Differences in Psychological Capital Factors (Self-Efficacy, Hope, Optimism, and Resilience) Between Latinx Students Enrolled in an After-school 4-H Program at a Catholic and a Public School

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Author Note
We have no conflict of interest to disclose. This research project was funded by Children Youth and Families At-Risk (CYFAR) United States Department of Agriculture (USDA/National Institute of Food and Agriculture (NIFA) Grant with Texas A&M Agriculture Life Extension (Grant Award No. 2014-41520-22194).

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Abstract

A demand for an educated Latinx student population requires investigating academic and psychosocial factors for this growing population in the United States. Toward this end, the purpose of this study was to measure the differences in psychological capital factors between Latinx students enrolled in a 4-H after-school program at a Catholic elementary and middle school and a public middle and high school. Response to statements reflective of self-efficacy, hope, optimism, and resilience were collected from 55 adolescent youth. The Psychological Capital for Youth [PsyCap-Youth] was used to compare responses from Latinx adolescent youth from the two schools (Garcia et al., 2018). Findings indicated that students enrolled in a Catholic school had statistically significant higher scores on hope, resilience, and optimism, but not on self-efficacy, than students enrolled in a public school. These findings have implications for the foundational use of psychological capital factors in curricula for 4-H after-school programs across the nation and the world with focus on Latinx youth.

Keywords: Latinx, psychological capital, 4-H, after-school programs, public and private schools
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Literature and research leading to the effectiveness of student participation within after-school programs has been mixed (Hurd & Deutsch, 2017). This was particularly true for student programs that emphasized social learning and psychological awareness, often relying on social emotional learning theory (Bandura, 1997) and other developmental states related to psychological capital factors (Luthans et al., 2007). Further, it has not been made clear if students from minority ethnic groups, especially Latinx, have benefited equally from such after-school programs (Fredricks & Simpkins, 2012). Absent from the psychological capital literature are measures evaluating factors for Latinx students who have participated in after-school programs. Thus, in order to begin to measure the effectiveness of after-school programs including Latinx students, tests and instruments will need to be developed to evaluate important psychological and academic outcomes (Mahoney et al., 2010; Riggs & Greenberg, 2004).

While there are many measuring instruments available, the Youth Program Quality Assessment has frequently been used to evaluate after-school programs (Smith & Hohmann, 2005). Another instrument that has been used to evaluate social emotional indicators is the Psychological Capital ([PsyCap]; Luthans et al., 2007). An important difference between the two instruments is that the former has been used for evaluating all ethnic groups, albeit, not specific to one program or ethnic group and the latter has a centralized focus on evaluating the self-efficacy, hope, optimism, and resilience construct levels present in adults in organizations.

The significance of this study is two-fold. On one hand, it will add to the literature on the effectiveness of after-school programs since research indicates that participation in after-school programs improves academic performance (Durlak et al., 2010) and there is uncertainty
about their effectiveness with underrepresented groups. Further, the development of the Psychological Capital-Youth ([PsyCap-Youth]; Garcia et al., 2018) can be used to measure psychological capital factors of self-efficacy, hope, optimism, and resilience in Latinx students.

**Literature Review**

While there are some studies on youth and the positive effects of after-school programs (Durlak et al., 2010), few studies have examined the impact of 4-H after-school programming for underrepresented youth in urban areas. Addressing the gap in the literature by measuring the impact of the psychological capital factors in Latinx youth who participated in a culturally-relevant 4-H after-school program is key in formulating the framework to better meet the needs of this underserved population. The literature reviewed was organized along the following themes: (a) Latinx population, (b) after-school programs, (c) 4-H Youth development program background, and (d) psychological capital factors (self-efficacy, hope, optimism, and resilience).

**Latinx Population**

The Pew Research Center (2019) indicates that Hispanics are the fastest growing population, making up 18% of the U. S. population and the largest segment (52%) of the student population in Texas (Texas Education Agency, 2018-2019). Providing culturally-relevant beliefs, values, and traditions, programs have been key to successfully engaging Latinx youth and respective parents (Koss-Chiono & Vargas, 1999). Specifically, Garcia et al. (2017) found that culturally-relevant programs that contribute to the Latinx’ sense of belonging, may also contribute to effective after-school programming outcomes. Additionally, Hobbs (2004) claims experience and research among Latino communities that use family-oriented educational delivery modes instead of child-only modes are more culturally appropriate. Family-oriented
approaches encourage Latino families to work towards making academic success a reality (Behnke & Kelly, 2011). Hobbs (2004) also posits that the level of effectiveness is contingent on understanding the manner in which Latinx relate to non-traditional designs, thus, adapting educational programs to the communities’ cultural characteristics is important. Other researchers indicate that developing effective after-school programs targeting youth of color residing in poverty areas may provide alternate channels for at-risk students facing serious challenges in their development of academic and social domains (Kerrigan, 2007; Myers, 2002; Wilson, 2010). Noteworthy, when considering parental inclusion, it is important that parenting styles are included to enhance and shape children’s positive psychological development (Karmakar, 2016).

