

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

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## Abstract

Examined in this study were dropout rates for Black, Hispanic, and White middle schools students during the 2012-2013 and 2013-2014 school years. Texas middle school dropout rates were downloaded from the Texas Academic Performance Reports for two school years. Inferential statistical analyses were conducted separately for each ethnic/racial group to determine whether changes had occurred in their dropout rates between the 2012-2013 and 2013-2014 school years. Black and White students did not have a statistically significant difference in their dropout rates between those two school years. Hispanic students, however, had a statistically significantly higher dropout rate in the 2013-2014 school year than in the 2012-2013 school year. Implications of these results are discussed, as well as recommendations for future research.

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*Index terms*— dropout rates, texas academic performance report, black, hispanic, white.

## 1 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.

## 2 II.

## 3 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.

## 6 C) PURPOSE OF THE STUDY

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42 Similarly, the school principal, student's parents, and two teachers were also given questionnaires. The school  
43 sample was restricted to regular public and private schools that had eighth grade students enrolled. The research  
44 sample included a total of 17,613 participants. The dropout rate in their study was documented as being 15.0%  
45 for Black students and 15.4% for Hispanic students (Carpenter & Ramirez, 2007). The dropout rate for White  
46 students was 8.4%. Consistent with previous findings, students in private schools drop out less than those students  
47 enrolled the public school sector, as well students in single parent homes drop out at higher rates than those  
48 students raised in two parent households. A large number of students who dropped out of school had previously  
49 been retained.

50 In addition to Carpenter and Ramirez (2007), Stearns et al. (2007) conducted a research study to investigate  
51 if previous theories of dropout would explain the link between students who had to repeat a grade and later  
52 dropping out of school. They analyzed data from the National Education Longitudinal Study of 1988. Stearns  
53 et al. (2007) focused on two dependent variables: early dropout and late dropout. Late dropouts were defined as  
54 being students who were enrolled in school in the eighth and tenth grade, but were not enrolled by the 12th grade.  
55 Early dropouts were calculated from 1990 whether dropout or currently enrolled of those students who were in  
56 the eighth grade in 1988. Early dropouts and late dropouts were analyzed separately due to the realization that  
57 younger students have different factors for dropping out than their older counterparts. Early dropout students  
58 were measured in the eighth grade, and tenth grade was used as the measure for late dropouts. Retention will  
59 predict early and late dropout for White, Black, and Hispanic students even as well as differences in resources,  
60 sociodemographic, and educational background (Stearns et al., 2007, p. 228). The differences in resources did  
61 have an effect on the likelihood of dropping out between retain and continuously promoted students differently  
62 across different ethnic groups.

### 63 4 a) Statement of the Problem

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

### 73 5 b) Significance of the Study

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

### 85 6 c) Purpose of the Study

86 The purpose of this study was to determine the degree to which the dropout rates of Black, White, and 2012-  
87 2013 and 2013-2014 school year. Specifically addressed was whether changes occurred in the dropout rates of  
88 these three groups of students between the 2012-2013 and 2013-2014 school years. The vast majority of research  
89 on school dropout rates and prevention is predominantly geared toward high school students. More research  
90 studies are warranted on dropout rates in middle schools. Next, the data files that were downloaded from the  
91 Texas Academic Performance Reports were converted into a SPSS data file. Then the relevant variables for this  
92 investigation were assigned labels, prior to statistical analysis. Because student data were reported to the Texas  
93 Education Agency directly from school districts, minimal errors in the data are assumed to be present. The focus  
94 of this study was middle school dropout rates among Black, Hispanic, and White students in the state of Texas.  
95 The specific term c) Definition of Terms dropout refers to a student who was enrolled in a Texas public school  
96 in grades 7-12, but did not return to a Texas public school the following fall within the school start window,  
97 was not expelled, did not graduate, receive a GED, continue high school outside the Texas public school system,  
98 begin college, or die (Accountability Manual, 2009).

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## 99 7 Texas

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

## 105 8 IV.

## 106 9 Results

107 Prior to conducting inferential statistics to determine whether a statistically significant difference was present  
108 between middle school dropout rates and ethnicity for the 2012-2013 and 2013-2014 school years, checks were  
109 conducted to determine the extent to which the data were normally distributed. An examination of divided by  
110 its standard error) revealed large deviations from normality. All three standardized coefficients were far outside  
111 the bounds of normality of  $\pm 3$  (Onwuegbuzie & Daniel, 2002).

112 Because the data for middle school dropout rates and ethnicity for the 2012-2013 and 2013-2014 school years  
113 were not normally distributed, a nonparametric statistical procedure had to be utilized (Slate & Rojas-LeBouef,  
114 2011).

115 Accordingly, a nonparametric Wilcoxon's dependent samples t-test (Huck, 2007) was used to address the  
116 research question. A dependent samples t-test was an appropriate inferential statistical procedure to calculate  
117 when the variables (i.e., ethnicity) are related (Slate & Rojas-Le Bouef, 2011). In this investigation, middle  
118 school dropout rates were present for by ethnicity and were at the interval/ratio level of measurement.

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

124 Table ??:

125 With respect to the second research question, the Wilcoxon's dependent samples t-test did yield a statistically  
126 significant difference in dropout rates between the 2012-2013 and the 2013-2014 school years for Hispanic students,  
127  $z = -2.37$ ,  $p = .018$ . The effect size associated with this difference, Cohen's  $d$ , was 0.10, small effect size (Cohen,  
128 1988). Hispanic students in middle schools had a statistically significantly lower dropout rate in the 2012-2013  
129 school year, 0.04% lower, than in the 2013-2014 school year.

## 130 10 Discussion

131 Examined in this study were the dropout rates of Black, Hispanic, and White middle school students for the  
132 2012-2013 and the 2013-2014 school years. The specific focus in this investigation was whether the dropout rates  
133 of these three groups of middle school students had changed between these two school years. In this study, the  
134 dropout rates of Black and White middle school students did not differ between the 2012-2013 and 2013-2014  
135 school years.

136 Of concern, however, was that Hispanic middle school students did have a statistically significant change in  
137 their dropout rates between the 2012-2013 and 2013-2014 school years. The dropout rate of Hispanic middle  
138 school students increased between these two school years. This result is congruent with the extant literature in  
139 that students who dropout of school are disproportionately from Black, Hispanic, low-income, and attend urban  
140 schools (Irby & Mawhinney, 2014).

141 No attempt was made in this study to determine the reasons for the increase in Hispanic dropout rates during  
142 these two school years. Additional studies should be conducted to investigate in more depth the reasoning  
143 behind why these students are dropping out of middle school. Empirical data were analyzed in this current study  
144 and, as such, provide information for Black, Hispanic, and White middle school dropout rates across the State of  
145 Texas. Researchers are encouraged to conduct not only additional quantitative investigations, but also qualitative  
146 and mixed methods studies, to obtain more in depth information regarding why middle school students drop out  
147 of school. Such information might be helpful in improving already existing dropout prevention programs. <sup>1 2</sup>

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**2**contains

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the standardized skewness coefficients (i.e., the skewness value divided by its standard error) and the

Descriptive Statistics for Black Student Middle School Dropout Rates by School Year  
2013-2014 School Year 2012-2013 School Year the descriptive statistics for Hispanic student dropout rates in m  
Year

2012-2013 1,063  
2013-2014 1,063  
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,  $z = -1.14$ ,  $p = .25$ .

0.20  
0.23  
Whit  
rates  
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Figure 1: Table 2 contains

**2**

Figure 2: Table 2 :

**3**

Figure 3: Table 3 :

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