Identifying the Impact of College Access Efforts on Parents' College Preparedness Knowledge

Carla Amaro-Jiménez, Mohan D. Pant, Holly Hungerford-Kresser, and Jason den Hartog

Abstract

Families play a critical role in their children's career and college decision making. Students' academic and postsecondary choices are often shaped by their own parents/families' experiences and/or information they have about processes, deadlines, and requirements. The focus of this study is a college awareness and outreach program meant to inform parents about college and career readiness, especially for parents of prospective first generation college students—those who are the first in their families to go to college. Parents took part in day-long conferences with educational stakeholders, including high school counselors, community college and university admission counselors, as well as nonprofit organization staff. We identified the impact of the program on all parents, regardless of background or educational level, and the ways in which they benefit from participating in career and college outreach programs.

Key Words: awareness, access, first generation college students, culturally and linguistically diverse families, university, preparedness, knowledge, parents

Introduction

The role parents/families (note: "parent" as used throughout should be understood to refer to any adult functioning in the role of parent for a student) play in their children's academic trajectories and college aspirations, especial-

ly for students from culturally and linguistically diverse backgrounds, should not be underestimated (Tornatzky et al., 2002), and this is emphasized by a large body of research (e.g., Auerbach, 2004; Hamrick & Stage, 2004; Perna, 2000; Pitre, 2006; Rowan-Kenyon et al., 2008). For example, researchers have found that, for students in seventh grade and up, parents who hold high expectations for their children can positively impact their grade point averages (see, e.g., Chen & Gregory, 2010). Studies have shown parents who demonstrate they value education positively impact their children's academic performance on standardized tests (Dietel, 2006) and in key subjects such as mathematics and science (Gordon & Cui, 2015). Moreover, parents who have ongoing discussions with their children about short- and long-term educational goals can help shape their future academic lives (Jeynes, 2007; McNeal, 2012). Holcomb-McCoy (2010), in citing Greenwood and Hickman's (1991) work, assert "family and/or parental involvement has been positively linked to several outcomes, including higher academic achievement, sense of well-being, school attendance, student and family perceptions of school climate, student willingness to undertake academic work...[and] aspirations for higher education" (p. 115).

However, research has also shown outcomes may be associated with the information (or lack of) families have about academic opportunities for their children, thus positively or negatively influencing their academic and postsecondary choices (Martinez et al., 2013). Fifteen years ago, Perna and Titus (2005) argued that helping increase families' understanding of what is needed to make informed and timely decisions is imperative for students' pathways. This understanding was deemed even more necessary for those parents who do not have a college education (Hamrick & Stage, 2004) and for students in high-poverty areas who rely on having this information to make decisions for their future (Holcomb-McCoy, 2010).

As such, we share the results from a year-long study that aimed to identify the impact of a college awareness and outreach program on increasing the information parents/families possess about college and career readiness after taking part in a conference. We were particularly interested in determining the impact this outreach effort—created and enacted through partnerships among high schools, admission counselors, community colleges, universities, and nonprofit organizations—had on parents' College Preparedness Knowledge (CPK). Tornatzky, Cutler, and Lee (2002) defined "College Knowledge" as what parents "need to know about these milestones and prerequisites and what actions need to be taken when" (p. 7). We elaborate on this definition by emphasizing not just the "what" and "when," but also the ways in which parent outreach programs may support parents in gaining information about how to potentially support their children's career and postsecondary education choices.

We draw on pre- and post-data collected from three groups of parents who participated in the third year of implementation of the program. As explained in detail later, each parent conference aimed to increase parents' CPK by exposing them to five critical research-based college and career readiness topics (Conley, 2010); each of these topics was addressed in a session during the day. Additionally, the conferences provided families with information related to study and life skills, student success, and educational resources to academically support their children, regardless of age, and positively support their life and educational trajectories (Hungerford-Kresser & Amaro-Jiménez, 2012).

Our research questions were:

1. What are possible differences in CPK scores of participants measured before and after each conference was held?
2. What are possible differences in gain scores across ethnicity and education level of participants?
3. What are possible differences in CPK scores of parent participants whose children plan to go to college, measured before and after the conferences?

Because decades of literature have shown the importance and impact of college outreach programs on the parents of first generation college students (e.g., Auerbach, 2004; Chlup et al., 2018; Gonzalez et al., 2018), our specific research hypotheses (in the context of the first research question) were that: (a) the parents of first generation college students would have the highest gains in their CPK scores, (b) the parents with the lowest education level would show higher gains in CPK scores than other parents, and (c) there would be no significant difference in CPK gain scores across race/ethnicity groups. As will be seen next, there is a large body of work dedicated to parental involvement in college attainment for students. However, recent literature on parental involvement and prospective first generation students is scant, with the exception of only a handful of studies. Most of the literature is now a decade or two old. As such, we draw on what has been learned about the impact parents have on students' educational trajectories and use these studies as a background to introduce our study. As we will argue later, as the country's demographics and student enrollment in postsecondary education continues to grow, understanding ways to support parents/families is and will continue to be necessary.

