The Relationship Between Positive Academic and Behavior Support Services: School Failure Prevention Plan

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Doi:10.19044/esj.2019.v15n10p127 URL:http://dx.doi.org/10.19044/esj.2019.v15n10p127

Abstract

Urban middle school students experience poor self-efficacy and poor attitudes toward school climates after being retained. Previous research has indicated that grade-level retention in primary and secondary education might cause long-term achievement gaps, school failure, and high school dropout rates. However, current research has yet to examine relationships between archival data retrieved on retained middle school students' achievement outcomes and perceptions of school climate. The purpose of this nonexperimental, quantitative study was to assess the relationships between retained middle school students' self-efficacy as measured by the School Climate Survey and their performance outcomes as measured by PowerSchool®. Bandura's theory of self-efficacy maintains that an individual must have the belief, motivation, determination, and drive to persevere when challenged. The archival data was collected from one Northeastern urban middle school in the United States representing underachieving participants (N = 45) enrolled in the Postive Academic and Behavioral Support Program during the academic school years of 2017 and 2018. Population groups of females and males students ranged in age between 11–14 years old. A repeated measure design analyzed the same participants over 6 months by measuring archival data on achievement (grade point average [GPA]); attendance; and demographics (sex and age). Results showed significant increases in GPAs and significant increases in males' positive perceptions of school over the school years of 2017 and 2018. The results of this study could be useful for education professionals working in urban school districts providing support services to at-risk students facing school failure.

Keywords: Positive academic, Behavior support, school failure, prevention plan

INTRODUCTION

Grade-level retention can result in many sociological problems across the lifespan of a student when he or she does not receive prosocial support (Marsh, 2016; Mellard, Frey, & Woods, 2012; Nocera, Whitbread, & Nocera, 2014). According to Vandecandelaere, Schmitt, Vanlaar, De Fraine, and Van Damme (2016), psychologists often describe the effects that grade-level retention can potentially have on the psychosocial development of students. Demographically, the U.S. Department of Commerce (2012b) reported that over a million students attending public schools in the United States encounter grade-level retention by at least one grade level. For instance, in 2013, it was estimated that 55.4 million students enrolled in U.S. public school systems in Grades K–12, and that, of those students, 2.2% would encounter grade-level retention that academic year (U.S. Department of Commerce, 2012a).

Researchers have found associations between grade-level retention in high school students and increased incidences of negative views of themselves (Gewertz, 2012). Within the findings were student self-images with poor attitudes toward school, poor academic achievement, poor attendance, and increased dropout rates (Gewertz, 2012; Meadan, Ayvazo, & Ostrosky, 2016; Shippen, Patterson, Green, & Smitherman, 2012). However, prior research has not substantiated any relationships between secondary data on low-performing middle school students' efficacy and their perceptions toward school climates when comparing grades, attendance, and demographics (sex and age). Several studies have focused on school-based protocols to change student achievement outcomes. For example, researchers have found positive effects in remediating academic deficits through response to intervention (RTI), and school-wide positive behavior support (Feuerborn & Chinn, 2012; Griggs, Rimm-Kaufman, & Merritt, 2013; Saeki et al., 2011; Sosa & McGrath, 2013).

A student's perception of self when failing can interfere with their self-efficacy and negatively impact their academic development and social development when retained, leaving them to believe that they lack the capabilities needed to perform tasks and persevere through challenges (Bandura, 1997). A review of literature from the last 30 years indicated that retaining students is a traditional practice used in numerous classrooms by teachers in the United States (Lamote, Pinxten, Van Den Noortgate, & Van Damme 2014). A pivotal time in the retained adolescent student's life is when the sources of self-efficacy are low, resulting from a limited mastery of experiences, negative social persuasion, limited vicarious experiences, and limited psychological mindset (Bandura, 2000).

A person's self-efficacy holds many sources and shapes such as self-image, self-concept, self-management, self-regulation, and self-development (Bandura, 2007). In previous literature, researchers have recommended that future research examine relationships between retained male and female middle school students in later grades and the relationships found in students with lower perceptions of their academic self-concept and achievement outcomes (Lamote et al., 2014). A definition of the School Climate Survey (SCS) notes that it is an assessment scale used to assess the development of a student's perception of themselves (Konold et al., 2014).

Researchers have noted that a student's perceptual efficacy towards school social support (e.g., the morale of school environment, teacher support, and parent support) arrives from learning, achievement, and social development experiences (Konold et al., 2014). Low-performing students experience grade-level retention when they falter in classrooms (Harklau, 2013). Often, teachers will make recommendations for students to be held back when they fail to make adequate progress during marking periods on standardized tests, fail to master a certain quota of literacy skills or fail to show growth in social development (Levine & Levine, 2012; Peterson & Hughes, 2011). However, extant research has not evaluated the relationships between low-performing middle school students' responses as measured by SCS and the prosocial support they receive from educational professionals to reduce the need for retention when exploring achievement over time (Konold et al., 2014).