**After-school Programs**

According to Durlak and Weissberg (2007), how students spend their time outside of school hours has implications for their development. Research has also found that some after-school programs may provide students with what may be lacking in both at school and home (Fredricks & Simpkins, 2012). Ganong (1993) acknowledged this need by agreeing that changes in current 4-H programming should consider deviating from traditional programming designed to reach rural youth to programs that target urban youth and particularly at-risk youth and their respective families.

After-school programming, including 4-H programs, also embrace an atmosphere conducive for parental involvement. Oftentimes, parents who choose to support and participate in after-school youth programs, willingly modify their lifestyles for the benefit of their children’s path to success. Greenleaf (1977) and Wisner (2011) stated that a shared vision allows each person to dig deeper within themselves so that everyone is part of that shared
vision. Ideally, transformation occurs when individuals are aware of the environment which shape their values (George, 2003). In sum, as Durlak and Weissberg’s study (2007) have noted, youth who are engaged in structured pursuits which provide opportunities for positive interactions with adults are more likely to develop personal skills and talents.

**4-H Youth Development Program Background**

For over one hundred ten years, 4-H Youth Development Program has been impacting youth across the nation and the world with positive youth development (Locklear, 2013). In 2018, Texas led the nation in the number of students enrolled, with nearly 500,000 youth ages 12 to 18 (Texas 4-H Youth Development Foundation, 2018). The majority of 4-H programming occurs in after-school programs through the enrollment of youth from suburbs and cities with a population over 50,000 (Texas 4-H Youth Development Foundation, 2018); with only a few Latinx youth from urban areas. A longitudinal study measuring positive youth development resulting from 4-H programming found that youth need to be able to choose participation within their specific interests for effective growth to occur (Theokas et al., 2006). While 4-H has been successful in youth outreach and engagement in Texas, recruiting minority youth in urban areas within the state has proven to remain challenging. From 2015-2019, the United States Department of Agriculture (USDA) and National Institute of Food and Agriculture (NIFA) granted an initiative to the Children Youth and Families At-Risk (CYFAR) enabling participation from a Catholic school and a public middle and high school in Texas. CYFAR provided opportunities for predominantly Latinx students to engage in a culturally-sensitive program which emphasized hands-on, high-impact, experiential learning, and leadership development activities promoting social and civic engagement growth.

**Psychological Capital**
Psychological capital has been defined in a variety of ways. Initially, psychological capital was defined as a construct derived from Bandura’s (1986) social cognitive theory, and later Peterson and Seligman (2004) added that psychological capital is rooted in positive psychology. Other researchers have indicated that psychological capital is a positive psychological state of development including optimism, self-efficacy, hope, and resiliency for the purpose of actualizing human potential (Luthans & Youseff, 2004). While still other researchers have proclaimed that psychological capital is not only concerned with “who you are,” but also in the development sense of “who you are becoming” (Nohria & Kahurana, 2010). Important to understand is that raising psychological capital, increasing one’s levels of self-efficacy, hope, optimism, and resilience, has been found to increase the potential for leadership effectiveness across adult populations (Avolio & Luthans, 2008). To understand how psychological capital manifests itself in Latinx student populations who engaged in an after-school 4-H program became the focus of this study.

**Self-efficacy in Students**

According to Bandura (1986), self-efficacy refers to an individual's belief in his or her capacity to execute behaviors necessary to produce specific performance attainments. Other researchers have associated self-efficacy as a tool for limiting symptoms of depression, resulting in better school functioning (Kalapurakkel et al., 2015). In McCoy and Bowen’s (2015) study, factors such as supportive parental support and neighborhood safety help youth maintain hope for the future bolstering self-efficacy performance in school. In Wisner’s (2011) study of psychological strengths as predictors of effective student leadership, it was found that there was a relationship between effective leadership and self-efficacy. Additionally, in their study, Kouzes & Posner (2002) proclaimed that student leaders that had high self-efficacy used
encouragement to help develop the self-efficacy in others while also inspiring them to make self-improvements. In sum, based on these findings, it became important to explore how self-efficacy worked in this Latinx population.