Background

For decades, researchers have studied parental involvement factors most likely to impact students' college choices. For example, almost three decades ago Steinberg et al. (1992) determined that parents having high expectations

for their children can positively impact achievement and college enrollment outcomes. Jeynes (2007), in considering the notion that voluntary parental involvement is substantially important for college going aspirations, suggested that parental involvement programs are effective even for parents who appear to be uninvolved. Likewise, Auerbach's (2007) work found that working class parents used moral, navigational, and emotional capital to attempt to help their children get to college.

According to the literature, having at least one college-experienced parent had positive effects on parental expectations, as demonstrated in Hamrick and Stage's (2004) work. Their study supports the assertion that parental expectation was a strong predictor of predisposition toward college. The historical and ongoing nature of this work underscores its importance. Interestingly, while McCarron and Inkelas (2006) found that parental involvement was clearly the best predictor for college aspirations of nonfirst generation students, parental involvement was not the main predictor for first generation students; instead, students' perception of their academic performance was the dominant factor. However, aspiring to be a college student does not guarantee becoming one. This emphasizes the need for first generation students to not only be academically prepared, but to involve their families in the decision-making process. Doing so may serve to not only boost students' aspirations but also to diminish the negative effects of college culture shock. Moreover, because Chlup et al. (2018) have also shown that some parents are unaware of the required processes and steps to make the transition from high school to college, especially when they are unfamiliar with the educational system, outreach programs are seen as key in providing the information mechanisms to support them (Trivette et al., 2012).

In fact, there is a large body of work highlighting how crucial it is for college outreach programs to serve children of families with low socioeconomic means. For example, a study conducted by Auerbach (2004) identified the effectiveness of an outreach program (Futures) in narrowing the information gap about college for Hispanic parents. Analyses demonstrated that families in their program were able to gain knowledge and confidence for interacting with institutions, communicating with their children, and easing pathways to college. Parent surveys and interviews concluded that the program meetings were their main source of college information. In addition to building college knowledge, the program built social networks and community among participants that would help motivate students to stay on track for college and continue to provide opportunities for students and their families (Rowan-Kenyon et al., 2008). More recent studies have also found this to be true (i.e., Martinez et al., 2013).

While progress is being made to ensure more Latina/o students are enrolled in college than ever before, the number of degrees attained by these students is still well below the national average, especially after the four-year mark (Excelencia!, 2018). The six-year completion rate for Hispanic students is 51%, compared to 74% of Asian students and 64% of White students. While college access and readiness efforts such as Advancement Via Individual Determination (AVID), Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR UP), and GO Centers are aiming to ensure that students have access to resources and are being equipped to be successful, many of these students are or will be the first in their families to go to college (Amaro-Jiménez & Hungerford-Kresser, 2013). Because college enrollment policies and procedures are ever-changing, students benefit when parents know details, such as the various entrance exams (e.g., SAT and ACT), college application procedures, financial aid and scholarship avenues and availability, deadlines, fee waivers, and administrative systems and processes. This mountain of information can be especially daunting for nonnative English speakers and parents of first generation students (Leonard, 2013).

With this literature as a framework, the College and Career Program (pseudonym; the same is true of all other names used) was built with a strong focus on parental involvement. Because decades of research have pointed to the importance of a parental element, particularly with first generation college students, this was an important part of the work. The following section highlights the program in which this study took place. As demonstrated in the findings, all parents, regardless of background or educational level, benefit from participating in career and college outreach programs that have been deemed impactful for mostly minority and first generation families.

The College and Career Program

The goal of the College and Career Program is twofold. First, the program works to reduce dropout rates among minority high school students by placing college students, with at least half of them being first generation college students, at GO Centers in high schools. GO Centers are dedicated office spaces in high schools where college students serve as peer mentors and guide high school students towards graduation (Amaro-Jiménez & Hungerford-Kresser, 2013). These GO Centers have been an initiative of the Texas Higher Education Coordinating Board (THECB) since 2007 (THECB, 2015). As part of the program, mentors who are placed at these GO Centers support students' efforts to establish a post-high school plan that responds to their interests as well as their short- and long-term goals. Some of these plans have included attending a two-year or four-year postsecondary institution and/or trade

school, selecting military service, and/or locating job opportunities. To do so, these mentors work with high school students to identify their career goals as well as necessary funding (e.g., scholarships, grants), especially for those who choose attending a postsecondary institution. The program has also offered subject-specific tutoring for college entrance and statewide examinations at the GO Centers whenever possible. All of these services are provided free of charge to the school districts.