Achievement and low achievement have been defined through a rating system that uses a weighted scale ranging from 0.000–4.000 to compute scores to generate a student's grade point average (GPA; Warne, Nagaishi, Slade, Hermesmeyer, & Peck, 2014). Researchers have reported that low-performing middle school students with a low GPA are at risk for developing the socio-emotional problems of poor self-efficacy and poor attitudes toward school climates (Braun, Gable, Billups, Vieira, & Blasczak, 2016; Haselden, Sanders, and Sturkie, 2012; Kirk et al., 2016). When deciding to retain low-performing male and female students, the initial goal of classroom teachers is to remediate academic problems by closing achievement gaps through allowing low-performing students more time to develop academic skills (Konold et al., 2014). Researchers have disputed this claim, noting that when analyzing data on retained male and female students for academic growth, adverse effects were shown in the area of academic gains over some time in achievement (Lamote et al., 2014).

Typically at least 10% of low-performing male and female students have been retained throughout K–eighth grades because they failed to meet grade-level expectations (Peterson & Hughes, 2011). The transition into middle school can be difficult for students, especially when they are failing;

however, transition into high school and failing can contribute to increases in high school dropout rates (Andrews & Bishop, 2012). Research conducted by, Bornsheuer, Polonyi, Andrews, Fore, and Onwuegbuzie (2011) reported that over 1.3 million failing students around the country have dropped out by the ninth grade. For instance, several studies have shown associations between grade-level retention increasing the chances of retained students exhibiting academic failures, multiple discipline referrals, and dropping out of school (Braun et al., 2016; Meadan et al., 2016).

School districts define *student attendance* as a schedule of calendar days students are required to attend throughout a school year (SY), whereas *absenteeism* is a term used for students who miss a substantial amount of school days throughout an academic year (Reid, 2012). When underachieving urban middle school students are failing, they often lose self-interest in school, which increases their chances of absenteeism and high school dropout rates (Birioukov, 2016). Similarly, when observing absenteeism in low-achieving students, Reid (2012) reported that such students held the behavioral traits of poor academic self-concepts, poor self-directedness, poor-regard, and low self-esteem. Also, to substantiate their findings, researchers have explored student responses for the causes of absenteeism, reporting high levels of feeling too distressed to cope with school expectations and a dislike of many aspects of classroom rigor (Attwood & Croll, 2015).

In endorsing such psychosocial issues, Birioukov (2016); Gottfried (2012); Grigg (2012); and Kirk, Lewis, Brown, Karibo, and Park (2016) studied student behaviors of absenteeism and high levels of dissatisfaction with school expectations, classrooms disruptions that lead to suspension, student transients, low-parental support, and student illnesses. Preventively, Reid (2012) suggested that future research is needed to explore relationships between school-student liaisons and attendance and graduation outcomes of low-performing students. Consequently, when low-performing students experience negative social interactions with teachers and peers within the classroom, researchers have found decreases in academically productive habits and increases in challenging behaviors, and therefore, increasing chances of absenteeism and retention (Meadan et al., 2016).

The purpose of this nonexperimental, quantitative study was to assess the relationships between retained middle school students' self-efficacy as measured by the School Climate Survey and their performance outcomes as measured by PowerSchool®. The research questions are as follows:

RQ1: Is there a significant difference between SY 2017 and SY 2018 on GPA outcomes of middle school students enrolled in the PABSS program as measured by PS® records, and change in self-efficacy and perceptions toward school climates as measured by SCS?

$H_0$1: There is no significant difference between SY 2017 and SY 2018 on middle school students' GPA outcomes as measured by PS® records and students' change in self-efficacy and perception toward school climates as measured by SCS over SY 2017 and SY 2018.

H_a1: There is a significant difference between SY 2017 and SY 2018 on middle school students' GPA outcomes, as measured by PS® records and students' change in self-efficacy and perception toward school climates, as measured by SCS over SY 2017 and SY 2018.

RQ2: Is there a significant difference between SY 2017 and SY 2018 attendance outcomes of middle school students enrolled in the PABSS program, as measured by PS® records and change in self-efficacy and perceptions toward school climates as measured by SCS?

$H_0$2: There is no significant difference between SY 2017 and SY 2018 middle school students' attendance outcomes, as measured by PS® records and students' change in self-efficacy and perception toward school climates, as measured by SCS.

H_a2: There is a significant difference between SY 2017 and SY 2018 middle school students' attendance outcomes, as measured by PS® records and students' change in self-efficacy and perception toward school climates, as measured by SCS.

RQ3: Is there a significant association between middle school students' age with a change in self-efficacy and perceptions toward school climates as measured by SCS between SY 2017 and SY 2018?

$H_0$3: There is no significant association between middle school students' age, and change in self-efficacy and perception toward school climates, as measured by SCS between SY 2017 and SY 2018.

H_a3: There is a significant association between middle school students' age and change in self-efficacy and perception toward school climates, as measured by SCS between SY 2017 and SY 2018.

