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Journal of American Indian Education, Volume 59, Numbers 2 & 3,  
Summer & Fall 2020, pp. 121-145 (Article)

Published by University of Minnesota Press

DOI: <https://doi.org/10.1353/jaie.2020.0012>

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## Parent Educational Level and Motivation Among Native American Adolescents: The Mediating Role of School Belonging

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School belonging and parent educational level are independently associated with student academic performance. However, few studies explore the simultaneous association between the three variables. This study examines this association among 215 Native American 9th through 12th graders. Overall, students reported an average school belonging score of 3.37 ( $SD = .67$ ) out of a maximum score of 5.0. Additionally, there was a small but significant positive association between parent educational level and student school belonging,  $r(165) = .18$ ,  $p < .05$ . Last, school belonging appeared to mediate the association between parent educational level and student academic motivation. Results suggest that parent educational level is related to student academic motivation via school belonging. Students whose parents have a higher educational level may feel a stronger sense of belonging to the school context, and this stronger sense of relatedness may contribute to higher levels of academic motivation. Findings from this study further explicate consequences of past and present colonization of Native American students, which complicate their educational attainment.

**S**TUDIES OF SCHOOL BELONGING SUGGEST that sense of school belonging is a strong predictor of student outcomes (Faircloth & Hamm, 2005; Goodenow & Grady, 1993; Walton & Cohen, 2007). Specifically, school belonging is strongly related to academic motivation (i.e., a person's desire regarding academic subjects when competence is judged against a standard of performance or excellence) (Neel & Fuligni, 2013). In education, a sense of school belonging is the extent to which a student feels personally accepted, included, and supported by peers or adults in the school environment (Galliher, Rostosky, & Hughes, 2004; Goodenow, 1993).

This study draws on an application of Holm, Pearson, and Chavis's (2003) peoplehood model by Tachine, Cabrera and Yellow Bird (2017) to explore a Native American student-specific version of sense of belonging. The peoplehood model emphasizes relationality among "multiple generations, extended family, other community members, more-than-humans, and the lands and waters of our homes" (Bang, Nolan, & McDaid-Morgan, 2019, p. 789). Both the peoplehood perspective put forth by Holm et al. (2003) and writings of Vizenor (2008) pay reverence to "persistent peoples" and interconnected acts of "survivance" in acknowledging Native American cultural continuity and resistance despite historic and contemporary colonization. According to Tachine et al. (2017), relationality among students, their families, and their home communities is fundamental to their sense of belonging and persistence in college. The current study also draws upon Baumeister and Leary's (1995) belongingness theory, which similarly suggests that human beings have a universal drive to maintain interpersonal affiliations. Per these theories, we believe students with a strong sense of belonging may be more motivated to engage in school, whereas students with a weak sense of belonging may be less motivated to do so.

American Indian and Alaska Native (AI/AN) families have long voiced desire for their children to be successful in school despite the transformative effects of American education (Brayboy, Fann, Castagno, & Solyom, 2012). Many AI/AN parents and grandparents attended residential boarding schools designed to assimilate them into U.S. mainstream society. In these schools, students were often marginalized, regimented, and severely punished. Even after the Indian boarding school era (1873 to 1945), punitive practices continued into the latter part of the 20th century. Instructional time at boarding schools was spent less on the academics of the time (e.g., reading, writing and arithmetic) and more on industrial and vocational skills training (Jerome, 2006; Lomawaima & Ostler, 2018; Reyhner, 2018). National reports on the quality of American Indian education published as early as 1928 highlight consistently under-resourced schools available to AI/AN students (e.g., Charleston & King, 1991; Meriam et al., 1928; U.S. Senate, 1969).

Yet today, scholars of American Indian education contend that AI/AN students are served by fragmented (i.e., government-controlled and tribally controlled schools, public schools, church-run schools, other private schools, and alternative schools) and inconsistent school systems that vary in the extent to which they support AI/AN language, culture, and student development (Huffman, 2010; Lee & McCarty, 2017; Ward,

2005). Many pay scant attention to Native history and culture in curricula, offer limited courses, use inadequate representational models, and yield low graduation rates (Brayboy & Maaka, 2015; Devoe & Darling-Churchill, 2008; Elliot-Groves & Fryberg, 2019; Stetser & Stillwell, 2014).

Scholars of American Indian education such as Leilani Sabzalian (2019) contend it is high time for researchers to draw their attention away from Eurocentric standards of educational success (e.g., test scores) to consider “other possible educational outcomes (e.g., knowledge of place, fluency in one’s Native languages, literacy in one’s own history and culture, ability to meaningfully contribute to one’s community)” (p. 18). We maintain that the study of relationships and relationality among Native American students, their families, and educational staff in school is an overlooked area that may promote increased academic performance.