The Latina/o Parents Leadership Conferences are the parent outreach component of the College and Career Program at Southern University. This component aims to give parents an opportunity to access relevant and timely information so that they can be better informed about their children's options beyond high school. In addition to creating opportunities for families to talk with university personnel on specific topics one-on-one (e.g., with personnel from the Office of Financial Aid), participants attend a day-long conference with concurrent sessions on a variety of topics.

The Parent Conferences

The topics for the first conference were born out of the needs school personnel and college mentors for the program identified as they worked with both students and families at the GO Centers. Topics included: understanding the similarities and differences between the U.S. public education system and that of other countries in Latin America, strategies for collaboration and parent engagement, and the similarities and differences between high school and college. The program also invited Hispanic speakers who could talk about their own college and work experiences. Prior to each session, parents were asked to fill out a needs assessment questionnaire on which they provided demographic information as well as general information about the topics they wanted to know more about. At the end of each session, attendees were asked to fill out an evaluation form to help the program gather information and improve the quality of forthcoming sessions. As a result of using both of these instruments, subsequent sessions included information on how to pay for a postsecondary education and timely immigration-related issues, which were the two most important issues identified in the questionnaire. The length of the sessions were kept at or under an hour each, and a resource "fair" was added for parents to gather information about educational services available for them and their children in the community.

For the first two years, all the sessions were held in Spanish. Once word spread about the conferences and non-Spanish speaking families began to attend them, the program sought presenters who could deliver these sessions in English. Families attending these sessions did so free of charge and were

provided lunch. Thanks to a longstanding partnership with a local school district, an interpreter and interpretation equipment were loaned to the program in the third year of implementation to ensure that the sessions could reach both English- and Spanish-speaking parents. All the sessions were delivered in English but were interpreted in Spanish in real time. Conference materials were also made available in both languages.

Content of Sessions

Input gathered from the first two years of implementation assisted in developing the scope of each session as well as the supports needed to implement the conferences in their final format (which is reported on here), including preferred days and times, materials needed, and ways to disseminate information about each session, including sharing the information at the GO Centers and via interviews on local news channels. Each conference held was a collaborative effort, given that sessions were jointly led by personnel from high schools, community colleges, universities, and nonprofit organizations—each of whom had extensive experience with the topics covered. For instance, high school counselors gave presentations about the high school to college transition, admission counselors spoke about admission requirements for their institutions, and financial aid personnel shared the various federal, state, and local opportunities available.

Based on the pilot data gathered, each conference contained five critical topics: (1) milestones of successful high school students by grade level, (2) college options available to students in high school, (3) academic expectations that lead to college enrollment and career success, (4) financial supports to seek a postsecondary education, and (5) common admission processes for technical and community colleges and universities. Some of the titles of the presentations included, "The Transition from High School to College: Strategies for Helping Students to Success in High School and Beyond," "Why Students Need Pre-Advanced Placement (AP)/AP and Dual Credit Classes and How to Prepare for Them," "Similarities and Differences in the Admission Process to Community Colleges and Universities," and "Considering College Costs: Scholarships & Financial Aid Basics," among others.

Presenters were asked to share their presentation materials with program personnel prior to the conferences to ensure the content of the presentations included the information needed for each topic as well as each of the components on the pre/post survey instrument. While the groups of families who attended the three conferences were different every time and the speakers varied, the content covered for each session remained the same. See Table 1 for a description of each broad topic addressed in the sessions. Presenters were also asked to facilitate group conversations and enact various engagement strategies

for families at their tables. Attendees were also asked to write questions for presenters on sticky notes, which were gathered before each presentation ended to ensure questions could be fielded at the end of each of the sessions.

Structure of Sessions

Each conference held started with an introduction to the conference and program overall, the paperwork to be filled out (e.g., consent form, presentation evaluations, needs assessment), and the schedule for the day. Sessions started at around 9:00 a.m. and ended at approximately 4:00 p.m. Sessions were 30 to 40 minutes long, and the day included a lunch break, a campus tour, and a closing session. Each conference had five to six sessions depending on the time allotted to each session. Time was also reserved at the beginning for registration and midmorning for an exhibitors' hall to share community resources with parents. While each presenter chose how to share information with attendees (e.g., some started with a video, others with a quote, others with statistics), each session had a specific focus. See Table 1 for specifics.

