to the educational and vocational dreams that students have for their future" (Sirin et al., 2004, p. 438). Lower levels of academic aspirations contribute to lower levels of educational achievement in rural populations (Ali & Menke, 2014; Irvin et al., 2012). Lower academic aspirations are linked to perceived barriers to educational achievement in rural high school students (Ali & Menke, 2014; Irvin et al., 2012). The barriers which impact rural student academic aspirations include geographic isolation from institutions of higher learning, the cost

of higher education, culture unfamiliarity with college, and anxiety around the idea that achieving higher education may result in permanent departure from rural students' home communities (Ali & Menke, 2014; Irvin et al., 2012). Rural high school students who perceive these barriers to be insurmountable (have lower academic aspirations) than students who did not (Irvin et al., 2012; Ali & Menke, 2014). While academic self-efficacy is traditionally the largest predictor of childhood career aspirations (Bandura et al., 2001), rural students must not only consider belief in their abilities to succeed but the complex realities facing rural people when considering the difficult transition to further education and training (Carr & Kefalas, 2009; Petrin et al., 2014; Schafft, 2016).

Rural Place Attachment

Rural people express high levels of place attachment, or the emotional feelings of connectedness and identification with social and physical place (Raymond, Brown, & Weber, 2010). Rural high school students express distress and uncertainty when considering leaving home for educational and career pursuits (Corbett, 2007, 2010, 2016; Grimes et al., 2019; Howley, 2009). Due to the lack of job opportunities requiring higher education in rural areas, rural students feel a pressure to choose between staying in the community which they love or leaving to pursue career achievements (Bright, 2020; Corbett, 2007, 2010; Howley, 2009). Further, rural students are more readily exposed to careers requiring only a high school diploma, reducing student exposure to the world of work and their academic aspirations as a result (Bright, 2020; Corbett, 2007, 2010; Grimes et al., 2019, Howley 2009).While community attachment may provide social support and encouragement for academic achievements (Petrin et al., 2011) in rural students it

may act as factor limiting academic aspirations (Carr & Kefalas, 2009; Corbett, 2007; 2010; Howley, 2006).

Childhood Career Development

While rural high school students have lower levels of academic aspirations and self-efficacy than non-rural students (Ali & Menke, 2014, Meece et al., 2013), the roots of academic aspirations develop in the elementary years (Bandura et al., 2001; Beale, 2003; Beale & Williams, 2000). Children with low academic aspirations may have disengaged from school as early as the third grade (McWhirter, et al., 1994). Children form aspirations based upon perceived ability to achieve (self-efficacy) which impacts what children deem appropriate for themselves and what they aspire towards (Bandura et al., 2001). Academic aspirations develop through a social feedback process where students' efforts are met with results (success/failure), response (support/admonishment), and contextual influences (cultural experiences, family beliefs) which cause internalize beliefs about which educational paths are appropriate for them (Bandura et al., 2001; Lent et al., 1994).

Theoretical Framework

The theoretical framework utilized to conceptualize the results was Social Cognitive Career Theory (SCCT) (Lent et al., 1994) and A Critical Pedagogy of Place (Gruenewald, 2003). Rooted in Bandura's (1986) general social cognitive theory, SCCT was designed to bring to combine self-concept, self-efficacy, aspirations, individual abilities, individual needs, and personal values under a career development perspective (Lent, et al., 1994). SCCT addresses the variables contributing to career decision making and how these variables interact through a network of social experiences, achievements, and feedback (Lent et al., 1994). SCCT aligns well the rural experience due to the significant influence of the rural

isolation and culture on rural student career aspirations and goals (Ali & Menke, 2014).

A Critical Pedagogy of Place combines the spatial and ecological awareness of place-based education with a critical examination of social expectations and educational practices (Gruenewald, 2003). Gruenewald suggests an examination of the social aspects of physical space such as social inequities, systemic messages and barriers, and social attitudes in isolated communities. Gruenewald contends that the geographic reality of place influences the social reality of place, and that these realities are important to consider when thinking about how different communities interact within greater society. A Critical Pedagogy of Place considers the relevance of social and geographic inequities and uses them in a strengths-based way to inspire children to learn, achieve, and choose the paths they find most meaningful in life (Gruenewald, 2003). The social and feedback focus of a Critical Pedagogy of Place well aligns it with SCCT since both consider the weight of contextual influences, feedback, and social messages.