RQ4: Is there a significant sex difference in females and males for change in self-efficacy and perceptions toward school climates as measured by SCS between SY 2017 and SY 2018 among middle school students?

$H_0$4: There is no significant sex difference in females and males for change in self-efficacy and perception toward school climates, as measured by SCS between SY 2017 and SY 2018.

H_a4: There is a significant sex difference in females and males for change in self-efficacy and perception toward school climates, as measured by SCS between SY 2017 and SY 2018.

METHODOLOGY

The population of this study was comprised of secondary data from urban middle school students between the ages of 11 to 14 years of age. The

research method of using secondary data via student members applies to a quantitative study because the focus of performing the secondary analysis is on information stored in computerized databases designed for government agencies such as school districts (Cohen, 2016). The sampling identification process for recruitment arrived from participants enrolled in the PABSS program and from a random sampling of members registered in the program. In the study, there was a sample size of 45 participants who were part of the program at the time of the study.

Secondary data was used to track potentially-retained students and retained middle school students enrolled in the PABSS program. Archival data were collected from SY 2017 and SY 2018. An approximate group of 45 participants who were students between the ages of 11–14 years old were sampled in order to collect the following information:

- School Climate Survey (SCS)
  - Physical environment (attitude toward school climates)
  - Teaching and learning (attitude toward school support)
  - Morale in the school community (efficacy)
  - Student relationships (efficacy)
  - Parental support (Efficacy)
  - Safety (attitude toward school climates)
  - Emotional environment (attitude toward school climates)
- PowerSchool® (PS®)
  - SY 2017 and SY 2018
  - Achievement (GPA)
  - Attendance
  - Gender (male/female)
  - Ages (11–14)
  - Grades (sixth–seventh and seventh-eighth)

The purpose of the SCS is to identify strengths and weaknesses that exist in the climate of school environments by tracking and collecting secondary data from the survey (New Jersey Department of Education, [NJDOE], 2012a). The ethical principles, procedure, and guidelines under the protection of rights for human research collection of data do not require researchers to gain permission before use of the SCS instrument, because it is within a public sector (see NJDOE, 2012b). For example, the website states, "the SCS is a free resource within the public domain that is designed for school districts to administer with the flexibility to use in a way that best fits the school's needs" (see NJDOE, 2012b, p. 1). The researcher will provide the website and a description of sample questions from the SCS instrument. Therefore, procedural design was used to collect, analyze, compare, and track students' responses. The researcher used these domain questions to assess their self-efficacy and attitude toward school support using these seven

predictors: (a) physical environment, (b) teaching and learning, (c) morale in school community, (d) student relationships, parent support, (e) safety, and (f) emotional environment (NJDOE; 2012b).

The purpose of the PS® records is to store cumulative records on the student populations, and it offered me a unique ability to collect archived data from educational professionals, families, and students. PS® is a web-based design that is used to archive, collect, compare, and track students' records on (a) grades, (b) attendance, (c) gender, and (d) age (Porter, 2000). The PS® is used as an assessment measurement to rank data that shows quantifiable growth or weaknesses (Porter, 2000).

The SCS scale is for middle school and high school students between Grades 6–12 (see NJDOE, 2012a). This demographic questionnaire assesses the age, race, gender, and educational experiences (see NJDOE, 2012b). The NJDOE (2012b) in conjunction with the Bloustein Center designed the scale for survey research at Rutgers University. The SCS asks 61 questions on a 5-item, Likert-type scale (see NJDOE, 2012b). The SCS scale yields items that measure students on their self-efficacy and perceptions toward school environments and uses seven-predictors: (a) physical environment, (b) teaching and learning, (c) morale in school community, (d) student relationships, € parent support, (f) safety, and (f) emotional environment (see NJDOE, 2012b).

BASELINE DESCRIPTIVE AND DEMOGRAPHIC CHARACTERISTICS

The sample of 45 participants was taken from students enrolled in the PABSS program in one Northeastern urban middle school in the United States during the SY 2017 and SY 2018. The PABSS program intervention provided low-achieving students with academic coaches, behavioral coaches, and school liaisons over two marking periods to meet the criteria of the study. Descriptive statistics were examined for the IVs of GPA and attendance and demographic characteristics of the MVs on age and gender as they related to the target population for this study. The variables at hand were either ordinal or nominal. All of the IVs and MVs descriptors were broken down into eight sections to represent each level of the characteristic samples and percentages. The first and second section contained the demographic characteristics of the MV1 of age, and this category represented an age range of 11 to 14 years old between SY 2017 and SY 2018. The third section displayed the MV2 of 19 female (42.22%) and 26 male (57.78%) students. The fourth and fifth sections illustrated 45 days within the marking periods of SY 2017 and SY 2018 in which data were collected. The sixth and seventh section consisted of the GPA samples that ranged from 64.4–90.4. Lastly, the final section was representative of the target populations' demographic characteristics of

68.90% of the sample that either received at least one grade-level retention and 31.10% low-achieving students who did not receive grade-level-retention throughout any grade levels. Table 1 summarizes the descriptive demographic characteristics of the participants.

