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Differences in Dropout Rates by Ethnicity/Race of Middle School Students: A Multi-Year Analysis

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Differences in Dropout Rates by Ethnicity/Race of Middle School Students: A Multi-Year Analysis

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I. INTRODUCTION

Projections show that by 2018, Americans will need to have a postsecondary education to obtain 63% of available jobs. Only an estimated 10% of jobs will be available to high school dropouts (Kahn, 2012). The United States will have 32% of high school students not succeed at receiving a high school diploma within 4 years (Peguero, 2011). Dropping out could lead to serious problems in time such as, a stronger possibility of being unemployed, more likely to use drugs, and more likely to be incarcerated in comparison to students who obtain a high school diploma (Peguero, 2011). This dropout problem is high for Blacks and Hispanics. An overrepresentation of dropouts among Blacks and Hispanics is historical and persistent (Peguero, 2011). Signs of possible dropout behavior are present well before the student is in high school. Students in Grade 6 who attend school less than 80% of the time, who demonstrate continued misbehavior, and who are failing reading or mathematics have a greater chance of dropping out in high school (Kahn, 2011). Systems developed that target students early on can ensure identification and providing of resources is given to those students. Traditionally, concentration has been placed on interventions in the high school level; however extensions should be made to provide middle school grades with the necessary resources to stay on track to graduation success.

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II. REVIEW OF THE LITERATURE

Carpenter and Ramirez (2007) conducted a research study to investigate the factors related to dropout behavior as a measure of achievement gaps among Black, White, and Hispanic students. The research was conducted and progressed in two phases. Carpenter and Ramirez (2007) used data collected from the National Education Longitudinal Study of 1988, which began while participants were in their Grade 8 year, continued into high school, postsecondary education, and into the labor force (Carpenter & Ramirez, 2007). As part of the data collection procedure questionnaires in addition to cognitive tests were given to each student. Similarly, the school principal, student's parents, and two teachers were also given questionnaires. The school sample was restricted to regular public and private schools that had eighth grade students enrolled. The research sample included a total of 17,613 participants. The dropout rate in their study was documented as being 15.0% for Black students and 15.4% for Hispanic students (Carpenter & Ramirez, 2007). The dropout rate for White students was 8.4%. Consistent with previous findings, students in private schools drop out less than those students enrolled the public school sector, as well students in single parent homes drop out at higher rates than those students raised in two parent households. A large number of students who dropped out of school had previously been retained.

In addition to Carpenter and Ramirez (2007), Stearns et al. (2007) conducted a research study to investigate if previous theories of dropout would explain the link between students who had to repeat a grade and later dropping out of school. They analyzed data from the National Education Longitudinal Study of 1988. Stearns et al. (2007) focused on two dependent variables: early dropout and late dropout. Late dropouts were defined as being students who were enrolled in school in the eighth and tenth grade, but were not enrolled by the 12th grade. Early dropouts were calculated from 1990 whether dropout or currently enrolled of those students who were in the eighth grade in 1988. Early dropouts and late dropouts were analyzed separately due to the realization that younger students have different factors for dropping out than their older

counterparts. Early dropout students were measured in the eighth grade, and tenth grade was used as the measure for late dropouts. Retention will predict early and late dropout for White, Black, and Hispanic students even as well as differences in resources, socio-demographic, and educational background (Stearns et al., 2007, p. 228). The differences in resources did have an effect on the likelihood of dropping out between retain and continuously promoted students differently across different ethnic groups.

a) *Statement of the Problem*

The Intercultural Development Research Association releases attrition rates each fall. As of the fall of 2015 Texas fails to graduate one out of every four students (Attrition and Dropout, 2015). Black and Hispanic students were two times more likely to leave high school without obtaining a diploma in comparison to White students (Attrition and Dropout, 2015). With predictions showing that 90% of jobs will require a high school diploma by the year 2020 (O'Brien, 2012), it is critical that educational leaders become more involved in dropout prevention. It is difficult to determine when and why these students ultimately make the choice to dropout, however warning signs that maybe evident in earlier grades can predict this outcome. Educational leaders in middle schools should target possible dropouts by providing resources for dropout prevention to students who have poor behavior but may not be failing their academics (O'Brien, 2012).

