Differences Between High School Hispanic and Non-Hispanic Students on the Social Emotional Competencies and Perceived Reading Achievement

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Abstract

The purpose of this study was to examine whether there were differences between Hispanics and non-Hispanics high school students on their level of social emotional competencies and academic learning after receiving support of academic and social emotional learning skills in an after-school SEL program. The participants of this study were 212 high school students in the southeast urban area of Texas, recruited from three school districts in 2018-2019. Both pre/post-surveys were administrated. The ANCOVA was used for investigation. The results indicated that there were statistically significant differences between the two groups on Hispanic and non-Hispanic students' social emotional attitudes and behaviors as well as their self-perceived reading achievement after receiving support and skills from the SEL program.

Keywords: Social-emotional Learning, Hispanics, Reading Achievement, Education Equity

Introduction

According to the data of National Center of Education Statistics (NCES), Hispanic students comprise the largest minority group in K-12 schools in many states across the United States (2019). However, Hispanic students have the highest rates of school dropout (McFarland, Cui, Holmes, & Wang, 2020) and the lowest reading achievement at the high school level (Hussar, Zhang, Hein, Wang, Roberts, Cui, & Dilig, 2020). Although adolescent Hispanic students from low-income families and those at risk of failure at school face academic and social challenges at school, there is little research examining the impact of their social and emotional development. That is, research has not examined differences between Hispanic and non-Hispanic students on SEL. The present study investigates whether there are differences between Hispanic students and non-Hispanics high school students on their level of social emotional attitudes and behaviors, and their academic learning after receiving support of academic and SEL skills in a SEL after-school program.

Objectives

The purpose of this study was to examine whether there were differences between Hispanics and non-Hispanics high school students on their level of social emotional attitudes and behaviors, and their academic learning after receiving support of academic and Social Emotional Learning (SEL) skills in an after-school SEL program.

The following two research questions are addressed in the present study:

1. Are there significant differences between high school Hispanic and other non-Hispanic students on their social emotional competencies (SEC), including: a) academic self-efficacy, b) growth mindset, c) fixed mindset, d) grit/perseverance, e) relationship skills, and f) self-regulated learning, after receiving the support in an after-school SEL program?

2. Are there significant differences between high school Hispanic and non-Hispanic students on self-reported reading achievement after receiving the support in the after-school SEL program?

Literature Review

Promoting adolescents' social and emotional wellbeing has becoming a prevalent topic and obtained increasing attention in recent years (OECD, 2015). The success of students in both school and out of school is closely related to healthy social and emotional development. Social-emotional leaning (SEL) instruction is characterized with five broad competencies, including self-awareness, social-awareness, self-management, relationship skills, and responsible decision making (CASEL, 2005). SEL develops the skills that are essential for individuals to be able to build interpersonal relationship with others and meet the challenges of life (Gómez-Ortiz, Romera, & Ortega-Ruiz, 2017). Students who have well-developed social and emotional skills are more resourceful and more likely to obtain innovative solutions to problems, so to expand their possibilities of being successful and reach their full potential (Durlak et al., 2011; Jones & Kahn, 2018; Ilhan, Ozfidan, & Yilmaz, 2019).

Research reveals that SEL is an essential aspect of pre-K–12 education. SEL has been found to positively predict student academic achievement (Tan, Sinha, Shin, & Wang, 2018). Also, students with higher SEL were found to have less academic and behavioral problems (Wang, Yang, Zhang, Wang, Liu, & Xin, 2019). In addition, Wang, et al. found that SEL can impact students' academic emotions and attitudes. Well-developed social-emotional skills can help increase students' engagement in academic learning thereby improving their motivation to learn (Zins, Bloodworth, Weissberg, & Walberg, 2007). Moreover, well-developed self-regulatory skills enable students to make rational decisions and to take personal responsibility for actions (Main, 2018). Research supports that students who have high SEC are more likely to successfully regulate their emotions. That is, having a high SEC can result in having good interpersonal relationship with peers and teachers which could increase the potential positive influence from peers and teachers to improve their academic performance (DeLay et al., 2016).