Table 1. Conference Topics

Topics	Content Covered
Milestones by grade level	Parents had the opportunity to learn about the various milestones high school students need to reach by grade level to proactively prepare for college.
College options available to students in high school	Parents learned about dual credit and AP classes and their benefits including how to be eligible to participate via test scores and administration approval. They also learned about partner community colleges' admission criteria to take both of these, such as having taken the ACT/SAT, submitting necessary applications, and the required meningitis vaccination. Parents also learned about similarities and differences between the ACT and SAT and about pre-AP courses.
Creating a college-going culture that leads to college enrollment and success	Parents learned about the expectations that both high school counselors and university faculty have that can lead to student success as well as ways they can create a college-going culture at home. Presenters discussed academic and course responsibilities and social and emotional adjustment. Parents learned strategies to support their children in managing their time effectively, as well as strategies to use at home such as establishing routines, awakening children's interests and matching them to a career, preparing them to choose a career, etc.
Financial supports to seek a postsecondary education	Parents learned how to apply for financial aid, when to apply, what is needed to apply (e.g., pin, tax returns, school codes), including how to calculate the Expected Family Contribution, what happens during the auditing or verification process, and how to determine financial need. Attendees also learned how to determine the cost of attendance, meaning the costs that the student would incur as part of their college experience, including tuition and fees, books, room and board, transportation, and other miscellaneous costs. Participants also learned what the FAFSA applied them for, including state and federal funds, Work-Study, and federal subsidized and unsubsidized direct loans. Parents also learned about other financing avenues such as grants and scholarships and the academic criteria students had to meet to be eligible to continue receiving these funds.
Common admission processes for technical and community colleges and universities	Parents were introduced to representatives from various community colleges and their admission criteria. Parents also learned about the various programs and offerings each had. They were also guided through the process to determine the costs of attending a community college as well as the ways in which these courses transferred to four-year universities.

Method

Participants

Participants for this study were 102 parents who attended one of three conferences held in the third year of this program's implementation. As shown in Table 2, the majority of participants were female and of Hispanic origin. In addition, the majority of participants had two children and had attained college level education.

Table 2. Demographics of the Participants

Variable	*n*	Percentage
Gender		
Female	66	64.7
Male	36	35.3
Number of Children		
1	14	14
2	48	48
3	27	27
4	9	9
5	2	2
Missing	2	
Level of Education		
Less than High School	14	14
High School	24	24
College	49	49
Graduate School	13	13
Missing	2	
English Proficiency		
Very Limited	24	23.5
Average	31	30.4
Good	47	46.1
Ethnicity		
African American	12	11.8
Asian American	11	10.8
Caucasian American	15	14.7
Hispanic American	64	62.7

Instrument and Measures for Data Collection

The instrument for this study was a survey questionnaire with 20 Likert scale items which were created based on the pilot data collected in years one and two. Table 5 shows the statements in the questionnaire. This instrument was used for collecting data before and after each conference on the parents' level of CPK. Participants included the 102 parents who completed the instrument before and after the respective conference days they attended. The instrument consisted of 20 four-point (1 = Completely Disagree, 2 = Disagree, 3 = Agree, 4 = Completely Agree) Likert scale items.

Psychometric Property of the Instrument

The internal consistency reliability of the instrument was assessed using Cronbach's alpha (Cronbach, 1951). Based on the data used in this study, the values of Cronbach's α for the instrument administered before and after the conferences, respectively, were: α = 0.96 (95% CI: 0.95–0.97) and α = 0.98(95% CI: 0.97–0.98).

The two continuous measures (variables), namely, College Preparedness Knowledge before (CPK_1) and College Preparedness Knowledge after (CPK_2) the conference were computed by averaging responses to 20 four-point Likert scale items from the survey questionnaires administered before and after the conference. Thus, these measures ranged in values between a minimum of 1 and a maximum of 4. Gain score for each participant was computed by subtracting CPK_1 from CPK_2.

Results

The mean scores of participants (n = 102) on the two variables, CPK_1 and CPK_2, are displayed in Figure 1.

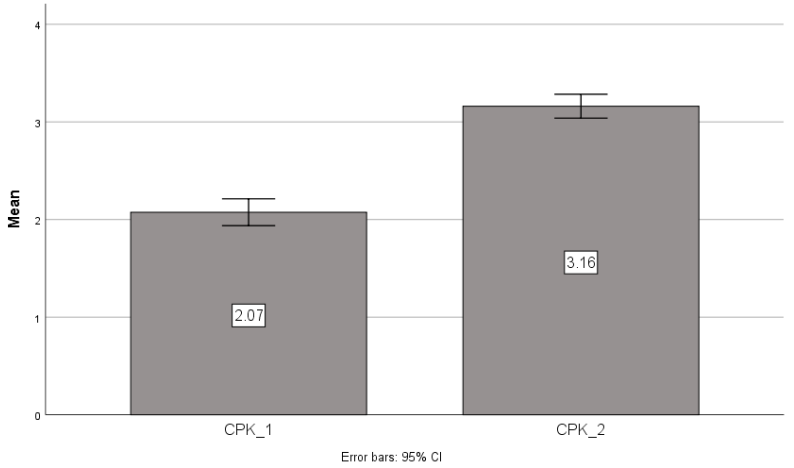

Figure 1. Mean scores of CPK_1 and CPK_2 with 95% confidence intervals of error bars.