b) *Significance of the Study*

As a part of his education agenda, President Obama outlined a plan to address high school dropout rates by addressing middle schools and paying for interventions to address this area (Wagon, 2012). The vast majority of research on school dropout rates and prevention is predominantly geared toward high school students. More research studies need to be conducted on dropout rates in middle schools. President Obama focused on middle school students because typically students who do drop out of school usually are on that path before they reach high school (Wagon, 2012). It is important to address those students before they drop out of school. Middle schools are typically designed to give these younger students a greater level of support in comparison to high schools when it is harder to reach those students (Khan, 2012). Strong predictors of whether a student will graduate are formed in this critical middle school period (Khan, 2012). The findings of this study will provide data for school administrators, counselors, and classroom teachers as well as policymakers to ensure a focus toward middle school students.

c) *Purpose of the Study*

The purpose of this study was to determine the degree to which the dropout rates of Black, White, and Hispanic middle school students differ between the

2012-2013 and 2013-2014 school year. Specifically addressed was whether changes occurred in the dropout rates of these three groups of students between the 2012-2013 and 2013-2014 school years. The vast majority of research on school dropout rates and prevention is predominantly geared toward high school students. More research studies are warranted on dropout rates in middle schools.

d) *Research Questions*

The following research questions were addressed in this study: (a) What is the difference in the dropout rates of Black middle school students between the 2012-2013 school year and the 2013-2014 school year?; (b) What is the difference in the dropout rates of Hispanic middle school students between the 2012-2013 school year and the 2013-2014 school year?; and (c) What is the difference in the dropout rates of White middle school students between the 2012-2013 school year and the 2013-2014 school year?

III. METHOD

a) *Participants*

Participants in this study were middle schools in Texas for which dropout rates were reported on the Texas Academic Performance Reports. Data on the dropout rates for Grade 7 and Grade 8 middle school students in Texas in the 2012-2013 and 2013-2014 school year were downloaded from the Texas Education Agency website. A total of 788 middle schools provided data on Black student dropout rates in the 2012-2013 school year and 806 middle schools provided these data in the 2013-2014 school year. Similarly, a total of 1,066 middle schools provided data on Hispanic student dropout rates in the 2012-2013 school year, and 1,085 middle schools provided these data in the 2013-2014 school year. Additionally, a total of 980 middle schools provided data on White student dropout rates in the 2012-2013 school year, and 985 middle schools provided these data in the 2013-2014 school year.

b) *Instrumentation and Procedures*

Data were obtained from the Texas Academic Performance Reports database for the 2012-2013 and 2013-2014 school years, and then imported in to the Statistical Package for Social Sciences (SPSS) software program. Next, the data files that were downloaded from the Texas Academic Performance Reports were converted into a SPSS data file. Then the relevant variables for this investigation were assigned labels, prior to statistical analysis. Because student data were reported to the Texas Education Agency directly from school districts, minimal errors in the data are assumed to be present.

c) *Definition of Terms*

The focus of this study was middle school dropout rates among Black, Hispanic, and White students in the state of Texas. The specific term

dropout refers to a student who was enrolled in a Texas public school in grades 7-12, but did not return to a Texas public school the following fall within the school start window, was not expelled, did not graduate, receive a GED, continue high school outside the Texas public school system, begin college, or die (Accountability Manual, 2009).

Texas Academic Performance Reports (TAPR) is formerly known as the Academic Excellence Indicator System Reports, these reports pull together a wide range of information annually on the performance of students across the state of Texas. This report provides information on staffing, programs, and demographics of every school and district (Texas Education Agency, 2016). *Attrition rates* can be defined as the indicator of a school's holding power, or the ability to keep students enrolled in school and learning until they graduate (Attrition and Drop Out, 2015).

IV. RESULTS

Prior to conducting inferential statistics to determine whether a statistically significant difference was present between middle school dropout rates and ethnicity for the 2012-2013 and 2013-2014 school years, checks were conducted to determine the extent to which the data were normally distributed. An examination of the standardized skewness coefficients (i.e., the skewness value divided by its standard error) and the

standardized kurtosis coefficients (i.e., the kurtosis value divided by its standard error) revealed large deviations from normality. All three standardized coefficients were far outside the bounds of normality of ± 3 (Onwueguzie & Daniel, 2002).