**Hope in Students**

Hope has been used to explain the motivation to succeed in attaining certain tasks. According to Synder (2002), hope may also be related to academic success since it allows students to identify the means to motivate and achieve their goals. Moreover, high hope has also been associated with better outcomes in physical health, academics, psychological adjustment, and athletics (Curry et al., 1997; Snyder, 2002). In their study, Hasnain et al. (2014) found that hope was a predictor of grades and positive affect. Other research conducted with undergraduates, sought relationships between eustress, self-efficacy, hope, and life satisfaction and determined that hope was the best predictor of life satisfaction (O’Sullivan, 2011). Among university students, hope also has served to positively predict academic achievement among university students (Ciarocchi et al., 2007). The investigation of hope in Latinx student populations became part of our goal in this study.

**Optimism in Students**

Optimism is most often understood as a disposition or tendency to perceive the favorable side of situations with an expectation of a favorable outcome. Studies have shown that students with increased levels of optimism are likely to outperform those who are pessimistic in the classroom (Ruthig et al., 2004; Solberg et al., 2009; Stoecker, 1999; Valentine et al., 2004). Further, Conchas and Clark’s (2002) study found that intimate school-within-schools’ settings are likely to encourage academic performance while increasing student optimism. Additionally, it has been found that at-risk students involved in after-school
programs have indicated that increased levels of optimism, commitment to academics, and more optimism about the future were positive outcomes. To find out how Latinx adolescent populations regard optimism in their lives, this variable was included in our study.

**Resilience in Students**

Resilience has been explained as an internal means for gaining the capacity to cope with adversity in a manner that will enable restoration while earning the determination to overcome obstacles with limited resources (Masten, 2001). Luthans et al. (2013) suggest that resilient individuals are likely to recover from mistakes and accept challenges instead of allowing themselves to become too emotionally burdened. According to Kalapurakkel et al. (2014) identifying resilient children is easy, but determining the factors that made them resilient is rather difficult. Martin and Marsh (2006) added that in educational settings, students’ academic resilience levels predicted psychological and educational outcomes such as class participation, general self-esteem, and school enjoyment.

In a longitudinal study of late adolescent delinquent girls, Stevens et al. (2011) found that girls who were higher in delinquency while in early adolescence were resilient if they had high levels of parental monitoring and did not have family members that were incarcerated. In a most recent study of undocumented Latínx students in college, educators learned from resilient successful undocumented students about effective practices on how to better serve those students who are not as successful in school (Borjian, 2018). According to Masten (2001), resilience is shaped by a combination of asset factors, influence processes, and risk factors. In sum, since self-efficacy, hope, optimism, and resilience were identified as important psychological variables in other student populations, this led to the investigation of these in Latínx students enrolled in a 4-H program.
Method

Sample

The 55 participants for the study were students from a Catholic school \((n = 35)\) and a public middle and high school \((n = 20)\) in an urban area in Texas. The Catholic school served kindergarten through eighth grade students and the public school served middle and high school students. There were 14 respondents from elementary (4-6), 15 from middle school (6-8), and 22 from high school (8-11), with 4 not providing this information. Respondents were 24 males and 28 females; 3 did not specify gender. All students were enrolled in 4-H clubs at their respective schools.

Instrument

The Psychological Capital for Youth is a 24-item questionnaire that was adapted and modified from the Psychological Capital Questionnaire (Garcia et al., 2018; Luthans et al., 2007). Permission was requested and granted from the authors to modify the existing instrument to gather data on students enrolled in 4-H after-school programs.

The PsyCap has been used mostly with adults and includes 24 items related to four psychological capital factors: self-efficacy, hope, optimism, and resilience (Luthans et al., 2007). The PsyCap-Youth was adapted to reflect the same factors as the PsyCap and was used to assess the youth enrolled in 4-H after-school programs (Garcia et al., 2018; Luthans et al., 2007). A statistical factor analysis was conducted to determine reliability and validity and a Cronbach’s \(\alpha\) of .89 indicated high reliability. Content validity was based on using statements from an existing questionnaire based on psychological capital. A factor analysis on the PsyCap-Youth yielded the same four factors as the PsyCap. However, the questions that loaded for the factors under the PsyCap varied from the factors that loaded under the PsyCap-Youth. For
example, on the PsyCap, questions 7-12 loaded on Hope, whereas, on the PsyCap-Youth, questions 5 and 11 loaded on the Hope factor. This indicates that elementary, middle and high school youth may perceive the four factors differently from the way adults perceive psychological capital.