Research exploring student motivation suffers from several limitations concerning AI/AN students. To our knowledge there is only one published study that delves into experiences of belonging in schools among Native American high school students (Covarrubias & Fryberg, 2015). That study highlights the importance that Native representation in the educational context can have in regard to school belonging. Other published studies on belongingness to peers and home communities among Native American students were conducted in higher education settings (Smith, Cech, Metz, Huntoon, & Moyer, 2014; Strayhorn, Bie, Dorime-Williams, & Williams, 2016; Tachine et al., 2017). Second, of the two extant studies focusing on academic motivation (i.e., communal goal incongruence, persistence intentions) of Native American students (Smith et al., 2014; Thompson, Johnson-Jennings, & Nitzarim, 2013), both explore experiences of Native college students, and only one (Thompson et al., 2013) examines an indirect path that could help uncover mechanisms driving direct relationships. The current study addresses these limitations by using data collected from Native American reservation high school students and by analyzing a possible indirect path between parent educational level and student motivation.

Given the history and politics of American education, it is imperative that educators be vigilant concerning whether students’ past neglect in educational settings has been addressed. School belonging, or psychological sense of school membership, is a construct that can be used to determine whether progress has been made on this front. When students feel they belong, they experience a social bond between themselves and people who, for them, represent the school and its values

(Wehlage, 1989). This unique form of relationality or belongingness is especially important because adolescents spend a great deal of time in the school environment and engage in crucial social interactions with peers at school.

### **Parent Educational Level and Student Motivation**

Academic motivation is widely studied in educational research, primarily for its relationship with academic achievement (Cetin, 2015; Graham & Weiner, 1996; Schunk, 1991). Research supports the association between parent educational level and certain aspects of student academic achievement (e.g., motivation, school engagement, grades, and graduation rates) (Fan & Chen, 2001). Researchers often explore the association between socioeconomic status (SES) and academic achievement by approximating SES through measurement of parent educational level. In this literature, both direct and indirect effects of parent educational level are linked to academic achievement. For example, a meta-analysis of studies assessing the direct effects of SES (mainly measured by parent education level) on academic achievement suggests that although parent education level strongly predicts academic achievement among K-12 White students, it does so less strongly among K-12 students from non-dominant racial/ethnic groups (Sirin, 2005).

Studies also show an association between parent education and a more specific type of academic achievement: motivation. Koutsoulis and Campbell (2001) found that various socioeconomic factors—including parent education—were related to academic motivation. Faria (2004) found that being from a low SES background (i.e., students whose parents had lower levels of education) was negatively associated with student academic motivation.

It is important to note a lack of literature exploring the association between parent educational level and academic motivation among AI/AN students. To date, there are no peer-reviewed empirical studies of this association. The current study hopes to address this limitation by exploring the association among Native American high school students.

### **School Belonging and Student Motivation**

In addition to research attesting to the significance of creating and maintaining social bonds for K-12 students' academic development, motivation has been associated with school belonging, parental involvement,

and academic achievement in students (Faircloth & Hamm, 2005; Goodenow & Grady, 1993; Sánchez, Colón, & Esparza, 2005). More specifically, school belonging is positively correlated with different facets of student performance, including school engagement (Finn, 1989) and student participation (Leithwood & Jantzi, 1999). A study of ethnically diverse students suggested a positive correlation between school belonging, academic motivation, and persistence (Goodenow & Grady, 1993). Research further supports the association between school belonging and academic performance: Faircloth and Hamm (2005) found there was a positive association between sense of school belonging and academic success of students from diverse racial/ethnic backgrounds. Also, Sánchez et al. (2005) suggested that sense of school belonging predicted academic motivation for students in a majority Latino public high school. Importantly, recent research linking school belonging to student academic outcomes has been conducted (Baskin, Wampold, Quintana, & Enright, 2010; Cheung & Pomerantz, 2012; Neel & Fuligni, 2013; Wentzel, Battle, Russell, & Looney, 2010). It should be noted that none of these studies included AI/AN students.

The sole study linking school belonging and motivation (i.e., academic persistence) for Native American students found a connection between low communal goals and feelings of school belonging with uncertainty, low motivation, and perceived poor performance among Native American university students (Smith et al., 2014). The researchers indicate that participants' communal goal orientation included a strong and intentional commitment to helping their tribal communities upon graduation. This study highlights the salience of relationality among AI/ANs. Participants were motivated to achieve academically to give back to the place and group or groups where they originated from (Cajete, 2000).