In order to foster students' healthy development, both mentally and academically, many SEL programs have been implemented. Results from several studies and meta-analysis have strongly supported that students' participation in SEL programs promote success on students' SEC, behavior, and academic achievement (Barry, Clarke, & Dowling, 2017; Dougherty & Sharke, 2017; Durlak et al. 2011; Ozfidan, Savas, & Demir, 2019; Dowling, Simpkin, & Barry, 2019; Wigelsworth, Lendrum, Oldfield, Scott, Bokkel, Tate, & Emery, 2016). In the present

study, after-school programs play a key role in the development of SEC and are designed specifically for low-income and students at risk of failure can by providing students with support, relationships, and learning opportunities not always found in school settings.

Methods

Participants

The participants of this study were high school Hispanic and non-Hispanic students in the southeast urban area of Texas, recruited from three school districts in 2018-2019. During the school year, students received support from the after-school SEL programs which aimed at improving students' academic skills and SEL. The after-school programs were voluntary and students typically attended the programs three days a week for approximately two hours. In total, 212 high school students (9-12 grade level) participated in the SEL after-school programs and completed both pre/post surveys. Descriptive statistics of participant's background information is displayed in Table 1.

Table 1. *Descriptive Statistics of Participants*

	Hispanic Students (N=133)	Non-Hispanic Students (N=79)
Characteristic	%	%
Female	64.7%	30.4%
Male	35.3%	69.6%
Grade level		
9	9.8%	20.3%
10	39.8%	26.6%
11	41.4%	43.0%
12	8.3%	10.1%

Instrument

The Student Social Emotional Survey was used in this study. The survey was developed based on previous research and survey measures (Bandura, 2006; Coryn, Spybrook, Evergreen, & Blinkiewicz, 2009; Duckworth, Peterson, Matthews, & Kelly, 2007; Dweck, 2006; Ji, DuBois, & Flay, 2013; Tan & Yates, 2007; Ozfidan, Duman, & Aydin, 2020; Zimmerman, 2008). The after-school programs administered the survey in the spring of 2018 and the spring of 2019.

Students were instructed to work on the survey individually and select answers that best described them and how they felt about school.

A factor analysis was used for identifying the SEC variables of interested on a total of 26 measured variables in the survey. A total of 6 factors (Table 2) including (a) academic self-efficacy (b) growth mindset (c) fixed mindset (d) grit/perseverance (e) relationship skills, and (f) self-regulated learning, were extracted with eigenvalues greater than 1 and reliability greater than .60. All items were scored on a 4-point Likert-type measure with 1= Strongly disagree, 2 = Disagree, 3 = Agree, and 4 = Strongly agree. Table 3 shows the reliability index (Cronbach's α) and correlations between the interested factors of SEC. Additionally, students were asked to indicate their grades in reading in both pre and post survey, on a 5-point Likert-type scale with 1 = mostly A's, 2 = Mostly B's, 3 = mostly C's, 4 = Mostly D's, and 5 = Mostly F's.

Table 2. *Socio-Emotional Competencies*

Factors	Definitions
Academic Self-Efficacy	Belief that students can successfully engage in and complete specific academic tasks
Growth Mindset	Belief that talents and abilities can be developed through effort and persistence
Fixed Mindset	Belief that basic qualities such as intelligence or talents are simply inherent or set
Relationship Skills	Ability to cooperate and work well with peers
Grit/Perseverance	Ability to persist on academic tasks until they are finished
Self-Regulated Learning	Ability to control emotions, thoughts, and behaviors when engaged in a learning activity