Purpose of the Study

The purpose of this study was to examine the relationship between academic aspirations, academic self-efficacy, and place attachment after controlling for gender, ethnicity, grade level, and parental education in a sample of 96 rural students in grades 4-6. Place attachment limits the aspirations of rural high school students (Ali & Menke, 2014; Meece et al., 2013) but its impact may begin as early as elementary school, making these relationships important to study in younger children. The variables of gender, ethnicity, grade level and parental education level are important control variables as they contribute to student levels of academic aspirations (Ali & Menke, 2014; Bandura et al., 2001; Byun et al., 2012; Irvin et al., 2011). While

socioeconomic status is a major sociodemographic variable impacting all examined constructs of this study (Byun et al., 2012; Meece et al., 2013; Irvin et al., 2011), the administration of the schools utilized in this study did not allow access to such information. This study utilized the following research questions:

RQ1. What relationships exist among students' academic aspirations, academic self-efficacy, place attachment, and sociodemographic characteristics?

RQ2. How do students' place attachment and academic self-efficacy relate to academic aspirations after controlling for sociodemographic characteristics?

RQ3. Does students' place attachment moderate the relationship between academic self-efficacy and academic aspirations after controlling for sociodemographic characteristics?

Method

Participants

Participants were 4th to 6th grade students (N = 96) enrolled in two rural school districts. Both districts were selected out of convenience samples. School 1 was within proximity to the primary researcher's academic institution with a school counselor and administration interested in exploring rural career development. School 2 was selected due to the researcher having professional contacts and experience within the district, allowing for the research request to go directly to administration, where it was approved.

A total of 4 responses were removed due to incomplete data making the final analytic sample size 92. School 1 (n = 48) qualifies as a rural distant district within the NCES (2006) definition of rurality, meaning it lies more than 5 miles but less than 25 miles from an urban cluster. School 2 (N=44) qualifies as a rural remote district, meaning it is more than 25 miles removed from an urban cluster. The sample was

composed of 49 females (53.26%), 43 males (46.74%), 73 white students (79.35%), 3 Hispanic/Latino students (3.26%), 2 Native American Students (2.17%), 1 Black/African American student (1.08%), and 12 students marking Others (13.04%). Due to the chosen sample being composed highly White, the variable of race was divided into White versus Non-White for analysis purposes. The sample was composed of 51 4th graders (55.43%), 12 5th graders (13.04%), and 28 6th graders (30.43%) due to COVID-19 cutting short the window of data collection.

Procedures

The researcher obtained approval from Penn State University's Institutional Review Board (IRB). The researcher sent out emails to school counselors in rural districts providing details about the study, IRB protocols, and benefits of the research. Families received an informed consent document providing them information regarding the online survey and the ability to opt their children out of the research study. The informed consent outlined that the research was entirely voluntary, that no identifiers were taken, and that the data would be used for publication.

The researcher utilized Qualtrics, an online survey generating website, in order to create and distribute the survey to students via a link. Students clicked the link during a designated period within the school day and complete the survey in a single sitting. School 1 students took the survey in one sitting on iPads within the classroom while School 2 students did the same on their classroom laptop computers. The Qualtrics link was only available to be used one time, assuring participants did not enter multiple responses. Students were prompted to provide the school they attended, their grade, and their parent's educational level.