Response options for each statement on the PsyCap-Youth were the same as for the Psy-Cap and used a Likert-type scale. The options were: 1 = Strongly Disagree, 2 = Disagree, 3 = Somewhat Disagree, 4 = Somewhat Agree, 5 = Agree, and 6 = Strongly Agree. Examples of questions for each of the factors follow. For Self-efficacy, “I feel confident in participating and contributing to 4-H after-school activities.” For Hope, “There are many ways to reach my goals.” For Optimism, “When I am planning for college, I feel confident analyzing a long-term problem to find a solution.” For Resilience, “When I feel defeated, I find ways to bounce back.”

**Design**

The five-year, USDA-funded Children Youth and Families At-Risk (CYFAR) project was developed and implemented at a Catholic school and public school in urban, Texas, where it began in 2015 and ended in the summer of 2019. The objectives of the CYFAR project were to expose students to agriculture, natural resources, and related sciences; possible agricultural careers; colleges and universities; using high-impact, hands-on experiential learning opportunities in a culturally-relevant 4-H after-school program. Surveys were distributed during a family night to collect data on Latinx youth from a Catholic school and a public middle and high school to compare responses from the two schools. Permission was granted by parents and schools and assent was obtained from participating students.

**Results**
An independent samples $t$-test was calculated comparing the mean scores of students enrolled in an after-school 4-H program in a Catholic school with those in a public school on four psychological capital factors, Self-efficacy, Hope, Optimism, and Resilience, of the PsyCap-Youth (see Table 1). Statistically significant differences were found between the two groups for Optimism ($t (53) = 3.00, p < .01$); Catholic ($m = 4.82, sd = .78$), Public ($m = 4.09, sd = 1.01$) with a medium effect size of $r^2 = .38$. Further, statistically significant differences were found between the two groups for Resilience, ($t (53) = 2.14, p < .03$) Catholic ($m = 4.69, sd = .61$), Public ($m = 4.34, sd = .43$) with a medium effect size of $r^2 = .28$. Moreover, statistically significant differences were found between the two groups for Hope ($t (53) = 2.33, p < .02$; Catholic ($m = 5.29, sd = .71$), Public ($m = 4.80, sd = .69$) with a medium effect size of $r^2 = .31$. There were, however, no statistically significant differences found between the two groups on Self-Efficacy ($t (53) = 1.52, p > .05$); Catholic ($m = 5.25, sd = .78$), Public ($m = 4.94, sd = .67$).

**Discussion**

Our findings indicated that there were three statistically significant differences with medium effect sizes between students enrolled in a Catholic school and those in a public school when participating in a 4-H program. Specifically, the differences were related to the psychological constructs of Hope, Resilience, and Optimism with those students enrolled in a Catholic school endorsing higher scores than students enrolled in a public school. However, there was not a statistically significant finding found between the two types of students on Self-Efficacy. The explanations for these findings follow.

Both of these types of students received the intervention of the culturally relevant 4-H after-school program; however, due to a lack of collection of pre- and post-tests, it was difficult
to assess whether the four psychological constructs (Hope, Resilience, Optimism, and Self-Efficacy) improved as a result of participation in the program. Further, the physical location of whether students were in Catholic or Public Schools can be mediated or moderated by a variety of factors (i.e. curriculum, schedules, time of day the 4-H program was offered, parental involvement, gender, socioeconomic factors….) and those variables were not considered.

Overall, the literature seems to indicate that students who obtain an education from a Catholic high school tend to have a higher GPA, graduate at higher rates, and more likely to go into the sciences (Fleming et al., 2018). Additionally, according to the National Catholic Education Association (2018), Catholic schools outperform students in public schools in reading and mathematics. Findings between students in Catholic and public schools noting differences on psychological constructs, however, are limited in the literature.

In this particular study, Hope was observed to be higher in students attending Catholic schools than those who attended the public school. This finding is encouraging because the majority of the literature has indicated that Hope is needed to motivate students (Snyder, 2002) and to have better academic outcomes. Beyond that, Hope has also been known to contribute to other important outcomes such as physical health, psychological adjustment, and athletics (Curry et al., 1997; Snyder, 2002). Regarding higher Hope scores in Catholic students, research by Frey et al. (2004) who used the Children’s Hope Scale to measure spiritual well-being between males and females found that females had higher scores and that Hope not only contributed to spiritual well-being, but was consistent with the goal of a Catholic education.