In order to answer research question 1, we ran a paired *t*-test using CPK_1 and CPK_2 as a pair of variables. The paired *t*-test was statistically significant, $t(101) = 14.69$, $p < .001$, at the 5% level of significance, implying that participants' CPK significantly increased after ($M = 3.16$, $SD = 0.62$) attending the conference, compared to their knowledge before ($M = 2.07$, $SD = 0.70$). In addition, the pair of variables (CPK_1 and CPK_2) were significantly correlated, $r(n = 102) = .37$, $p < .001$, at the 5% alpha level. See Table 3 for descriptive and inferential statistics.

Table 3. Descriptive and Inferential Statistics for Paired t-test

	Descriptive Statistics			Inferential Statistics				
Variable	*n*	*M*	*SD*	*r*	*MD*(*SE*)	*t*	95% Confidence Interval	
CPK_1	102	2.07	0.70		---	---	*LCL*	*UCL*
CPK_2	102	3.16	0.62	.37**	1.09 (0.07)	14.69**	0.94	1.23

Notes. **$p < .001$; *MD*(*SE*) = Mean Difference with Standard Error in parentheses; *LCL* = Lower Confidence Limit, *UCL* = Upper Confidence Limit.

In order to answer research question 2, we ran a linear regression model with CPK_Gain (CPK_2 - CPK_1) as dependent variable and gender (male = 0, female =1), ethnicity (with Caucasian as reference category), education level (with Less than High School as reference category), English proficiency (Very Limited as reference category), and children (with One Child as reference category) as predictors. The slope coefficients, standard errors, Pearson correlations (*r*), *t*-statistics, and associated *p*-values are shown in Table 4. The results of multiple regression analysis indicated that the model was significant at 5% level of significance and that 24% of variance in the dependent variable (CPK_Gain) was explained by the five categorical predictors, $F(12, 87) = 2.24$, $p = .016$, $R^2 = .24$. Further, the multiple regression model (Table 3) indicated that the slope coefficients associated with education level of College, $t(87) = -2.11$, $p = .038$, and Graduate School, $t(87) = -2.56$, $p = .012$, were significant at the 5% alpha level. In addition, the slope coefficient associated with "Three Children" (from among the four categories of number of children) was significant at the 5% alpha level. The multiple regression model can be written as:

$$\widehat{(CPK\_Gain)} = 2.35 - 0.21*Female - 0.13*African\ American - 0.31*Asian\ American - 0.19*Hispanic - 0.35*High\ School - 0.51*College - 0.88*Grad\ School - 0.23*Average\ English\ Proficiency - 0.23*Good\ English\ Proficiency - 0.26*Two\ Children - 0.73*Three\ Children - 0.01*Four\ or\ More\ Children \quad (1)$$

where $\widehat{CPK\_Gain}$ in (1) is the predicted value of CPK_Gain. Based on model (1), Caucasian Males with "Less than High School" education level, "Very Limited" English proficiency, and with "One Child" are expected to have an average CPK_Gain of 2.35 points. On the other hand, Caucasian Females with "Less than High School" education level, "Very Limited" English proficiency, and with "One Child" are expected to have an average CPK_Gain of 2.14 (2.35 – 0.21) points.

Table 4. Multiple Regression Model with CPK_Gain as Response Variable, Gender, Ethnicity, Education Level, English Proficiency, and Children as Predictors

	Coefficient	*SE*	*r*	*t*	*p*
Constant	2.35*	0.40		5.86	< .001
Gender					
Male	-----	-----	-----	-----	-----
Female	-0.21	0.15	-.13	-1.36	.177
Ethnicity					
Caucasian American	-----	-----	-----	-----	-----
African American	-0.13	0.31	-.06	-0.43	.670
Asian American	-0.31	0.32	-.13	-0.99	.327
Hispanic American	-0.19	0.24	-.12	-0.77	.444
Education Level					
Less than High School	-----	-----	-----	-----	-----
High School	-0.35	0.26	-.20	-1.35	.180
College	-0.51*	0.24	-.35	-2.11	.038
Graduate School	-0.88*	0.34	-.40	-2.56	.012
English Proficiency					
Very limited	-----	-----	-----	-----	-----
Average	-0.23	0.20	-.14	-1.11	.268
Good	-0.23	0.24	-.15	-0.93	.354
Children					
One	-----	-----	-----	-----	-----
Two	-0.26	0.22	-.17	-1.15	.255
Three	-0.73*	0.25	-.44	-2.95	.004
Four and more	-0.01	0.30	-.01	-0.04	.971

Figure 2 shows mean scores on CPK_1 and CPK_2 for the four categories of education level of parents.