Measures

Academic self-efficacy served as an independent variable. Academic self-efficacy was measured by the 8-item Personal Ability subscale of the SEFQ (Gaumer et al., 2016). The SEFQ was designed to measure student perception on their ability to perform academic tasks and achieve goals and milestones. The scale measured two subscales of self-efficacy, (1) Belief that ability can grow with effort and (2) Belief in one's ability to meet specific goals and expectations. Items are presented on a five-point Likert Scale (Very Unlike me to Very Like me) with a total score ranging from 0 to 40. Sample items include *I will succeed in whatever career path I choose* and *I can learn what is being taught in class this year.* The internal consistency of the total score of the SEFQ was .80 in this study

Academic aspiration was a dependent variable of this study. It was measured by the 7-Item Children's Academic Aspirations Scale (CAAS) developed by Bandura and colleagues (2001). The CAAS was initially created from prior research suggesting self-efficacy and parental aspirations as a key influencer of childhood academic aspirations. The seven items were measured on a five-point Likert scale (Strongly Disagree to Strongly Agree) measuring the importance placed on academic attainments by themselves, their parents, and their friends and the level of academic performance expectations their parents had for them and they had for themselves. A total score of academic aspiration ranges from 0 to 100, with a higher score indicating greater academic aspiration. Sample items include *My academic achievement is important to me* and *My academic achievement is important to my parents.* The internal consistency of the CAAS was .75.

Place attachment was measured through the 20-item Place Attachment Scale (PAS: Raymond et al., 2010). The PAS was designed to assess an individual's

attachment to their living place through the dimensions of personal context, community context, and natural environment context. The PAS subscales included Place Identity (6-item), Nature Bonding (5-item), Place Dependence (5-item), Family Bonding (2-item), and Friend Bonding (2-item). Results were measured on a five-point Likert Scale (Strongly Disagree to Strongly Agree) with a total score ranging from 0 to 40. Sample items include *I am very attached to my home community* and *My relationships with my family in my home community are very special to me.* The internal reliability of the whole scale in the study was .92.

Sociodemographic questionnaires for this study included gender, race, level of rurality, and parental education level. Gender was measured through a one-item question. Students were given the option to select whether they identified as a boy or a girl. Race was measured by 1 item used by Meece and colleagues (2013) in a study of rural students. The five options were: White, Black, Hispanic/Latino, Native American, or Other. Level of rurality was measured through a one-item question developed by the researcher. Students were given the option to select which school they attended (School 1 or School 2) which the researcher categorized as Rural Distant or Rural Remote. Parent educational level was measured through a one-item question and response options of the highest level of their parent's education included from Less than High school to More than a 4-Year College Degree.

Data Analysis

Data was collected from a single source, a survey which was provided only to the students in grades 4-6 in the participating schools. In total, 96 students completed the survey, however, 5 responses were missing one or more questions. Of these, 4 were removed from analysis due to missing more than 10% of the responses following the guideline used by Bennett (2001). Several other responses

were missing 1 question below the 5% threshold recommended by Schafer and Graham (2002) and the 10% threshold by Bennett (2001). These participants' responses were included in the data analysis as a result.

Data analyses proceeded in multiple steps. Descriptive statistics for the participants and research variables were examined. Next, a correlation analysis was conducted to understand the relationships between students' academic self-efficacy, academic aspirations, place attachment, and sociodemographic variables. The statistic *r* was utilized in the correlation analysis with a significance value set at $p < .05$. A hierarchical multiple regression model was constructed, including an interaction term of self-efficacy and place attachment, to analyze the moderating role of place attachment. Prior to the analysis, the assumptions of linearity, homoscedasticity, independence, normality, and the distribution of residuals were explored (Tabachnick & Fidell, 2013). The first 3 steps of the hierarchical multiple regression model were also used to examine the relationships between study variables. The statistics used to evaluate significance in multiple regression were β, R^2 change in R^2, F, and p with its significance value set at anything less than .05.

