RESEARCH BRIEF

The school-counselor-to-student ratio: Does having a school counselor matter?

PURPOSE OF THE STUDY

The purpose of this study was to better understand the effect school-counselor-to-student ratios have on academic achievement. Minnesota has one of the largest achievement gaps and worst school-counselor-to-student ratios in the nation (ASCA, 2016a; Condron, Tope, Steidl, & Freeman, 2013). While the American School Counseling Association (ASCA) recommends the counselor-to-student ratio to be 1:250, Minnesota's ratio is 1:743 (ASCA, 2015).

BACKGROUND & PURPOSE

Licensed school counselors are an influential resource for students (e.g., Lapan, Whitcomb, & Aleman, 2012). Smaller school-counselor-to-student ratios have been associated with reduced disciplinary problems, and increased school connectedness and well-being (Carrell & Carrell, 2006; Carrell & Hoekstra, 2014; Lapan, Wells, Peterson, & McCann, 2014; Lapan, Whitcomb, & Aleman, 2012), yet research of the effect school counselor ratios have on the achievement gap does not exist.

Minnesota has one of the largest racial and economic achievement gaps (Condron, Tope, Steidl, & Freeman, 2013) and one of the worst school-counselor-to-student ratios in the nation (ASCA, 2016a). The American School Counseling Association (ASCA) recommends a counselor-to-student ratio of 1:250 (ASCA, 2015). Minnesota's school-counselor-to-student ratio is far from meeting this best practice, with a reported ratio of 743 students per licensed school counselor (ASCA, 2016a).

MINNESOTA HAS ONE OF THE WORST SCHOOL-COUNSELOR-TO-STUDENT RATIOS IN THE NATION. IOWA, NORTH DAKOTA, SOUTH DAKOTA, AND WISCONSIN (ALL STATES BORDERING MINNESOTA) HAVE COUNSELOR-TO-STUDENT RATIOS THAT ARE LESS THAN 400 STUDENTS PER COUNSELOR AND MANDATES IN PLACE TO SUPPORT LOWER RATIOS. MINNESOTA'S RATIO IS 1:743, FAR FROM THE RECOMMENDED RATE OF 1:250.

Recent Minnesota legislation emphasized the need for an increased presence of helping professions in rural Minnesota schools (MINN. STAT. 144.1501, 2014) yet it remains unclear how this may influence student academic achievement. This brief highlights the status of school counseling in Minnesota. The research questions provide understanding about Minnesota children and achievement based on individual and school factors. The results of which can impact the way resources are implemented to support urban and rural academic achievement.

The research questions were as follows:

1. *Do standardized test scores differ for eighth grade students who have a licensed school counselor compared to students who do not have a licensed school counselor?*

2. *What effects does school-counselor-to-student ratio have on middle school standardized test scores when controlling for individual and school factors?*

METHODS

Using secondary data from the Minn-LInK project, eighth grade students who completed the MCA-III in the academic year 2013-14 were included in the study. Individual (e.g., race/ethnicity) and school (e.g., teacher-to-student ratio) factors were accounted for. Statistical assumptions were met.

Using data from the Minn-LInK project, a sample of Minnesota eighth grade students who completed the MCA-III in the academic school year of 2013 – 2014 was selected. Students who did not have MCA-III scores from the previous year were excluded from analysis due to the inability to control for their previous scores. Demographic variables included individual factors of race and ethnicity, limited English proficiency, free/reduced lunch eligibility, number of months on state assistance (provided by the Minnesota Department of Human Services Minnesota Family Investment Program), school attendance and mobility, and homelessness; school factors included geographic setting (Rural-Urban Commuting Area [RUCA] codes; USDA, 2014), teacher-to-student ratio, teacher licensure rates, teacher longevity in the field, and the factor of interest, school-counselor-to-student ratio. An independent samples t-test for research question one and hierarchical multiple regression (HMR) for research question two were executed with SPSS 23 (IBM Inc., 2014). Relevant statistical assumptions were tested. Correlation observation of the variables revealed that some independent variables were highly correlated; however, because the collinearity statistics (i.e., Tolerance and VIF) were all within accepted limits, the assumption of multicollinearity was deemed to have been met (Coakes, 2005). Residual and scatter plots indicated the assumptions were reasonably satisfied.

Table 1. Characteristics of students

Descriptor	No Licensed School Counselor (*n* = 10,713) Percent	Licensed School Counselor (*n* = 47,749) Percent
Race or ethnicity		
American Indian or Alaskan Native	**3.5**	**1.9**
Asian or Pacific Islander	**5.8**	**6.8**
Hispanic	6.7	6.7
Black, non-Hispanic	**10.7**	**9.3**
White, non-Hispanic	**73.3**	**75.3**
Free/reduced lunch eligibility		
Ineligible	**59.0**	**65.6**
Reduced price meal	**7.8**	**7.2**
Free meal	**33.2**	**27.2**

NOTE: Bolded numbers indicate significant differences in proportion between students who do not have a licensed school counselor and students who have a licensed school counselor at p < .05.