Resilience scores were higher and statistically significant for students at the Catholic high school than in students in the public school. The increase in resilience was important in light of the fact that resilient individuals are more likely to see mistakes as learning opportunities and
accept challenges that help their emotional recovery (Luthans et al., 2013). Moreover, the literature further indicates that students with high resilience levels are more apt to have better psychological and educational outcomes. The outcome of this study partially concurred with other research which has indicated that African American and Mexican American males enrolled in Catholic middle schools and who participated in academic skill development demonstrated resilience which lasted well beyond their middle school years (Fenzel & Richardson, 2019).

Self-efficacy was not found to be statistically significant for either one of the Latinx groups. This psychological construct is important to study because students who have high self-efficacy demonstrate higher academic work, earn higher grades, set higher goals, and persist in reaching their academic goals (Kalapurakkel et al., 2015). Research on self-efficacy with Latinx students participating in an after-school program at a public school indicated that self-efficacy is mediated and moderated by many other variables that need to be considered however, there were some positive outcomes (Niehaus et al., 2012). For example, self-efficacy was a positive predictor of students’ school attendance and performance on math achievement scores. In this specific study, there was no statistical significance, however, students from the Catholic school did have higher mean scores than students from the public school. Nevertheless, due to its strong relationship with academic outcomes and goal setting, it is important to question whether after-school programs last long enough to develop Self-efficacy, a construct that may take longer to develop than the other constructs of Hope, Optimism, and Resilience. An alternative explanation is that the pathway to Self-efficacy is through Hope, Optimism, and Resilience. To investigate this issue, an analysis that could be used would be structural equation modeling.

Limitations
The responses to this research are limited to those collected during 4-H after-school events which was a small and convenient sample, it was not an experimental design, and did not have a baseline to compare. Further, the respondents were 4-H youth in a Catholic school and public middle and high school; therefore, responses could be affected by developmental differences. Further, information later obtained from parents known to influence the child’s response in a positive way was not considered when designing the PsyCap-Youth survey (Garcia et al., 2018). Moreover, in the factor analysis, the statements that loaded for the factors varied between the PsyCap questionnaire and the PsyCap-Youth questionnaire, indicating that there is a difference between how adults and youth respond to statements.

**Implications**

The findings of this research have implications on (a) after-school programs, such as 4-H programs, (b) programs that build psychological capital in the areas of Hope, Self-Efficacy, Optimism, and Resilience, and (c) researchers interested in developing instruments that measure these constructs.

In summary, related to after-school and 4-H programs, this research has durable and potentially long-lasting implications for 4-H and similar youth development after-school programming in Texas and across the United States. The general suggestions for purposeful inclusion in culturally relevant 4-H after-school programming and other related youth programs remain specific to the development of the four psychological dimensions. Moreover, when considering instruments, the PsyCap-Youth has been validated for use in evaluating psychological dimensions of Hope, Resilience, Optimism, and Self-Efficacy with Latinx students in after-school programs.
References


Latinx Students Enrolled in After-School Programs: A Meta-Analysis of Impact on Personal and Social Skills in Children and Adolescents


Handbook of research on schools, schooling, and human development (pp. 379-397), Routledge.


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[https://doi.org/10.2466%2Fpr0.1999.84.3.873](https://doi.org/10.2466%2Fpr0.1999.84.3.873)


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Table 1

Scores on Psychological Capital (Hope, Resilience, Optimism, Self-Efficacy) for Latinx School Children in a Catholic and Public School

<table>
<thead>
<tr>
<th>Factor</th>
<th>Catholic School (n = 35)</th>
<th>Public School (n = 20)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hope</td>
<td>5.29</td>
<td>4.80</td>
</tr>
<tr>
<td></td>
<td>0.71</td>
<td>0.69</td>
</tr>
<tr>
<td>Resilience</td>
<td>4.67</td>
<td>4.34</td>
</tr>
<tr>
<td></td>
<td>0.61</td>
<td>0.43</td>
</tr>
<tr>
<td>Self-Efficacy</td>
<td>5.25</td>
<td>4.94</td>
</tr>
<tr>
<td></td>
<td>0.78</td>
<td>0.67</td>
</tr>
<tr>
<td>Optimism</td>
<td>4.82</td>
<td>4.09</td>
</tr>
<tr>
<td></td>
<td>0.78</td>
<td>1.01</td>
</tr>
</tbody>
</table>

Note. * p < .02; ** p < .03; *** p < .01