Table 1

Demographic Characteristics of the Study Sample (N = 45)

Characteristics	*N*	%
Age SY 2017		
11	4	8.90
12	10	22.20
13	22	48.90
14	9	20.00
Age SY 2018		
11	0	0
12	6	13.30
13	25	56.60
14	14	31.10
Gender		
Female	19	42.22
Male	26	57.78
Attendance SY 2017		
1.00 (27-35) days present	4	8.90
2.00 (36-39) days present	6	13.30
3.00 (40-45) days present	35	77.80
Attendance SY 2018		
1.00 (27-35) days present	1	2.22
2.00 (36-39) days present	6	13.33
3.00 (40-45) days present	38	84.44
GPA SY 2017		
1.0 GPA scores between (64.4-69.4)	9	20.00
2.0 GPA scores between (69.5-79.4)	27	60.00
3.0 GPA scores between (79.5-90.4)	9	20.00
GPA SY 2018		
1.0 GPA scores between (64.4-69.4)	6	13.33
2.0 GPA scores between (69.5-79.4)	28	62.22
3.0 GPA scores between (79.5-90.4)	11	24.44
Grade Level Retention		
Yes	31	68.90
No	14	31.10

Note. $N = 45$.

RESULTS

In the preliminary data analysis screening, sphericity violations and normality assumptions were tested for the DVs to justify using the repeated measures ANOVA (see Green & Salkin, 2008). For DVs, skewness values between -1.00 to +1.00 indicated that the data reached normal distribution. Q-Q (quantile-quantile) plots also indicated that the assumption of normality was

met (see Green & Salkin, 2008). Skewness values for the composite scores were as follows: SY 2017 efficacy = 0.37, SY 2018 efficacy = 0.47, SY 2017 perceptions = 0.21 and SY 2018 perceptions = 0.98. These values indicated that the DVs did not violate the assumption of normality. Tests for equality of variance for SY 2017/2018 efficacy and SY 2017/2018 attitude found no significant differences (efficacy, p = 0.06 and perceptions, p = 0.52). The skewness values and equality of variance results indicated that the results yielded from parametric tests are valid. An a priori sample size estimate showed that N = 34 participants would allow for a Pearson correlation of at least r = 0.50 to detect and to achieve 80% power.

In most cases, the sphericity is always in violation when computations on the within-subject factors and between-subject factors have Type I or Type II errors (Green & Salkin, 2008). However, when a researcher uses two-levels, there is no possibility of violating sphericity, since the scores hold only two variances and one covariance that is measured two times (Green & Salkin, 2008). For example, in verifying this assumption under the Levene's assessment of homogeneity of variance or homoscedasticity, a researcher can assess this assumption and the null hypothesis by measuring if the population variance is equal (Green & Salkin, 2008).

The researcher carried out a one-way repeated measure ANOVA with a statistical significance of $p < .05$. The IVs were archival results on GPA and attendance while the MVs were of archival records on age and gender. The DVs were used to assess archival results gathered on responses from the SCS on self-efficacy and perceptions toward school climates. In this study, data were examined to see if there was a significant relationship first between SY 2017 and SY 2018 GPA and then between attendance to check for changes in self-efficacy and perceptions toward school climates. The statistical significance at $p < .05$ on the third and fourth research questions was used to assess for a significant relationship between SY 2017 and SY 2018 age groups and gender when assessing for changes in self-efficacy and perceptions toward school climates.

The key variables setting was on an ordinal and nominal scale for GPA, attendance, age, gender, self-efficacy, and perceptions toward school climate. The independent variables and moderating variables mean scores examined for statistical relationships that exist over time within PS® records during the SY 2017 and SY 2018. PS® measurement produced pre- and post scores on GPA, days of attendance, age, and gender (Porter, 2000). The GPA scores ranged was 64.4-90.4 2017 SY mean of 74.83 (SD = 4.43) and 2018 SY mean of 75.38 (SD = 5.23). Attendance scores ranged from 27 to 45 with 2017 SY mean of 41.18 (SD = 3.78) and 2018 SY mean of 42.42 (SD =2.46). Ages ranged from 11 to 14 with 2017 SY mean of 12.80 (SD = .869) and 2018 SY mean of 13.18 (SD = .650).

The DV mean scores examined statistical relationships that exist over time within SCS during the SY 2017 and SY 2018. Archival datasets in this study, items from the SCS questionnaire of 49 responses from the seven domains, were then broken down into two groups of self-efficacy and perceptions towards school climates. Self-efficacy covered questions under the areas of "Morale in School, Student Relationships, and Parental Support" (NJDOE, 2012, p. 27). For this entire sample, 2017 self-efficacy scores ranged from 77 to 125 with a mean of 99.38, (*SD* = 11.22) and 2018 self-efficacy scores ranged from 61 to 146 with a mean of 100.93, (*SD* = 15.25). Additionally, perceptions towards school climates enveloped questions about "physical environment, teaching and learning, safety, and the emotional environment" (NJDOE, 2012, p. 27). Also, for this entire sample, 2017 perceptions scores ranged from 63 to 113 with a mean of 88.18, (*SD* = 10.84) and 2018 perceptions scores ranged from 68 to 131 with a mean of 92.40, (*SD* = 11.96). The descriptive statistics for the independent and dependent variables are in Table 2.