SCHOOL COUNSELORS IN MINNESOTA

Only four Minnesota counties had an average school-counselor-to-student ratio for eighth graders that adhered to ASCA's recommendation of 1:250. Twenty-seven counties had average ratios of 1:400 or less. This left the majority of Minnesota counties (n=54) with an average school-counselor-to-student ratio greater than 1:400, including 10 counties that were without a single school counselor for middle schoolers (see Figure 1).

Nearly one out of every five eighth grade students in Minnesota was without access to a licensed school counselor at the student's school (n = 10,713). As can be seen in Figure 2, only six counties provided every eighth grade student with access to at least one school counselor within the student's school. In one third of Minnesota's counties (n=29), the majority of eighth grade students were without access to a school counselor at the student's school. Counties with limited to no access to a school counselor were likely to be in rural settings, especially in western Minnesota. In addition, a greater proportion of students without access to licensed school counselors were Black or Native American and/or were eligible for free or reduced price lunch, as compared to the proportion of students who did have licensed school counselors (see Table 1).

ACCESS TO A SCHOOL COUNSELOR AND ACHIEVEMENT

Differences in standardized test scores for students who were without access to a licensed school counselor were compared with students who did have access to a licensed school counselor. Independent samples t-test analyses revealed that, on average, across all MCA-III subjects (math, reading, and science), students who had access to a licensed school counselor performed significantly better than students who were without access to a licensed school counselor in their school (see Figure 3).

FINDINGS

Many of Minnesota's eighth grade students lacked access (or had limited access) to a licensed school counselor; students without access were more likely African American/Black or Native American and from poor families. Students who had access to a licensed school counselor scored significantly higher across all MCA-III subjects than students who did not have access to a licensed counselor.

SCHOOL-COUNSELOR-TO-STUDENT RATIO AND ACHIEVEMENT

Three five-stage hierarchical multiple regressions were conducted observing a dependent variable of scaled test score for either math, reading, or science. Individual factors were entered at stage one (e.g., race or ethnicity, number of months receiving MFIP), geographic setting was entered at stage two, school factors were entered at stage three (e.g., teacher-to-student ratio), and finally school-counselor-to-student ratio was entered at stage four, given that it was the variable of interest after controlling for the previous three stages. The variables were entered in this order as it was theoretically appropriate to start with variables most closely related to a student's identity and grow to account for family and then environmental factors. Each student's MCA-III scaled score from the previous academic year was controlled in the model.

Figure 1. Average school-counselor-to-student ratio by county for schools with a school counselor
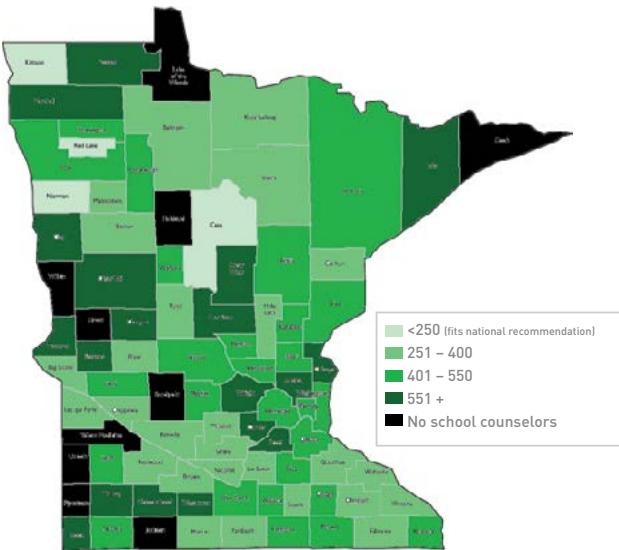