### **Parent Educational Level and School Belonging**

Little research explores the association between parent educational level and school belonging. Of the few empirical articles that explore this association, results are mixed. Some research suggests an association between these two variables, in which educationally related responses to children from households where parents espouse lower educational levels may influence students' experiences. For example, a recent study employing student-level data of students from various countries found a positive correlation between parent educational level and school belonging. Students whose parents had higher educational levels felt more

socially included in college than students whose parents had lower educational levels. Additionally, this study found that parent educational level was associated with a student's attitude toward school (Marksteiner & Kruger, 2016).

To our knowledge, only one study explores the relationship between parent education and student school belonging among Native American students (Covarrubias & Fryberg, 2015). These researchers found that mother's level of education was related to number of self-relevant representations participants provided, not ratings of school belonging. These mixed findings suggest the need for further examination of the association between parent educational level and student sense of school belonging. Therefore, the paucity of research exploring the association between parent educational level and motivation, or potential contextual level factors associated with the relationship between them, must be addressed.

### **School Belonging as a Mediator**

The empirical studies mentioned previously suggest direct relationships between parent educational level and motivation, parent educational level and school belonging, and school belonging and motivation. However, there is little research on indirect paths that could be mechanisms through which these relationships occur. One study of Latino students explored the mediating effect of school belonging in the relationship between parental school involvement and academic achievement. Results of this study found that school belonging mediated the association between parental school involvement and student academic achievement (Kuperminc, Darnell, & Alvarez-Jimenez, 2008). Another study explored the relationship between acculturative stress and school performance among Latino students. Results showed that an increase in acculturative stress was associated with a decrease in school performance. However, the mechanism through which this relationship was manifesting was school belonging (Roche & Kuperminc, 2012). Last, a study of college students found that school belonging mediated the association between social class and students' adjustment to college (Ostrove & Long, 2007). Although neither of these studies addressed motivation as a formal outcome, they explore constructs related to academic achievement. In addition, Ostrove and Long (2007) looked at SES as the predictor variable. The use of parent educational level as a proxy for SES has been previously discussed. Considering there are related studies

suggesting that school belonging mediates the association between various predictors and academic achievement, we hypothesize that school belonging may also mediate the association between parent educational level and academic motivation.

### **The Present Study**

Since literature on academic outcomes suggests a relationship between parent educational level, sense of school belonging, and academic outcomes, it is important to explore this association in different contexts. Few if any empirical studies with AI/AN students examine the connection between parent educational level and students' sense of school belonging. Of those that exist, it is unclear how parent education level is associated with academic outcomes. Nevertheless, recent empirical studies sampling AI/AN students point to a possible association. For example, a study of educational aspirations among AI/AN students from a nationally representative sample of 9,040 middle school students reported that parent education level (but not free and reduced lunch eligibility) was associated with students having plans to attend college. Furthermore, those who talked with family and teachers about their academic plans four or more times in the past year were more likely to have a college plan (Higheagle Strong, Carbonneau, & Austin, 2018). Since school belonging is a significant aspect of an AI/AN interdependent cultural orientation and connectedness (i.e., belongingness) and is linked to positive well-being among AI/ANs (Mohatt, Fok, Burket, Henry, & Allen, 2011), it is important to examine variables that may be associated with sense of school belonging in this population. In addition, it is valuable to explore mechanisms underlying this relational association (e.g., sense of belonging) to better understand how parent educational level is associated with students' academic outcomes.

### **Research Questions and Study Hypotheses**

The goals of this study are to (a) establish a more inclusive literature on sense of relatedness at school by examining school belonging levels of AI/AN students; (b) determine whether parent educational level relates to student sense of school belonging in this population; and (c) examine school belonging as a mediator between parent educational level and motivation. Because of the current literature on educational disparities and academic outcomes of AI/AN students, we will note



whether Native American students in the current study report lower levels of school belonging than the levels of school belonging reported in past studies sampling other ethnic groups. Based on prior studies that suggest a positive association between parent educational level and student school belonging, we hypothesize that Native American students whose parent(s) have higher levels of education will feel a stronger sense of school belonging than their counterparts. Last, consistent with belongingness theory, we hypothesize that school belonging will mediate the association between parent educational level and student motivation.