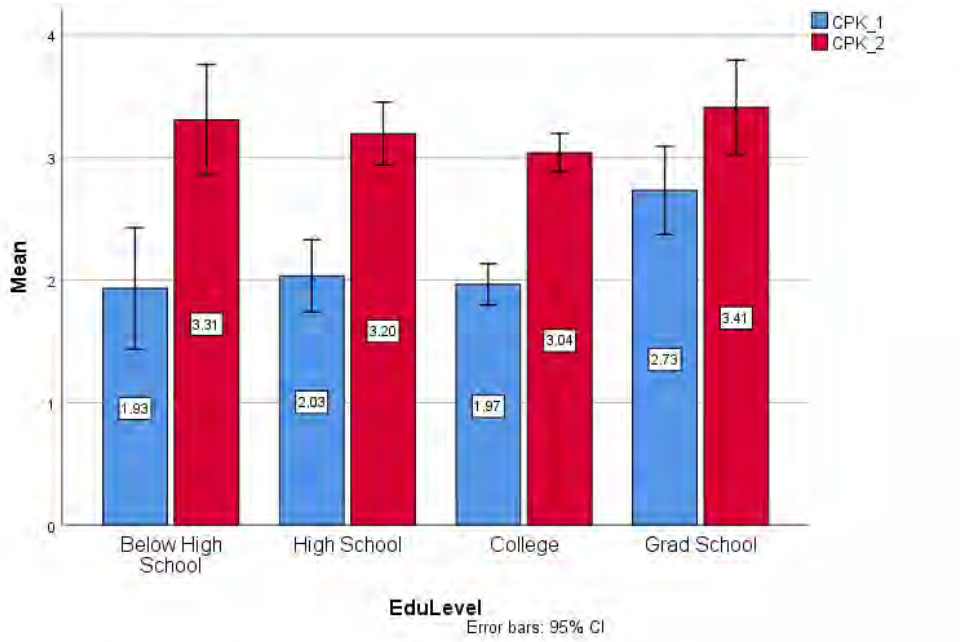

Figure 2. Mean scores with 95% confidence interval of error bars for CPK_1 and CPK_2 across various levels of highest educational level of parents.

In order to answer research question 3, we first created a subsample of participants who reported that their children plan to attend college. There were 88 participants in this subsample. Then, we ran a paired *t*-test using CPK_1 and CPK_2 as the pair of variables. The results of this *t*-test were statistically significant, $t(87) = 13.18$, $p < .001$, at 5% alpha level, implying that participants' CPK significantly increased after ($M = 3.13$, $SD = 0.62$) the conference compared to their knowledge before ($M = 2.10$, $SD = 0.71$) the conference. In addition, the pair of variables (CPK_1 and CPK_2) were significantly correlated, $r(n = 88) = .39$, $p < .001$, at the 5% alpha level. See Table 5 for descriptive and inferential statistics results.

Provided in Table 6 are the results of descriptive and inferential statistics of item-level scores of participants before (Pretest) and after (Posttest) participating in each conference held. As seen in Table 6, participants' item-level average (of the four-point Likert scale) Posttest scores are significantly higher than their Pretest scores. This fact shows that the CPK of participants increased after taking part in the conference. The differing sample sizes (n) reflect the fact that not all 102 participants responded to all questions before and after.

Table 5. Descriptive and Inferential Statistics for the Paired t-test for Parents Whose Children Plan to go to College

	Descriptive Statistics			Inferential Statistics				
Variable	*n*	*M*	*SD*	*r*	*MD*(*SE*)	*t*	95% Confidence Interval	
							LCL	*UCL*
CPK_1	88	2.10	0.71		---	---	*LCL*	*UCL*
CPK_2	88	3.13	0.62	.39**	1.04 (0.08)	13.18**	0.88	1.19

Note. ** $p < .001$; *MD*(*SE*) = Mean Difference with Standard Error in parentheses; *LCL* = Lower Confidence Limit, *UCL* = Upper Confidence Limit.