Figure 2. Percent of students without access to a licensed middle school counselors by county
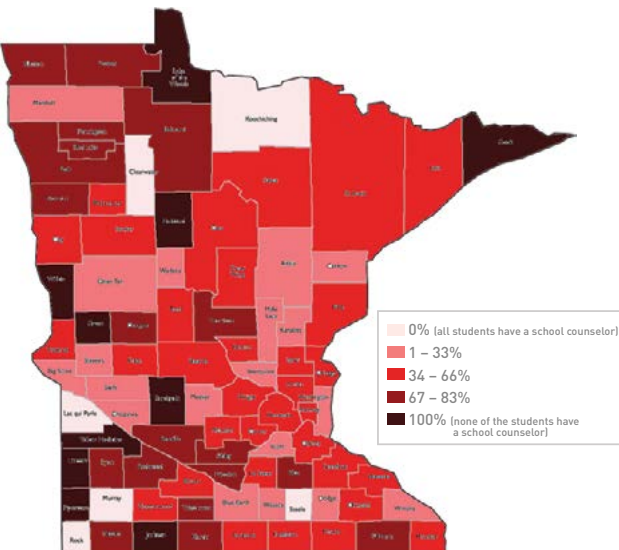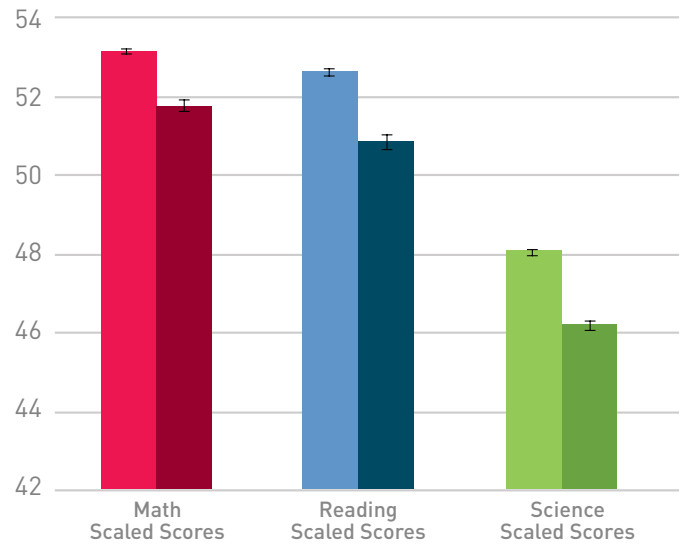

Figure 3. MCA-III scaled scores for students with and without access to a school counselor

Note. *Differences in scaled scores were significant for math, reading, and science when compared by school counselor access.*

Results revealed that this combination of variables significantly predicted a proportion of variance in student scaled scores. Specifically, the variables predicted 75% of the variance in math scaled scores ($F(13, 52,152) = 12,056.27$, $p < .001$), 65.4% of the variance in reading ($F(13, 52,376) = 7,614.09$, $p < .001$), and 23.6% of the variance in science ($F(12, 55,396) = 1,425.90$, $p < .001$). While each model showed significant change among each level, R^2 stayed constant after level three for both math and reading. For each subject, although school-counselor-to-student ratio appeared significant, it did not meaningfully add to our ability to predict MCA-III scores after accounting for other variables in the model.

It is important to note that a greater proportion of the variance in the math and reading scores were accounted for due to the inclusion of the previous year's MCA-III scores in the regression model. Previous science scores could not be accounted for in the model because the science scale scores from the academic year of 2013 - 2014 are not vertically equated to the academic year of 2010 - 2011 as the students took an earlier version of the test, the MCA-II.

Many of Minnesota's eighth grade students lacked access (or had limited access) to a licensed school counselor; students without access were more likely African American, Native American, or from poor families. Students who had access to a licensed school counselor scored significantly higher across all MCA-III subjects than students who did not have access to a licensed counselor. Although school-counselor-to-student ratio did not meaningfully add to the ability to predict MCA-III scores above and beyond other individual and school factors, the presence of a licensed school counselor made a difference in student achievement.

Conclusion

The current study revealed that one in five Minnesota eighth graders do not have access to a school counselor within the student's school. Students without access to a counselor tended to be African American/Black or Native American, eligible for free or reduced price lunch, and/or in a rural county - all demographics that are related to achievement gaps (Condron, Tope, Steidl, & Freeman, 2013). Comparisons between students with and without access to a school counselor revealed that students with access to a licensed school counselor had significantly higher standardized test scores (in reading, math, and science) than students without access to a counselor.

LIMITATIONS

The presence of a licensed school counselor predicts higher standardized test scores; however, whether a school has a counselor at all is likely influenced by a number of school-related factors. For example, the presence of a school counselor is likely directly related to not only the amount of financial resources a school has available but also the characteristics and needs of students at that school.

This study also confirmed previous research that individual and school factors influence standardized test scores (Carrell & Hoekstra, 2014; Lapan, Wells, Petersen, McCann, 2014). Smaller ratios have been connected to fewer disciplinary problems, especially for students of color and students in poverty (Carrell & Carrell, 2006) – populations that tend to fall into the achievement gap (Lacour & Tissington, 2011).

While future research is needed to disentangle the effects of poverty, school resources, students' involvement in disciplinary incidents, and school-counselor-to-student ratios on student achievement, the current research has implications for policy. Minnesota has a school-counselor-ratio of 1:743, yet each of its Midwestern neighbors - Iowa, North Dakota, South Dakota, and Wisconsin have average ratios that are less than 1:400 (ASCA, 2016a). Wisconsin, North Dakota, and Iowa mandate a licensed school counselor be present for all grade levels. Furthermore, Iowa and North Dakota mandate counselor-to-student ratios of 1:350 and 1:250, respectively (ASCA, 2016b). It is imperative for Minnesota to catch up to neighboring states and the entire nation. These results call for a licensed school counselor for every Minnesota student with a mandated school-counselor-to-student ratio that is consistent with ASCA best practice recommendations.

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