Table 3. *Internal Consistency and Correlation Matrix Between SEC Factors*

Variables	α	1	2	3	4	5	6
1 Academic Self-efficacy	.64	1.000					
2 Growth-mindset	.60	.355***	1.000				
3 Fixed-mindset	.64	-.061	-.278**	1.000			
4 Grit/ Perseverance	.71	.646***	.519***	-.205**	1.000		
5 Relationship Skills	.74	.495***	.427***	-.262**	.668***	1.000	
6 Self-regulated Learning	.81	.359***	.449***	-.226**	.619***	.624***	1.000

Note. **$p < .01$, ***$p < .001$

Data Analysis

The analysis of covariance (ANCOVA) was used for investigating the both research questions on whether there were differences between Hispanic and non-Hispanic high school students on each factor of students' SEC and self-perceived reading achievement on the post survey data controlling for the effect of the differences among students in the pre-survey. All statistical analyses were performed using SPSS.

Results

The descriptive statistics of both groups are presented in Table 4. The mean scores of SEC factors and reading achievement showing that the Hispanic students were more likely to have a lower social emotional level and reading outcomes than non-Hispanic students in both before and after enrolling in the after-school program.

Table 4. *Descriptive Statistics on the SEC and reading achievement between Hispanics and Non-Hispanics High School Students in Pre/Post-survey*

Variables	Hispanics			Non-Hispanic		
	M	SD	N	M	SD	N
Academic Self-efficacy						
Pre	2.71	.344	133	3.16	.364	79
Post	2.75	.374	133	3.05	.430	79
Growth-mindset						
Pre	3.04	.801	133	3.34	.505	79
Post	2.99	.461	133	3.35	.532	79
Fixed-mindset						
Pre	1.92	.573	133	2.12	.795	79
Post	1.99	.628	133	2.22	.827	79
Grit/ Perseverance						
Pre	3.03	.912	133	3.17	.519	79
Post	3.02	.476	133	3.21	.423	79
Relationship Skills						
Pre	3.11	.506	133	3.25	.444	79
Post	3.15	.463	133	3.29	.397	79
Self-regulated Learning						
Pre	3.32	.463	133	3.40	.441	79
Post	3.38	.427	133	3.39	.480	79

Reading Achievement						
Pre	1.75	.727	131	1.85	.672	75
Post	1.79	.762	126	2.03	.645	73

Table 5. *Results of ANCOVA comparing the social emotional competencies between Hispanics and Non-Hispanic High School Students (covariate: pre-survey; dependent variable: post-survey)*

SEC Factors	Sum of squares	*df*	Mean square	F	sig	Partial η^2	*Pairwise comparison*
Academic Self-efficacy							
Pre-survey	2.739	1	2.739	21.817	.000	.095	
Group	.590	1	.590	4.703	.031*	.022	H < Non-H
Error	24.241	209	.126				
$R^2 = .139$ (adjusted $R^2 = .131$)							
Growth-mindset							
Pre-survey	6.544	1	6.544	35.601	.000	.146	
Group	1.514	1	1.514	8.235	.005**	.038	H < Non-H
Error	38.416	209	.184				
$R^2 = .190$ (adjusted $R^2 = .182$)							
Fixed-mindset							
Pre-survey	30.368	1	30.368	84.417	.000	.288	
Group	.657	1	.657	1.825	.178	.009	
Error							
$R^2 = .190$ (adjusted $R^2 = .182$)							
Grit/ Perseverance							
Pre-survey	5.678	1	5.678	30.623	.000	.128	
Group	1.406	1	1.406	7.851	.006**	.035	H < Non-H
Error	28.752	209	.185				
$R^2 = .163$ (adjusted $R^2 = .155$)							
Emotional Competence							
Pre-survey	11.948	1	14.212	97.745	.000	.319	
Group	.071	1	.071	.577	.448	.003	
Error	27.112	209	.130				
$R^2 = .327$ (adjusted $R^2 = .320$)							
Self-regulated Learning							
Pre-survey	11.272	1	10.768	87.758	.000	.296	
Group	.005	1	.005	.037	.847	.000	
Error	28.894	209	.138				
$R^2 = .297$ (adjusted $R^2 = .290$)							

Note. H indicates the Hispanic group. Non-H indicates the non-Hispanic group.