## **Method**

### **Procedure**

In fall of 2014, we were asked by a Native American guidance counselor working in a reservation high school in the Midwest to replicate a study of school belonging previously conducted with Native American middle school students in the Southwest (Hussain, Domingue, LaFromboise, & Ruedas-Gracia, 2018) and to assess levels of student engagement in the school. She was interested in school belonging because her school was conducting teacher in-service trainings on ways of fostering student resilience and the school had just expanded the role of its teachers by initiating a teacher advisory system. This system paired students with volunteer advisory teachers to meet briefly (15 minutes) during the first period each day to provide social-emotional support to students. Ideally, students would keep the same teacher adviser over the course of their high school experience. It was thought that the current study may shed light on issues surrounding this type of school reform.

Once we developed a survey entitled “Everyday Experiences and School Life,” the guidance counselor, a local tribal member and long-term community educator, oversaw administration of the survey along with the second author and a graduate student. The second author, a professor of education and Native American studies who has served as a teacher in American Indian education programs and schools, and the third author, a graduate student who once taught first grade in a reservation school, also assisted with data collection. Reporting of this study additionally involved collaboration of the first and fourth authors, who were doctoral research assistants at the time of the study.

After students received information about the study, they self-selected into the respondent pool by assenting to participate. Surveys were

distributed to all advisory teachers in the school. Participants filled out the Psychological Sense of School Membership (PSSM; Goode-now, 1993) and the High School Survey of Student Engagement (HSSSE; Kuh, Cruce, Shoup, Kinzie, & Gonyea, 2008) during their advisory period over the course of several homeroom sessions (as each advisory session was brief and the estimated time to complete the survey was 45 minutes). Students who opted out of the survey engaged in their daily advisory period as usual. A lottery of \$5 and \$10 gift cards was offered to participants as an incentive for their involvement in the study.

All procedures were approved by the university's Institutional Review Board (IRB), which required approval from the participating tribal research committee. In accordance with our Tribal IRB protocol, we refrain from including any information that may disclose the study location. This article was approved by the Tribal IRB Committee before manuscript submission.

## **Participants**

Two hundred twenty-six students were recruited from the school (47% male, 53% female). Ages ranged from 14 to 19 years with an average age of 15.9 years. Participants indicated their ethnicity/race from the following options: "American Indian/Alaska Native," "African American," "Asian American," "Hispanic," "Native Hawaiian/Pacific Islander," "White," or "Other." They could select more than one option. Ninety-six percent identified as AI/AN, while a small number identified as belonging to other racial/ethnic groups (6% African American, 1% Hispanic, 2% Native Hawaiian/Pacific Islander, 9% White, and 3% "Other," respectively). Since we are studying school belonging and academic motivation among AI/AN students, this analysis included only those who self-designated as AI/AN within the overall sample. Eleven participants who did not identify as AI/AN were excluded from the analysis. The final sample for this study consisted of 215 participants, all of whom self-identified as AI/AN. Thirty-one percent were in 9th grade (ages ranged from 14 to 16 years); 18% in 10th grade (14 to 17 years); 24% in 11th grade (16 to 18 years); and 27% in the 12th grade (17 to 19 years).

It is important to note demographics of the school and community to be aware of the environmental context of this study. Approximately 15,000 tribal members resided on the reservation at the time of the study. The population was young: 36.3% under the age of 18. As shown

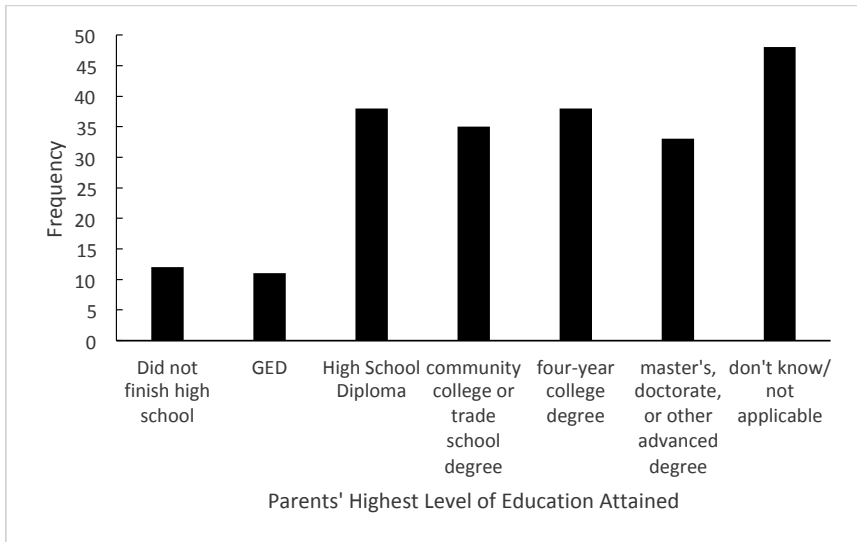


Figure 1. Parents' highest educational level attained.

in Figure 1, there was variability in educational levels among community members.