Table 2
Descriptive of Means and Standard Deviations for Variables of Self-Efficacy and Perceptions, GPA, Attendance, Age, and Gender

Variables	*N*	SY 2017 *M*	SY 2017 *SD*	SY 2018 *M*	SY 2018 *SD*
GPA	45	74.83	5.43	75.38	5.23
Attendance	45	41.18	3.78	42.42	2.46
Age	45	12.80	.869	13.18	.650
Gender					
Female	19				
Male	26				
Perceptions Toward School Climates (DV)	45	99.38		100.93	15.25
Self- Efficacy (DV)	45	88.18		92.40	11.96

The first analysis tested for a significant association between GPA and changes in self-efficacy, or perceptual attitudes toward school climates. The beta (β) level, confidence intervals lower and upper, and *p* values of the DV and independent variables are in Table 3, and no significant associations found.

Table 3
Repeated Measure Correlations on GPA, Self-Efficacy, Perceptions, Beta Level, Confidence Intervals Lower and Upper, and p-Value

		95% Confidence Interval (*CI*)		
Assessment of Correlations	*β*	*CI Lower*	*CI Upper*	*p*
GPA and Self-Efficacy	0.01	-0.01	0.03	0.36
GPA and Perceptions	-0.006	-0.03	0.02	0.67

The second analysis tested for a significant association between attendance and changes in self-efficacy, or perceptions toward school climates. The beta (β) level, confidence intervals lower and upper, and *p* values the dependent variable and independent variables are in Table 4 in which there were no significant associations found.

Table 4
Repeated Measure Correlations on Attendance, Self-Efficacy, Perceptions, Beta Level, Confidence Intervals Lower and Upper, and p-Value

		95% Confidence Interval (*CI*)		
Assessment of Correlations	*β*	*CI Lower*	*CI Upper*	*p*
Attendance and Self-Efficacy	-0.007	-0.10	0.08	0.88
Attendance and Perceptions	-0.05	-0.15	0.08	0.37

The third analysis tested for significant correlations between age and changes in self-efficacy, or perceptions toward school climates. The beta (*β*) level, confidence intervals lower and upper, and *p* values the dependent variable and independent variables are in Table 5 in which there were no significant associations found.

Table 5
Repeated Measure Correlations on Age, Self-Efficacy, Perceptions, Beta Level, Confidence Intervals Lower and Upper, and p-Value

		95% Confidence Interval (CI)		
Assessment of Correlations	*β*	*CI Lower*	*CI Upper*	*p*
Age and Self-Efficacy	-3.04	-7.64	1.56	0.19
Age and Perceptions	-0.66	-4.62	3.30	0.74

The fourth analysis tested for a significant difference between males and females differences in self-efficacy, or perceptions toward school climates. The mean difference, confidence intervals lower and upper, and p values the dependent variable and independent variables are in Table 6 where no significant difference in efficacy was noted. However, males were significantly lower than females on perceptions.

Table 6
Repeated Measure Correlations Males and Females, Self-Efficacy, Perceptions, Mean Difference, Confidence Intervals Lower and Upper, and p-Value

		95% Confidence Interval (*CI*)		
	MD	*CI Lower*	*CI Upper*	*p*
Gender (M/F) and Efficacy	-3.97	-12.04	4.11	0.33
Gender (M/F) Perceptions	-7.03	-13.58	-0.49	0.04

MAJOR FINDINGS

A Pearson correlation between the dependent variables from first and second assessments for efficacy and perceptions were consistent with the proposed sample size estimates (efficacy: $r = 0.53$, $p < 0.001$; perceptions: $r = 0.52$, $p < 0.001$). The sample consisted of 19 females and 26 males and had an average age of $M = 12.80$, $SD = 0.87$ with a range of 11 to 14 years. For the entire sample, the mean 2017 GPA was $M = 74.83$, $SD = 5.43$ and the mean 2018 GPA was $M = 75.38$, $SD = 5.23$. The difference in 2017 and 2018 GPA was statistically significant (mean difference = 0.55, *SD* of mean difference = 0.98, $t = 3.78$, $df(44)$, $p < 0.001$). Additionally, males ($M = 7.19$, $SD = 12.02$) and females ($M = 0.16$, $SD = 8.69$) did show a significant difference in change in perception of school environment (mean difference = repeated measures analysis and correlations between GPAs and genders will be in Table 7.

Table 7
Summary of Repeated Measures Analysis of Correlations Within and Between Variables on GPAs and Genders

Variables	*SDMD*	*t*	*df*	*p*
2017-2018 GPAs	0.98	3.78	44	0.001
2017-2018 M/F Perceptions	-7.03	-2.17	43	0.04

Note. N = 45.