*p < .05, *p < .001

To further investigate the differences between the two groups, an ANCOVA was conducted in this study. According to Table 5, the results of the ANCOVA showed that controlling for the effect of the differences among students in pre-survey, there were no statistically significant differences found on fixed-mindset, relationship skills and self-regulated learning. However, statistically, significant differences were found between the two groups in the post-survey on factors including academic self-efficacy (F = .590, $p < .05$), growth-mindset (F = 8.235, $p < .01$), and grit (F= 7.851, $p < .01$), indicating that there were statistically significant differences between the two groups on their social emotional attitudes and behaviors after receiving support and skills from the SEL program.

Also, according to the results of pairwise comparison, the scores of non-Hispanic students were statistically significantly higher than Hispanic students on SEL after receiving support and skills from the after-school SEL program on these factors. Namely, the after-school program was more effective in developing non-Hispanic high school students' SEL than for Hispanic high school students. Therefore, more support needs to provide to high school Hispanic students on improving their growth-mindset which encourages students' belief on the efforts and persistence of developing the abilities, perseverance of working persistently on academic tasks, and their academic self-efficacy in the after-school SEL program.

Table 6. *Results of ANCOVA comparing the reading achievement between Hispanics and Non-Hispanic High School Students (covariate: pre-survey; dependent variable: post-survey)*

Self-reported reading achievement	Sum of squares	*df*	Mean square	F	sig	Partial η^2	*Pairwise comparison*
Pre-survey self-reported grade	30.428	1	30.428	82.668	.000	.300	
Group	1.508	1	1.508	4.097	.044*	.021	H < Non-H
Error	71.037	193	.368				

$R^2 = .319$ (adjusted $R^2 = .312$)

Note. H indicates the Hispanic group. Non-H indicates the non-Hispanic group. *$p < .05$

Results of second research question are presented in Table 6. Statistical significance was found on self-perceived reading achievement between the two groups of students after participating the after-school program (F= 4.097, p <.05), controlling for the effect of the

differences between groups on self-reported reading achievement in pre-survey. The mean self-reported reading achievement of Hispanic and non-Hispanic students were 1.79 and 2.03 in the post survey, with the standard deviation of .762 and .645 respectively (Table 3). The result of the pairwise comparison further showed that the mean of Hispanic students' self-reported reading achievement was lower than non-Hispanic students. That is, students' reading achievement in non-Hispanic high school students improved significantly more than that of high school Hispanic students.

Educational Importance of the Study

The significant differences between high school students who are Hispanic and non-Hispanics on students' SEC and academic achievement after receiving the support from the SEL programs indicates the importance of providing students who are at risk, from low-income families, and are ethnic minorities, with more support and learning opportunities on developing SEC and academic skills. That is, it is vital for Hispanic students who are under-represented in the mainstream high school context to receive more support from both school and out of school SEL programs in order to increase their academic self-efficacy and social awareness, and develop the ability of perseverance, relationship, and self-management skills. Meanwhile, this study shows that Hispanic students have lower levels of SEL and lower self-reported reading achievement than non-Hispanic students. The lack of adequate support on SEL and academic skills which is specifically for Hispanic students might account for the causal relationship between the lower level of SEC and academic achievement.

In order to achieve a more equitable society, establishing and integrating social, emotional, and academic development in pre-K–12 plays a vital role (Jones & Kahn, 2018; Ozfidan & Burlbaw, 2020). Schools and education administrators should explore the way of implementing equitable and inclusive practices in school and out of school, as well as formulate the strategies for challenging difficulties to help Hispanic students foster a healthy development both social-emotionally and academically. Therefore, it is meaningful to determine whether there are differences between Hispanic and non-Hispanic high school students on their SEC and academic skills. The differences found between the two group of students in this study suggest the future directions and support to Hispanic high school students, indicate the ways to provide

them with a set of skills that can reduce exposure to difficulty and improve academic outcomes in school.

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