Table 6. Descriptive Statistics (Means, Standard Deviations, and Pearson Correlations) and Results of Paired t-Test for Individual Survey Items

	Pre-test	Post-test					
Item	*M* (*SD*)	*M* (*SD*)	*r*	*n*	*t*	*df*	*p*
1. I know how my child will pay for his/her college/university education.	2.06 (0.80)	3.03 (0.70)	.35	98	11.22	97	< .001
2. I know how to calculate my child's GPA.	2.16 (0.91)	2.91 (0.74)	.38	100	8.11	99	< .001
3. I know what dual enrollment courses are.	2.43 (1.00)	3.27 (0.64)	.41	98	8.83	97	< .001
4. I know why AP or Advanced Placement courses are important when preparing to attend college/university.	2.77 (0.99)	3.33 (0.68)	.48	101	6.27	100	< .001
5. I know when applications for federal financial aid (FAFSA) become available.	2.24 (0.96)	3.30 (0.73)	.21	100	9.89	99	< .001
6. I know what documentation is needed to apply for federal financial student aid (FAFSA).	2.22 (0.77)	3.26 (0.97)	.19	100	9.30	99	< .001
7. I know how to calculate how much federal financial student aid can be expected based on a given income.	1.84 (0.85)	2.97 (0.80)	.31	100	11.64	99	< .001
8. I know other reasons why the federal financial student aid (FAFSA) documentation is filled out.	1.93 (0.83)	3.15 (0.74)	.29	101	13.11	100	< .001

Table 6, continued

9. I know what the differences between grants, loans, and scholarships are.	2.19 (0.98)	3.21 (0.72)	.33	98	10.05	97	< .001
10. I know what various financial aid options available to pay for college/university are.	1.99 (0.87)	3.15 (0.73)	.27	100	11.94	99	< .001
11. I know what the eligibility requirements to receive federal financial student aid (FAFSA) are.	1.91 (0.86)	3.11 (0.75)	.32	98	12.67	97	< .001
12. I know what requirements need to be met to continue receiving federal financial student aid (FAFSA).	1.89 (0.83)	3.15 (0.76)	.22	100	12.71	99	< .001
13. I know what the TAFSA is.	1.77 (0.77)	3.21 (0.79)	.25	98	15.04	97	< .001
14. I know who may be eligible to apply for TAFSA.	1.72 (0.76)	3.19 (0.76)	.26	96	15.50	95	< .001
15. I know what the admission process is to be admitted to a community college and/or university.	2.02 (0.93)	3.21 (0.68)	.34	96	12.33	95	< .001
16. I know how a student can transfer from a community college to a university.	2.06 (0.96)	3.21 (0.71)	.34	97	11.51	96	< .001
17. I know what ninth graders (freshman) need to do to prepare for college.	1.98 (0.89)	3.12 (0.76)	.43	91	12.26	90	< .001
18. I know what tenth graders (sophomore) need to do to prepare for college.	2.02 (0.91)	3.16 (0.73)	.41	92	12.05	91	< .001
19. I know what eleventh graders (juniors) need to do to prepare for college.	2.01 (0.90)	3.20 (0.70)	.36	94	12.57	93	< .001
20. I know what twelfth graders (seniors) need to do to prepare for college.	2.08 (0.89)	3.17 (0.80)	.42	65	9.64	64	< .001

Discussion

Though the number of participants in the study is small, the data are telling. First, as our data revealed, parents who participated in the conferences made gains in their CPK, regardless of ethnicity or educational background. For us, this is an important finding given that we had assumed that gains would only be evident in the parents of prospective first generation college students and those with lower education levels (Tornatzky et al., 2002). However, as the data showed, these gains were consistent across groups, though the gains from those with graduate degrees were smaller than the rest. As such, our findings seem to indicate that college access and educational initiatives that prepare and support families in their information gathering about educational paths after high school are necessary, regardless of who they are and what their education level is. Making assumptions of who needs what information is inaccurate, at best.

While the program had intended to only reach Hispanic parents when it began, in part because that was the largest population served by the program initially, data revealed that this information was needed across groups, thus highlighting the need for all families to be supported and exposed to this content. In other words, although the literature suggests college outreach programs can effectively narrow the information gap for underrepresented groups (Auerbach, 2004), we believe this information gap can be narrowed for all, if the right supports and information are provided to them. Efforts that can identify on an ongoing basis what information families and students need and want to learn about is necessary.