RESEARCH QUESTION RESULTS

RQ1: Is there a significant difference between SY 2017 and SY 2018 on GPA outcomes of middle school students enrolled in the PABSS program as measured by PS® records, and change in self-efficacy and perceptions toward school climates as measured by SCS?

Change in self-efficacy between SY 2017 and SY 2018 was not significantly associated with a change in GPA ($\beta = 0.01$, 95% *CI*: (-0.01, 0.03), $p = 0.36$; Figure 1); therefore, it failed to reject the null hypothesis. The change in perception of school environment also showed no significant association GPA ($\beta = -0.006$, 95% *CI:* (-0.03, 0.02), $p = 0.67$; Figure 2); therefore, the null hypothesis could not be rejected.

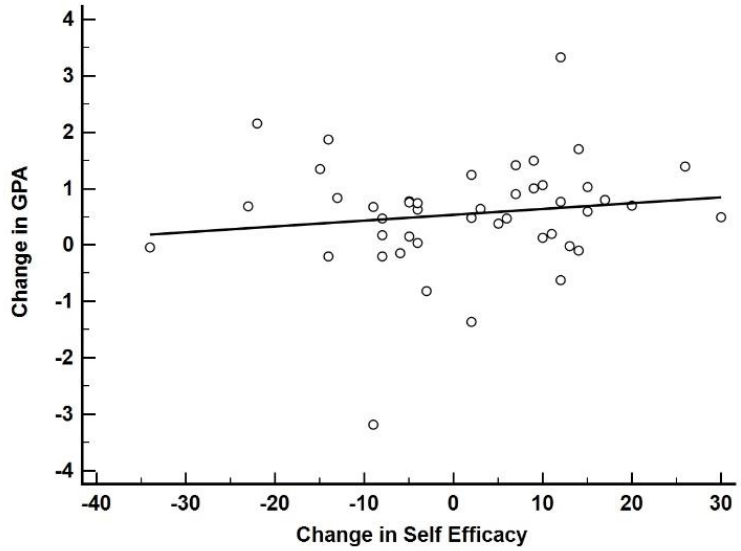

Figure 1. Linear association of 2017 and 2018 self-efficacy and GPA.

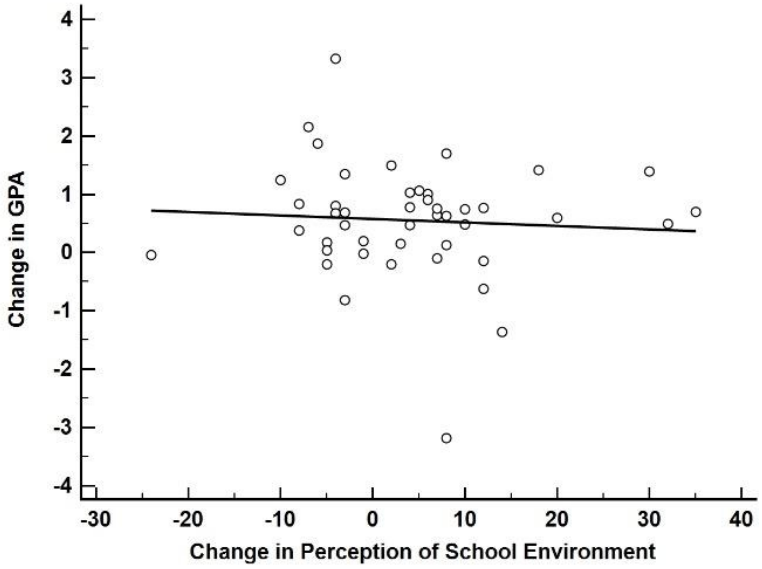

Figure 2. Linear association of 2017 and 2018 perception and GPA.

RQ2: Is there a significant difference between SY 2017 and SY 2018 attendance outcomes of middle school students enrolled in the PABSS program, as measured by PS® records and change in self-efficacy and perceptions toward school climates as measured by SCS?

Change in self-efficacy did not show a significant association with a change in attendance (β = -0.007, 95% *CI*: (-0.10, 0.08), p = 0.88; Figure 3); therefore, the null hypothesis was not rejected. The perception of school

environment also showed no significant association attendance (β = -0.05, 95% *CI*: (-0.15, 0.08), $p = 0.37$; Figure 4); therefore, the null hypothesis was not rejected.