Threats to Validity

Given that the data collection for this survey occurred during the beginning of the COVID-19 Pandemic, the results may have been influenced by students feeling emotional distress, fatigue, or distraction. The pandemic also halted data collection mid-process, resulting in a sample size short of the intended 300. The methods of analysis conducted in this study were intended for a larger sample size. Tabachnick and Fidell (2013) recommended the formula $N > 50 + 8m$, where m is the number of independent variables, for multiple linear regression. The current sample size of 92 is less than the recommended minimum sample size of 122, resulting in a power of

.724 and an increased likelihood of Type II error. Generalizability of these results is therefore limited, and further studies should be conducted to test the results presented here. Another limit to generalizability is the lack of inclusion of socioeconomic status due to participant school protocols. The study adapted a place attachment scale originally designed for adults, potentially influencing the validity of the instrument. The study also utilized a single subscale of Self-Efficacy Formative Questionnaire (SEFQ; Gaumer et al, 2016) instead of the full instrument, which had not been done in previous research and may have impacted the validity of the instrument. Finally, the data collection was done at a single point in time and thus the study does not imply causation.

Results

Binary Correlations

Binary correlations among key variables and sociodemographic variables were presented in Table 1 as it relates to the research question 1. Key study variables, such as self-efficacy, academic aspiration, and place attachment were positively associated at moderate levels (r = from .41 to .66). Race was found to demonstrate a weak correlation with academic aspiration, non-White with lower academic aspiration. Grade showed weak negative correlations with academic aspiration (r = -.22) and place attachment (r = -.37). Level of rurality was weakly associated with self-efficacy (r = .21), academic aspiration (r = .25), and place attachment (r = .32), with the rural distant school showing higher scores in the variables than the rural remote school. Parental education level was positively associated with self-efficacy (r = .30)

Hierarchical Multiple Regression

A hierarchical multiple regression model was conducted to address the research questions 2 and 3. Table 2 presents the result from the regression analysis examining the main effect of self-efficacy and the interaction effect of place attachment as a potential moderating variable on the level of academic aspiration. In step 1, the control variables accounted for 4.5% of the variance with (R^2 = .045, ΔR^2 = .098, F (5, 85) = 1.840, p > .05*).* Step 2 introduced academic self-efficacy and was significant, accounting for 46.2% of the variance (R^2 = .463, ΔR^2 = .402, F (6, 84) = 13.956, p < .001*).* Step 3 added place attachment and the fit was not significant, with a total of 46.2% of the variance accounted for (R^2 = .423, ΔR^2 = .005, F (7, 83) = 13.956, p > .005*).* Step 4 added the interaction term between academic self-efficacy and place attachment and was significant, accounting for 50.7% of the variance (R^2 = .507, ΔR^2 = .047, F (8, 82) = 12.582, p > .01). The interaction term had a significant relationship with academic aspirations (β= -.267, p < .01).

Students with low academic self-efficacy (-1 SD or greater from mean) and low place attachment (-1 SD or greater from mean) had the lowest levels of academic aspirations (M = 2.34). Students with low academic self-efficacy and high place attachment had the second lowest academic aspirations (M = 2.59). Students with high academic self-efficacy and low place attachment had the highest levels of academic aspirations (M = 3.21) while students with high academic self-efficacy and high place attachment had the second highest academic aspirations (M = 3.07). The results indicate that place attachment was a significant moderator of the relationship between academic self-efficacy and academic aspirations. Figure 1 depicts the moderating effect of place attachment on the relationship between academic self-efficacy and academic aspiration.

Discussion

The current study intended to explore current gaps in the literature regarding rural childhood career development; specifically, the potential influence of place attachment on the academic aspirations of students. A major gap was the omission of place attachment being studied in the elementary school population despite research literature indicating that academic aspirations, academic self-efficacy, and career development beliefs are rooted in these years (Bandura et al, 2001; Beale, 2003; Hartung et al., 2005). Place attachment was examined as a moderator due to research suggesting that academic self-efficacy is one of the largest predictors of academic aspirations in students (Bandura et al., 2001 Britner & Pajares, 2006).