In 2011, 31% of tribal members ages 16 and older were employed. The regional economy revolved around employment in tribal and federal governmental programs, tribal-owned and individually Native-owned businesses, and service agencies. Within the school system, tribal members occupied positions within all levels of the school staff (e.g., superintendent, teachers, aides, security guards); likewise, within the health care system tribal members occupied positions within all levels of the medical staff (e.g., doctors, nurses, technicians). As of 2010, 40% of families lived below poverty level (U.S. Department of Health and Human Services, 2012). A majority of study participants (61%) reported qualifying for free or reduced-price lunches.

## Measures

**School Belonging** The 18-item PSSM measures the degree to which students feel they belong in their high school environment (Goode-now, 1993). Responses ranged from 1 (not at all true) to 5 (completely true) to items such as: "I feel like a real part of my school" and "Sometimes I feel as if I don't belong here." Although this scale was not initially

created for AI/AN student populations, it is known to be generalizable to various culturally diverse populations of students (Faircloth & Hamm, 2005). A previous study with two samples of Native American reservation students (middle school and high school) reported acceptable internal consistency for the PSSM ( $\alpha = .81$ ; Hussain et al., 2018). Internal consistency of the current study was also acceptable ( $\alpha = .87$ ).

The HSSSE is a survey used to assess students' beliefs about learning, attitudes about their school experience, and behaviors in their learning environment (Kuh et al., 2008). The following HSSSE items were adapted with permission from the Center for Evaluation and Education Policy to measure parent/guardian educational level and motivation.

**Parent/Guardian Educational Level** Participants reported the highest educational level of both their parents (or guardians) on the HSSSE by selecting one of the following options for each parent: 0 (did not finish high school), 1 (GED), 2 (high school diploma), 3 (community college or trade school degree), 4 (4-year college degree), 5 (master's, doctorate, or other advanced degree), or 6 (don't know/not applicable).

**Motivation** This measure consisted of 12 HSSSE items capturing two constructs of academic motivation— self-efficacy and valuing of school—suggested by the Faircloth and Hamm (2005) contextual model of school belonging and the expectancy-value model of academic motivation put forth by Eccles and colleagues (Eccles et al., 1983; Wigfield & Eccles, 1992). Responses ranged from 0 (strongly disagree) to 3 (strongly agree). The following three HSSSE items measured the self-efficacy beliefs construct of academic motivation: “I have the skills and ability to complete my work,” “I take pride in the quality of my school work,” and “I feel good about who I am as a student.” For the current study, internal consistency was borderline acceptable ( $\alpha = .69$ ). The following nine HSSSE items measured the valuing of school construct of academic motivation broadly: “I go to school: (a) ‘because I enjoy being in school,’ (b) ‘because of what I learn in classes,’ (c) ‘because of my teacher(s),’ (d) ‘because of my friends,’ (e) ‘because of my parent(s)/guardian(s),’ (f) ‘to participate in athletics,’ (g) ‘to participate in band, orchestra, and/or choir,’ (h) ‘because I want to graduate and go to college,’ and (i) ‘because I want to learn skills to get a good job.’” They include types of activities that motivate a student to value the experience of school, notably interactions with peers, influences from family,

and participation in school-related activities. The internal consistency of the valuing of school index was acceptable ( $\alpha = .74$ ).

## Results

### Preliminary Analysis

An independent samples *t*-test revealed no significant difference in school belonging scores between females ( $M = 3.35$ ,  $SD = .06$ ) and males ( $M = 3.40$ ,  $SD = .07$ ),  $t(210) = 0.51$ ,  $p = .61$ . A one-way analysis of variance (ANOVA) test revealed no significant differences in school belonging scores by grade level,  $F(3, 209) = 2.24$ ,  $p = .08$ . In addition, all levels of parent (or guardian) education were represented in the sample (see Figure 1). Participants who selected “other/don’t know” in response to the parent education item were excluded from the correlational analysis, which did not affect our results. When a correlation was computed based upon the data for all the remaining 166 participants, the sense of school belonging scores remained relatively the same. Thus, listwise, deletion did not bias the sample. See Table 1 for unstandardized means, standard deviations, and correlations among all study variables.