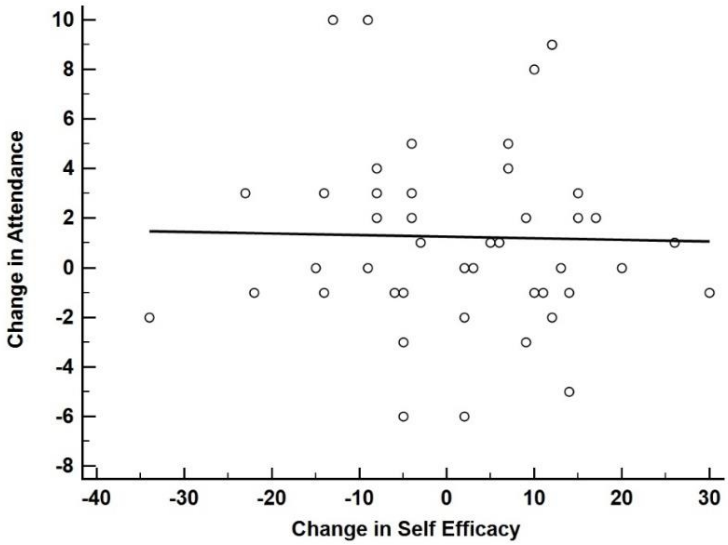

Figure 3. Linear association of 2017 and 2018 self-efficacy and attendance.

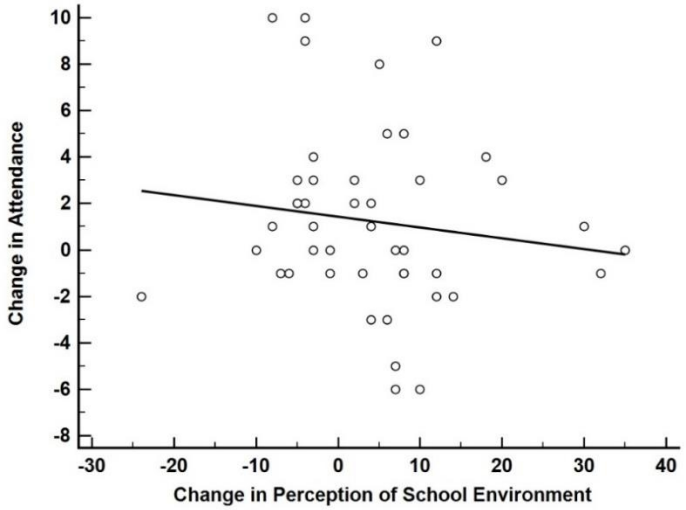

Figure 4. Linear association of 2017and 2018 perceptions and GPA.

RQ3: Is there a significant association between middle school students' age with a change in self-efficacy and perceptions toward school climates as measured by SCS between SY 2017 and SY 2018?

Age was not associated with change in self-efficacy (β = -3.04, 95% *CI*: (-7.64, 1.56), $p = 0.19$; Figure 5); therefore, the null hypothesis was not rejected. The change in perception of school environment also showed no significant association (β = -0.66, 95% *CI*: (-4.62, 3.30), $p = 0.74$; Figure 6); therefore, the null hypothesis was not rejected.

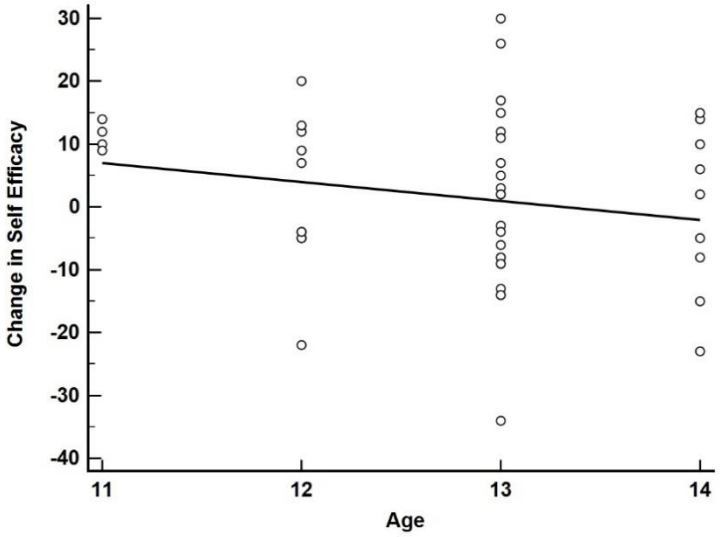

Figure 5. Linear association between self-efficacy change and age.

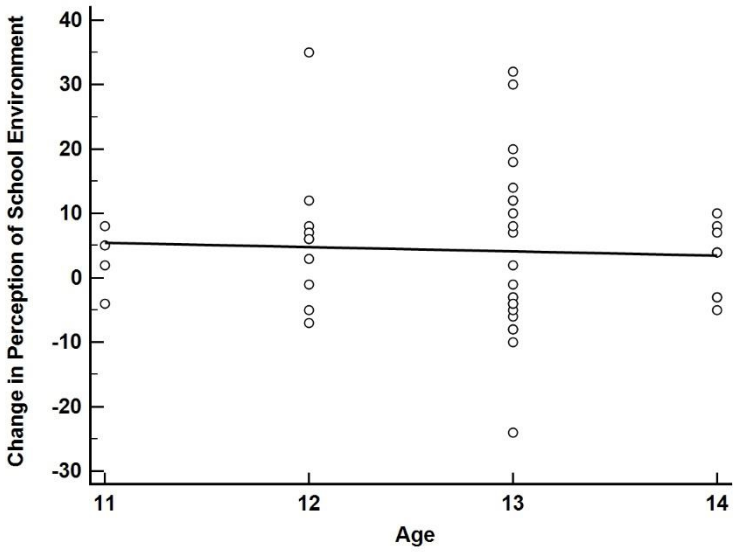

Figure 6. Linear association between perceptions and age.