The Relationship of Place Attachment, Academic Self-Efficacy, and Academic Aspirations

Academic aspirations had a significant positive relationship to place attachment and academic self-efficacy. This is in line with previous research which found academic self-efficacy to have a significant relationship with academic aspirations (Bandura et al., 2001). Under a SCCT model, achievements in academics would foster positive feedback and outcomes. From a SCCT perspective, connection to community may provide students access to support systems which encourage them to set and complete academic goals. Conceptually, this conclusion makes sense as community and support provide the encouragement and means to envision and obtain goals. Within rural high school populations, the focus on place attachment has been the emotional bonds which make students hesitant to leave home (Corbett, 2007; 2010; Howley, 2006; Meece et al., 2013). It is therefore not surprising that place attachment positively related to academic aspirations, since students in the elementary years are not yet at the point of having to consider

leaving home for educational purposes. Rural elementary students may therefore experience the general benefits of attachment, including support for goals and positive associations with identity. It is important to note, however, the relationship present in the regression model was positive, but not statistically significant. This suggests that place attachment on its own did not have a significant relationship with academic aspirations. This unexpected result may have occurred because the true relationship of place attachment to academic aspirations is more complex. Place attachment's relationship to academic aspirations may only come through its interaction with academic self-efficacy.

Place Attachment as a Moderating Variable

The main effect in the regression model was the strong positive relationship between academic self-efficacy and academic aspirations. Place attachment, however, had a significant moderating impact on this relationship. Students with low levels of place attachment were more sensitive to the influence of academic self-efficacy than students with high levels of place attachment. A lack of academic self-efficacy more severely reduced academic aspirations in low place attachment students while increases in self-efficacy more dramatically increased their aspirations. Students with low academic self-efficacy and low place attachment had the lowest levels of academic aspirations. Students with high academic self-efficacy and low place attachment had the highest levels of academic aspirations.

These results suggest several possibilities. For students with low-self efficacy, place attachment may play a positive role in their academic aspirations by buffering them from its negative impacts. For example, if a student had low belief in their abilities and did not feel emotionally attached to the place they lived or the people around them, it is plausible that their general motivation and drive towards

achievement would be lower. Various studies have noted the value of school connectedness on academic aspirations (Bryan et al., 2012; McWhirter et al.,2018; Santos & Collins, 2016). In these cases, feeling cared about and mutually caring back increased students' motivation to achieve. It is possible that place attachment is playing a similar role for rural students. When students have lower belief in their abilities, their academic aspirations could be low but not as low as they would be if they did not feel connected to people and the community, making attachment protective.

Conversely, when students have higher academic self-efficacy, they believe in their ability to succeed and thus aspire to higher academic goals (Bandura et al., 2001). If students identify with home and feel attached, they may relate to careers with lower educational requirements and/or reduce their aspirations out of knowledge that college requires them to relocate out of their community. While academic self-efficacy is still a strong predictor of their aspirations, the emotional associations of place attachment now limit what students consider as options. For example, a student may believe in their academic ability and see themselves capable of achieving a graduate degree, but if they feel connected to home and identify with career options requiring less education, they may reduce their aspirations to follow suit (Grimes et al., 2019; Meece et al., 2014).

It is important to note, however, that the above hypothetical examples are rooted in students making career and educational decisions later in life. It is plausible that the results represent the early stages of student identification with place and circumscription of career options. Students are involved in the process of developing their relation to community, self, and career, and may shape future options as a

result. However, an alternate interpretation of the results is that the relationship place attachment has with the other study variables may differ over the years.

Implications

Implications for School Counselors

A major finding of this study was how levels of place attachment make students more sensitive to the influence of academic self-efficacy on academic aspirations. Increasing academic self-efficacy increases students' academic aspirations. Rural school counselors can increase student academic self-efficacy through a variety of means, including running academic support groups, study groups, and after school programming (Uwah et al., 2008). Studies show, however, that it is not only performance which impacts academic self-efficacy, but the support and feedback received from students by community (Butz & Usher, 2015; Usher & Pajares, 2006). Therefore, it is not only crucial for the rural school counselor to provide responsive services such as individual and group counseling centered around students' academic needs, but also proactively develop lessons, programming, and curriculum which focus on fostering an encouraging community, managing negative emotions, and increasing perseverance and grit (Bardhoshi et al., 2017).