To determine if the mean PSSM score for this sample was statistically different from previous samples, a one-sample *t*-test was conducted comparing the mean of the study sample against the mean PSSM score of three previous studies using the PSSM in diverse populations as shown in Table 2. With the exception of one of the studies in Goode-now (1993), the mean PSSM score of the current study sample ( $M = 3.37$ ,  $SD = .64$ , Range = [1.5 – 4.9]) was found to be significantly lower than ethnically diverse and White school student participants.

**Table 1** Means, SDs, and Correlations Among Study Major Variables

Variable	M	SD	1	2	3	4
1. Sense of school belongingness	3.38	.64	—			
2. Parent education	2.18	.55	.19*	—		
3. Valuing of school	1.81	.44	.47***	.25**	—	
4. Self-efficacy	3.04	1.47	.41***	.22**	.45***	—

Note.  $N = 166$ .

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

**Table 2** Results of Single Sample t-Test Analysis With Past Studies Using PSSM

Reference	Ethnicity and class of sample (if reported)	M	N	t-value
Goodenow (1993)	Study 1: White, middle class	3.86	454	-9.72*
	Study 2: African American, Hispanic, and White working class	3.11	198	5.21*
	Study 3: no information collected about ethnicity	3.84	611	-9.33*
Anderman & Anderman (1999)	50% African American, 39% White, 7% Hispanic, and 4% Other	3.84	660	-9.33*
Davis, Chang, Andrzejewski, & Poirier (2014)	White, Hispanic, Asian, and multi-racial	4.43	637	-21.07*
Hughes, Im, Kwok, Cham, & West (2014)	Latino	3.83	204	-9.12*

Note. PSSM = Psychological Sense of School Membership.

\*  $p < .001$ .

### Research Question One

Does the educational level of a student's parent/guardian influence a student's sense of school belonging? A correlational analysis revealed a significant positive association between a student's parent/guardian educational level and a student's school belonging score,  $r(165) = .18$ ,  $p < .05$ . Although a weak correlation, there was indeed an association between parent/guardian level of education and student sense of school belonging: the higher the student's parent/guardian level of education, the higher the student's sense of school belonging, and vice versa.

### Research Question Two

Does sense of school belonging mediate the association between parent educational level and motivation? In this study, motivation consisted of two constructs; thus a mediation analysis was conducted between parent educational level and self-efficacy beliefs, and between parent

educational level and valuing of school. A Sobel-Goodman mediation and bootstrap analysis were conducted to test the role of school belonging in mediating the association between parent educational level and the two subcategories of motivation separately (i.e., efficacy beliefs and valuing of school). This mediation was assessed using the Baron and Kenny three-step framework for mediation analyses (Baron & Kenny, 1986). The three steps are: (1) assess if parent educational level is associated with motivation, (2) assess if parent educational level is associated with school belonging, and (3) assess if strength of the association between parent educational level and motivation is attenuated once school belonging is added to the model. In addition, the Sobel-Goodman test was employed to test the strength of the mediation (Sobel, 1982). This study also employed bootstrapping to account for possible concerns regarding standard errors. An alpha level of 0.05 was used to test for statistical significance. All analyses were computed using Stata 13.0 statistical software. Continuous variables were standardized to reduce multicollinearity. Before running the statistical analysis, regression assumptions of linearity, measurement reliability, homoscedasticity, and normality were tested, as recommended by Osborne and Waters (2002). Analyses revealed the data followed regression assumptions. Additionally, one outlier was identified in the data. Removing the outlier did not change the significance of the results, so it was kept in the study sample.

Sobel Goodman's mediation analyses (Preacher & Hayes, 2008) revealed that school belonging accounted for 31% of the effect of parent educational level on efficacy beliefs and 52% of the effect of parent educational level on valuing of school (see Figures 2a and 2b). Next a bootstrap analysis was conducted to further test school belonging as a mediator between parent educational level and both efficacy beliefs and valuing of school (Baron & Kenny, 1986). Indirect effects were computed for 10,000 samples. The bootstrapped indirect effect of school belonging on efficacy beliefs in this study was .04, and the 95% confidence interval ranged from .001 to .83. In regard to valuing of school, the bootstrapped indirect effect of school belonging was .05, and the 95% confidence interval ranged from .003 to .10. Altogether, these analyses support our hypothesis that school belongingness mediates the relation between parent/guardian educational level on both efficacy beliefs and valuing of school.