RQ4: Is there a significant sex difference in females and males for change in self-efficacy and perceptions toward school climates as measured by SCS between SY 2017 and SY 2018 among middle school students?

Males (M = 3.23, SD = 14.00) and females (M = -0.74, SD = 12.17) showed no significant difference in self-efficacy change (mean difference = -3.97, 95% *CI:* (-12.04, 4.11), t = -0.99, df(43), p = 0.33); therefore, the null hypothesis was not rejected. However, males (M = 7.19, SD = 12.02) and females (M = 0.16, SD = 8.69) did show a significant difference in change in perception of school environment (mean difference = -7.03, 95% *CI*: (-13.58, -0.49), t = -2.17, df(43), p = 0.04)); therefore, the null hypothesis was rejected. Sex differences for change in self-efficacy and perception of school environment are shown in Figure 7.

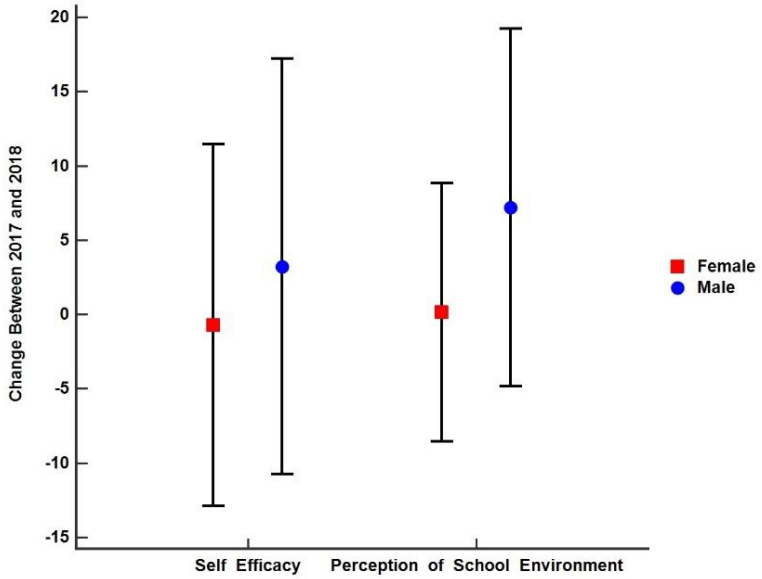

Figure 7. Sex differences for change in self-efficacy and perceptions.

RESULTS AND DISCUSSION

In this study, there was a sample size of N = 45 participants from SY 2017 and SY 2018 archival datasets from underachieving middle school students enrolled in the PABSS program in the northeastern part of the United States. The purpose of this quantitative study was to examine the relationship between differences found in underachieving middle school students' GPA, attendance, age, and gender as measured by PS® records and to observe for changes in their self-efficacy and perceptions toward school as measured by SCS. Based on the results of this study, there was no significant evidence to support that there was a relationship between middle school students enrolled in the PABSS program achievement outcomes and self-efficacy.

During SY 2017 and SY 2018 archival datasets on GPAs, attendance, age, gender, reported no significant evidence found to suggest that the PABSS program related to changes in middle school students–self-efficacy or perceptual attitudes toward school climates. The variables present in research

questions one and four showed a relationship in 2017 and 2018 GPAs and changes between male and female groups could account for increases found in male perceptions toward school climates based on the time of males being in the PABSS program.

This research study aimed at providing awareness to educational professionals because intervention-based support services are often believed to impact underachieving student self-efficacy. However, the lack of significant findings in this study regarding achievement outcomes and self-efficacy is interesting. Over the two years of the examination of the program, student GPA and attendance did improve. Also, male students did believe that the school environment was more supportive of their progress. However, even though students did improve in their academic performance, they did not believe in their innate abilities to meet their goals which is self- efficacy. Thus, the question for future researchers would be to ascertain if what students believe about themselves will improve their performance. There could be a variety of answers to this question. Possibly students believed that the adults in the program were the reason they succeeded and that without that support, they would fail. Maybe the students realized that they needed structure outside of the regular school environment to show academic progress. It is also interesting that males and not females improved their perceptions of the environment in school and saw school staff as more supportive of them over time. The reasons for these views is unknown and need further research.

Lastly, it is important to recognize that school support programs such as the one studied in this research are costly. Although school failure and school dropouts are a significant financial burden for society, it is vital that we recognize programs that are effective and understand why these programs work. In this study of school retention, school grades and attendance improved but student self- efficacy did not. Maybe it takes more time than our study allowed for students to believe in themselves even when they are successful. It could be that failure for many years in school is a difficult perception to change and has lasting effects. In hindsight, it takes years of increased positive adult involvement in changing self- perception, and self- efficacy.

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