Bardhoshi and colleagues (2017) studied the effects of a program designed to increase self-efficacy in rural elementary students. Using a 12-lesson classroom curriculum titled *I know I can: Persevering to Success,* they demonstrated that rural low income students who received classroom lessons on perseverance, self-confidence, belief in self, and positive academic habits had significantly higher increases in pre/post self-efficacy than students who did not receive lessons. The

average student in the intervention group had self-efficacy scores higher than 72% of those in the comparison group.

Rural school counselors can implement similar programs throughout the elementary years. Further, rural school counselors can involve community by sending information about self-efficacy home in newsletters, collaborating with parents to increase self-efficacy at home, and through working to establish a school-wide culture of encouragement and support (Bardhoshi et al., 2017).

The findings may suggest that place should also be considered when working to increase student academic aspirations. Place-based curriculums (Grunewald, 2003; Schafft, 2010) could potentially make academic principals and experiences more tangible, or provide positive feedback encouraging future career exploration. By emphasizing the relevance of careers to local spaces, rural students can see how their academic efforts can make a difference locally and beyond.

Schafft (2010) detailed an excellent application of these practices. Saint Mary's Middle School in rural Pennsylvania programs centered around the reality of environmental conservation in the local area. The school went as far to develop its own environmental learning center through governmental partnerships with the Pennsylvania Conservation Corps, The Pennsylvania Department of Environmental Protection, the Workforce Investment Board Youth Council, and the Pennsylvania Fish and Boat Commission. The environmental learning center provided a linkage between academic principles and real-life careers. Students received microbiology lessons in a local stream, developed an aquaculture facility on the school's campus, and even managed a trout nursery fed by hydroponics. The fish raised in this capacity were released into local streams, illustrating the impact of education and specialized career functions on the environment of the local community. This hands-

on learning allowed Saint Mary's to meet and academic career standards while giving students quality experience informing their interests and future paths (Schafft, 2010). The exposure to scientific principles, concepts, and activities also increased their academic self-efficacy in biology and related fields.

For students with high levels of place attachment, who are less positively influenced by self- efficacy, a better understanding of the social and economic realities surrounding their community may empower students to think more critically about career development and determine if they could obtain educational training which would be beneficial to home. This may remove the dichotomy which has traditionally existed, where students are learning to leave their homes for good (Carr & Kefalas, 2009). Place based educational practices may encourage students to see what is possible locally while increasing their understanding and comfort with academics. This may also simultaneously provide inspiration for students to see the skills and abilities they've gained locally linked to potential exciting career paths outside of the community.

It is paramount that elementary school counselors expose rural students to career opportunities in the local community as well as encourage an exploration of what local needs could be met by students if they pursue higher education. This can be accomplished through developing a comprehensive curriculum including career exploration guidance lessons, field trips to local businesses, field trips to institutions of higher education, and running career fairs with local participants and speakers (Knight, 2015). These presenters should be individuals from the local community who have careers that students may not see daily. By conducting community assets mapping, an elementary school counselor can identify a diverse array of careers available locally and partner with these professionals to help educate and inspire

students. Intentional selection of speakers from a wide range of backgrounds, both professionally and culturally, can open students' eyes to what they view as possible. Further, these relationships can spark more in-depth partnerships such as career shadowing opportunities for students in the middle school years.

Counselor Education Implications

Rural people and their culture do not receive enough coverage in counselor education programs (Breen & Drew, 2012; Bright, 2020; Grimes et al., 2019; Grimes et al., 2013). Learning modules presenting rural people as a unique sociocultural population would better prepare counselors in training to work with this population (Bright, 2020; Grimes et al., 2019; Grimes et al., 2013). Exposure to rural culture in multicultural courses, in-class case studies, and programmatic partnerships in rural communities would provide counselors-in-training valuable exposure to the dynamics of working with these people. Such partnerships could include internship opportunities at rural school districts and/or mental health clinics available in rural community centers. This exposure would make the reality of place, isolation, and rural culture more apparent to counselors-in-training and allow for the development of professional perspectives to assist future rural clients, including rural elementary students.