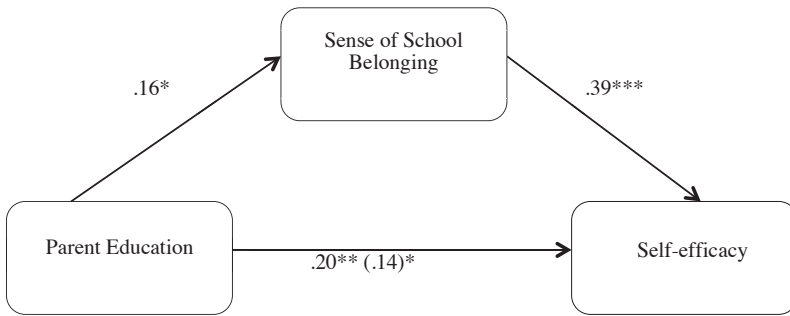


Figure 2a. Standardized regression coefficients for model explaining the relation between parent education and self-efficacy as mediated by sense of school belonging. (Note: The standardized regression coefficient for the effect of parent education on self-efficacy controlling for sense of school belonging is in parentheses. \*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .)

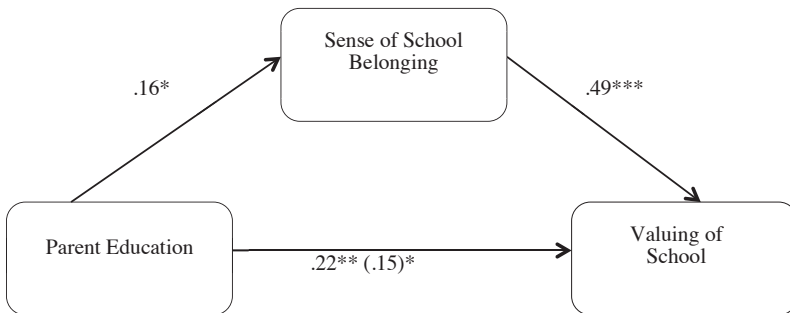


Figure 2b. Standardized regression coefficients for model explaining the relation between parent education and valuing of school as mediated by sense of school belonging. (Note: The standardized regression coefficient for the effect of parent education on valuing of school controlling for sense of school belonging is in parentheses. \*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .)

## Discussion

This study's aim was to analyze whether parent educational level associates with students' sense of belonging at school. Our findings indicate that students whose parents were more highly educated tended to have a stronger sense of belonging to school than students whose parents were less educated. This positive correlation supports previous studies that also found a positive association between parent educational level and sense of school belonging in higher education (Cabrera & Padilla,



2004; Stephens, Fryberg, Markus, Johnson, & Covarrubias, 2012; Walton & Cohen, 2007, 2011).

We caution the reader not to assume that less educated parents do not transmit attitudes and beliefs concerning the importance of education to their child. In fact, many studies show that parents from ethnically minoritized communities communicate the importance of education to their children (Brayboy et al., 2012; Camacho-Thompson, Gonzalez, & Fuligni, 2019; Camacho-Thompson, Gonzalez, & Tein, 2019). Parents bring a wealth of cultural beliefs to the educational process. Many parents see their role as encouraging children to work hard in school to further their education. In this study, it may be that less educated parents strongly encouraged their children to excel academically, but systemic barriers not fully addressed in this study (e.g., historical and contemporary trauma regarding the assimilation agenda of schooling) prevailed. Furthermore, students whose parents have limited familiarity with educational institutions may experience school differently in terms of the amount of encouragement their teachers and administrators provide. Thus, the child may feel a lower sense of school belonging.

These considerations also tie into the study's second aim, which was to test whether school belonging mediated the relationship between parent educational level and motivation. Previous research provides empirical evidence of the relationship between parent involvement on motivation, particularly parent aspirations for their child's postsecondary education and parent advising on school matters (Fan & Williams, 2010). Parents who have more experience with Western education systems may be more able to transmit information concerning Western notions of academically appropriate behavior (e.g., finding one's voice, leading groups) and to interpret certain educational policies to their child. Children of parents with higher Western education levels may gain more familiarity with schooling practices, see their family as a part of the educational system, and thus develop a sense of being "in place" in school (Cajete, 2000; Deloria & Wildcat, 2001). This could lead to greater motivation to achieve in school as compared to a child whose parents have lower levels of education.

It should be noted that in preliminary analyses of this study participants reported a school belonging mean score lower than the school belonging mean scores reported in a number of studies with students from nondominant racial/ethnic groups and White students. Why might Native American students within a relatively small, community school predominately made up of their tribal members feel a low sense of school

belonging? One would assume that since students are surrounded by peers, teachers, and staff who are similar to them in terms of racial ethnic identity, they would be comfortable in this setting and thus experience a high sense of school belonging. However, we see that this is not the case.