Because the data for middle school dropout rates and ethnicity for the 2012-2013 and 2013-2014 school years were not normally distributed, a nonparametric statistical procedure had to be utilized (Slate & Rojas-LeBouef, 2011). Accordingly, a nonparametric Wilcoxon's dependent samples *t*-test (Huck, 2007) was used to address the research question. A dependent samples *t*-test was an appropriate inferential statistical procedure to calculate when the variables (i.e., ethnicity) are related (Slate & Rojas-Le Bouef, 2011). In this investigation, middle school dropout rates were present for by ethnicity and were at the interval/ratio level of measurement.

For the first research question, the Wilcoxon's dependent samples *t*-test did not yield a statistically significant difference in middle school dropout rates between the 2012-2013 and the 2013-2014 school years for Black students, $z = -1.17$, $p = .24$. Black students in middle school had dropout rates in the 2012-2013 and the 2013-2014 school years. Presented in Table 1 are the descriptive statistics for Black student' middle school dropout rates in both school years.

Table 1: Descriptive Statistics for Black Student Middle School Dropout Rates by School Year

School Year	<i>n</i> of schools	<i>M</i>	<i>SD</i>
2012-2013	771	0.19	0.67
2013-2014	771	0.31	1.60

With respect to the second research question, the Wilcoxon's dependent samples *t*-test did yield a statistically significant difference in dropout rates between the 2012-2013 and the 2013-2014 school years for Hispanic students, $z = -2.37$, $p = .018$. The effect size associated with this difference, Cohen's *d*, was 0.10, small effect size (Cohen, 1988). Hispanic students

in middle schools had a statistically significantly lower dropout rate in the 2012-2013 school year, 0.04% lower, than in the 2013-2014 school year. Table 2 contains the descriptive statistics for Hispanic student dropout rates in middle schools in the 2012-2013 and the 2013-2014 school years.

Table 2: Descriptive Statistics for Hispanic Student Middle School Dropout by School Year

School Year	<i>n</i> of schools	<i>M</i>	<i>SD</i>
2012-2013	1,063	0.20	0.57
2013-2014	1,063	0.23	0.02

In reference to the third research question, the Wilcoxon's dependent samples *t*-test did not reveal a statistically significant difference in dropout rates between the 2012-2013 and the 2013-2014 school years for White students in middle schools, $z = -1.14$, $p = .25$.

White students in middle school had similar dropout rates in both school years. Delineated in Table 3 are the descriptive statistics for White student dropout rates in the 2012-2013 and the 2013-2014 school years.

Table 3: Descriptive Statistics for White Student Middle School Dropout Rates by School Year

School Year	<i>n</i> of schools	<i>M</i>	<i>SD</i>
2012-2013	951	0.18	0.81
2013-2014	951	0.24	1.07

V. DISCUSSION

Examined in this study were the dropout rates of Black, Hispanic, and White middle school students for the 2012-2013 and the 2013-2014 school years. The specific focus in this investigation was whether the dropout rates of these three groups of middle school students had changed between these two school years. In this study, the dropout rates of Black and White middle school students did not differ between the 2012-2013 and 2013-2014 school years. Of concern, however, was that Hispanic middle school students did have a statistically significant change in their dropout rates between the 2012-2013 and 2013-2014 school years. The dropout rate of Hispanic middle school students increased between these two school years. This result is congruent with the extant literature in that students who dropout of school are disproportionately from Black, Hispanic, low-income, and attend urban schools (Irby & Mawhinney, 2014).

No attempt was made in this study to determine the reasons for the increase in Hispanic dropout rates during these two school years. Additional studies should be conducted to investigate in more depth the reasoning behind why these students are dropping out of middle school. Empirical data were analyzed in this current study and, as such, provide information for Black, Hispanic, and White middle school dropout rates across the State of Texas. Researchers are encouraged to conduct not only additional quantitative investigations, but also qualitative and mixed methods studies, to obtain more in depth information regarding why middle school students drop out of school. Such information might be helpful in improving already existing dropout prevention programs.

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