Research Implications

The current results suggest that future inquiries should examine the relationship between place attachment, academic self-efficacy, and academic aspirations. While this analysis examined place attachment as a moderating variable, given the relationship present between all three main variables, mediation models should be explored to further examine how these variables are all coming together to influence career development. Longitudinal studies would paint a better

picture of how these variables interact during the elementary years and if these impacts are stable or if they shift and changes over the years. Longitudinal studies examining these variables from the elementary to high school years across multiple schools and regions would provide a deeper insight into what is impacting rural students' career development, when, and what interventions may be appropriate. These studies should include the important variable of socioeconomic status, which due to school district policy was excluded in this study. A comprehensive exploration of how the control variables utilized in this study interact with the three main variables would further illuminate the reality of place attachment's impact on rural populations and advise future practice and research. Further work should also be done on developing age appropriate scales for measuring place attachment during the elementary years.

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Biographical Statement

David Bright is an assistant professor of counselor education at the State University of New York and a former school counselor. His research interests include school counseling interventions, the needs of rural populations, and career development.

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Appendix

Table 1

Binary Correlations among Research Variables

	1	2	3	4	5	6	7	8
1. Gender[a]	-							
2. Race[b]	.13	-						
3. Grade[c]	-.06	-.08	-					
4. Rurality[d]	.06	.08	-.79***	-				
5. Parental education[e]	.18	-.14	-.31**	.33**	-			
6. Academic aspiration	-.11	-.26*	-.22*	.25*	.11	-		
7. Academic Self-efficacy	.10	-.18	-.15	.21*	.30**	.66***	-	
8. Place attachment	-.08	-.19	-.37***	.32**	.07	.57***	.41***	-
M	-	-	-	-	-	3.99	4.08	3.60
SD	-	-	-	-	-	.57	.57	.78

Note. [a]Gender (1=Male, 2=Female); [b]Race (1=White, 2=Non-White). [c]Grade (1=4th grade, 2=5th grade, 3=6th grade). [d]Rurality (1=Rural remote, 2=Rural distant). [e]Parental education (1=less than high school, 5=more than a four-year college degree)

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 2

Hierarchical Multiple Regression Analyses with the Place Attachment (total) as a Moderator

	Step 1		Step 2		Step 3		Step 4	
	B (*SE*)	*β*	*B* (*SE*)	*β*	*B* (*SE*)	*β*	*B* (*SE*)	*β*
Gender[a]	.055 (.137)	.042	.145 (.104)	.112	.147 (.104)	.114	.131 (.099)	.102
Race[b]	-.179 (.171)	-.113	.068 (.131)	.043	.081 (.132)	.051	.122 (.127)	.077
Grade[c]	-.068 (.121)	-.095	.099 (.093)	.138	120 (.095)	.167	.022 (.063)	.030
Rurality[d]	.032 (.221)	.025	.142 (.166)	.110	.144 (.167)	.111	.180 (.160)	.140
Parental education[e]	.111 (.059)	.216	.103 (.044)	.211*	.108 (.044)	.229*	.130 (.043)	.253**
Self-efficacy	-	-	.677 (.082)	.681**	.634 (.095)	.638**	.516 (.100)	.519**
Place attachment	-	-	-	-	.076 (.084)	.091	.039 (.081)	.046
Self-efficacy × Place attachment	-	-	-	-	-	-	-.190 (.065)	-.267**
ΔR^2	.098		.402**		.005		.047**	
Total adjusted R^2	.045		.463		.462		.507	
F	1.840		13.956		12.058		12.582	

Note. Outcome variable is academic aspiration. [a]Gender (1=Male, 2=Female); [b]Race (1=White, 2=Non-White). [c]Grade (1=4th grade, 2=5th grade, 3=6th grade). [d]Rurality (1=Rural remote, 2=Rural distant). [e]Parental education (1=less than high school, 5=more than a four year college degree)

* $p < .05$, ** $p < .01$, *** $p < .001$

Figure 1

Place Attachment as a Moderator between Academic Self-Efficacy and Academic Aspirations