Second, analyses of the variation of CPK gains from the pretest to the posttest answers demonstrate that program participants needed to be more informed on financial aid, particularly the qualifications for receiving financial aid opportunities (e.g., FAFSA vs. state financial aid, in this case TAFSA), the requirements for continuing to receive financial aid, and the key milestones students need to reach in order to be college ready. Interestingly, while attendees appeared to have been more familiar with the tasks seniors or twelfth graders need to do to be "ready," they were not as knowledgeable about what students in all the other levels had to do, as shown in Table 6. Typically, discussions about college readiness and preparation are limited to high school-level tasks (Conley, 2010), and college and career readiness efforts have focused on students who are about to finish high school. As such, we call for efforts that expand beyond Grades 9–12 and emphasize the milestones all students need to achieve in order to be on the career or college path they choose. More research, however, is needed to determine if earlier outreach efforts can have the impact that outreach programs are having for high school students.

Data demonstrated participants had limited information about university admissions as well as how to transfer from a community college to a university. Participants' knowledge of dual enrollment courses and AP classes did not change as much, perhaps in part because of the emphasis placed on both of these options in local school districts. However, there is a need to discuss how these courses could support their children as they transfer to technical and community colleges or a university. Doing so will help them understand the ways in which these courses can leverage students' career and college efforts while they are still in high school.

As such, we believe that partnerships between parents and high school, college, and financial aid counselors as well as college outreach programs that can provide this information to both students and families is necessary to ensure all students and their families can have access to the information they need. Sharing information with them about not only processes and timelines, but also ways they can proactively support their children, such as knowing how to read their grade point averages and seeking tutoring when needed (Chen & Gregory, 2010; Gordon & Cui, 2015), should be a priority for outreach efforts. Likewise, there is a great need to expand outreach efforts that emphasize not just what students need to do to attend a community college or university, but that would allow them to explore all the possibilities that are available, including seeking employment, attending trade school, and/or joining the military. Because parents' discussions with their children can proactively shape these decisions (McNeal, 2012), we believe that limiting these outreach discussions only to being college ready can be a detriment to the future of our students. Families and students need to be aware of the myriad opportunities they have access to, and outreach efforts should put students and their families at the center so that they can choose the path that is best for them. Having a variety of voices represented as part of these outreach efforts is an important first step, and we call on outreach programs to proactively seek opportunities that can give all students and their families a pathway to success.

Limitations

The study had limitations, but these are starting places for moving this work forward in the future. One of the limitations is that participants in our study were selected using a nonrandom sample (those who showed willingness to attend a conference and signed a consent form for research purposes were included). Some of these participants did not complete all questions in the postconference survey questionnaire, which resulted into differing sample sizes in Table 6. One way to obviate this problem is to replace missing values with the average of nearest values, which has its own limitation. Another approach

is to delete participants with incomplete data. This approach reduces sample size. Thus, we presented data as they were. However, in our pretest–posttest design, participants served as their own controls. The second sample of 88 participants, representing parents whose children had already decided to go to college, was a subsample of the original participants. This subsample was considered for subgroup analysis.

Another limitation of this study is that we did not seek advice from experts in the subject area for ensuring content validity of our instrument (survey questionnaire). However, the instrument we designed was, as argued already, directly derived from what the literature has shown students need to be college ready, and we used pilot data collected in years one and two to create the instrument used in its final modality for year three.

Lastly, we did not have a follow-up study to determine the extent to which these families used the information gained (or otherwise) as they supported their children in the long term. Future research should aim to conduct longitudinal studies to track and follow participants for further insight into how their participation in such conferences helped them and their children in the long-term. A follow-up study would have also helped determine not just their CPK but the application of this information, possibly resulting in college enrollment and career decision making. Future studies could also include a reflective, qualitative follow-up with participants, with data collection focused on family perceptions and opinions on the utility of the information they received.

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Carla Amaro-Jiménez is an associate professor of Bilingual and English as a Second Language Education at the University of Texas at Arlington. Her research interests include preservice and in-service teacher preparation in culturally and linguistically diverse environments, equity issues related to the schooling of English language learners, and pathways that can lead to college enrollment for traditionally underrepresented and Hispanic students. Correspondence concerning this article should be addressed to Dr. Carla Amaro-Jiménez, 701 Planetarium Place, Arlington, TX 76019, or email amaro@uta.edu

Mohan Dev Pant is an associate professor at the School of Health Professions at Eastern Virginia Medical School. Dr. Pant's current research interests include biostatistics, statistical computing, and Bayesian statistics.

Holly Hungerford-Kresser is an associate professor of English education and literacy studies at the University of Texas at Arlington. A former high school English teacher, Dr. Hungerford-Kresser remains committed to literacy research that promotes equity via pedagogy and practice. Her current research projects focus on the intersection of college readiness, preservice teacher education, and underserved student populations.

Jason den Hartog teaches English and coaches wrestling at Arlington High School. He hopes to one day get a PhD in the History of Education.