A potential explanation may revolve around institutional norms that structure the school and impact how relationships are formed with students and families. Parents and family members who negatively experienced school as children may prefer for their children to “come into wisdom” within the context of family, community, and other relations (Simpson, 2014). While beyond the scope of this study, it is important to recognize how the school may not have validated the students and family members. Students may have experienced what Tachine et al. (2017) call *peoplehood invalidations* (see also Running Bear et al., 2018).

Finally, concern over not belonging at school may be particularly salient in an AI/AN context. Students in the current study may be attuned to the possibility of not being accepted by peers or being overlooked by educators and therefore may rate themselves lower in school belonging than students who attend schools that scaffold independent cultural models of education (Fryberg, Covarrubias, & Burack, 2013). Most importantly, lower school belongingness may be offset by a strong sense of kinship within one’s extended family and/or wider community. Nonetheless, concerns with social acceptance may be associated with academic motivation.

This study has a number of theoretical and practical implications. It raises new questions related to mechanisms influencing the association between parent educational level and student motivation. In our study, we see parent educational level as a possible proxy through which parents, both implicitly and explicitly, convey information about educational practices to their child. Implicitly, parent educational level may inspire the child to perform well in educational contexts, leading the child to greater academic-related aspirations and greater sense of school belonging. Explicitly, familiarity with the educational system assists parents in helping their children navigate the educational context. Familiarity with educational practices can thus offer parents more awareness of opportunities for giving advice about how to maneuver the academic sphere.

Most AI/AN communities already have valuable familial systems in place that may tap into the mechanisms driving the link between parent educational level and students’ sense of school belonging. According to Bang and her colleagues (2019), “the vitality and growth of

everyday resurgence in Indigenous families across our communities is what will continue and grow our sovereignty and nationhood” (p. 798). We believe that AI/AN schools, especially those located on tribal lands, should actively reach out to families of students within their student body to validate their sense of peoplehood (Holm et al., 2003; Tachine et al., 2017) and work with them to increase motivational opportunities for student academic achievement.

Research and development in family-community-school relationships can provide direction in effective practices for reaching families (LaFromboise, Hoyt, Oliver, & Whitbeck, 2006; McMahon, Kenyon, & Carter, 2013). Heavy Runner and De Celles (2002) recommend that Indigenous serving institutions replicate the extended family structure within the school culture. They advance an Indigenous-based Family Education Model, which has been found to enhance college students’ sense of belonging and increase persistence in higher education (Guillory & Wolvertson, 2008). This model could be adapted for high school settings. For example, reservation schools in Montana piloting teacher-family home visits witnessed positive outcomes such as greater parent-teacher understanding and student attendance gains (J. Calder, personal communication, May 15, 2020; Sheldon & Jung, 2015).

AI/AN tribal nations employ a system that may also tap into mechanisms driving the association between parent education level and students’ sense of school belonging. There are currently 38 tribal colleges and universities (TCUs) serving federally recognized tribes (American Indian Higher Education Consortium, n.d.). TCUs not only assist students toward advancing their education but also provide lifelong learning opportunities for community members. TCUs could present workshops or seminars for parents and extended family members to learn how to support their child’s educational aspirations (Brayboy & Maaka, 2015). There are numerous other possible interventions, yet a complete review of family-community-school partnerships is beyond the scope of this work.

It is important to note the limitations of this study. We did not collect information about whether any students in the sample were siblings, so we cannot account for any parent/child nesting effects. Another weakness is the limits to the generalizability of the study findings to the U.S. general population or to AI/AN populations attending schools in other reservations or regions of the country. In addition, because of the cross-sectional research design, we cannot confidently infer causality from our models. However, this study gives necessary insight into a mechanism not previously seen in school belonging literature. It is hoped

that this study influences practitioners to develop ways to increase sense of school belonging, thus moving the field closer toward overcoming educational disparities among AI/AN youth.

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**Dr. Andrea Laverdure** serves on the Tribal Nations Research Group. Her interest in Native student thriving despite adversity led to her dissertation research and involvement in the current study.

## ACKNOWLEDGMENTS

The authors would like to thank the community collaborator who invited us to conduct this study and oversaw the recruitment of teachers and participants, the students who participated in the survey, the advisory teachers who administered the survey, and the school board member who helped us interpret our results. We would also like to thank the tribal council and the tribal research committee for allowing us to conduct the study. The research reported here was supported by the Center for the Comparative Study of Race and Ethnicity at Stanford University and the Institute of Education Sciences, U.S. Department of Education, through Grant R305B140009 to the Board of Trustees of the Leland Stanford Junior University. The opinions expressed are those of the authors and do not represent views of the Institute or the U.S. Department of Education.

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