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THE PREDICTABILITY OF TYPES OF MENTORING RELATIONSHIPS ON THE PERCEIVED RETENTION STATUS AND ACADEMIC SUCCESS OF COLLEGE UNDERGRADUATE STUDENTS

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ABSTRACT

The purpose of this study was to examine the predictability of types of mentoring relationships on the perceived academic success and retention status of undergraduate students from two historically Black colleges and universities. Specifically, this study focused on the predictable relationship between types of mentoring relationships, such as peer mentorship, faculty mentorship, e-mentorship, and group mentorship, on the perceived academic success and retention status of undergraduate students. A correlational multiple regression design was used in this study. Two hundred and sixty (260)

undergraduate students were selected to participate in the study. An instrument entitled Undergraduates' Perception of Performance Behavior Survey was used to collect data in this study. This instrument was found to have excellent content validity from a group of experts in the field of higher education. An alpha coefficient of .85 was computed for the instrument. Furthermore, the data were tested utilizing the Standard Multiple Regression Technique. The data revealed that types of mentorship relationships did have some predictive validity regarding perceived retention status and academic success.

KEYWORDS: Educational Leadership, Higher Education, University Administration, Historically Black University (HBCU).

The Predictability of Types of Mentoring Relationships on the Perceived Retention Status and Academic Success of College Undergraduate Students

INTRODUCTION

Retention of undergraduate students remains a key focus for institutions of higher education (Simmons, 2013). NCES (2020) suggests that nearly 40% of students enrolled at least a selective four-year college or university were not retained during the 2017-2018 school year. Demetriou et al., (2017) states post-secondary institutions must focus on the issue of undergraduate retention. Additionally, Talbert (2012) posits that undergraduate retention continues to be a crucial problem for institutions of higher education.

Research shows that poor retention rates among minority students are prevalent within higher education institutions (Brittan, Sy, & Stokes, 2009). Black undergraduate males have the lowest retention rates among all races and sexes in regard to institutions of higher education (Sinanan, 2016). Undergraduate students drop out of college for a variety of reasons, such as low self-esteem, academic motivation, first-year GPA, and feeling marginalized by the campus environment (Yomotov, Plunkett, Efrat, & Marin, 2017). Moreover, Yomotov et al., (2017) asserts that undergraduate students are more likely to drop out due to the lack of social support while attending college. Some colleges and universities are having difficulty retaining their students which results in students having substandard graduation rates (Simmons, 2013).

According to Soria and Stebleton (2012), some college students have low confidence in their academic ability and preparedness for the rigor of college coursework. Moreover, Seirup and Rose (2011) states 25% of all undergraduates will be placed on academic probation. Additionally, students who are placed on academic probation receive lower than a 2.0 grade point average and struggle with transitioning and adapting to college life (Seirup, & Rose, 2011).

Many researchers such as Perez (2017), Kring (2017), Brooms and Davis (2017), have examined the phenomena of mentoring relationships and undergraduate students' academic performance

behaviors. An increasing number of higher education professionals are exploring the association between mentoring relationships and undergraduate students' academic performance.

According to Crisp, Baker, Griffin, Lunsford, and Pifer (2017), mentoring programs and practices have become more prevalent at colleges and universities across the nation. Mentorship practices within colleges and universities can be essential in improving graduation rates, reducing discrimination among marginalized and underrepresented groups, and increasing participation in STEM (Crisp et al., 2017). Crisp et al., (2017) further note that for decades institutions of higher education have utilized mentoring as a retention strategy, and research has shown that mentorship is positively correlated with developmental and academic success.

Colvin and Ashman (2010) state that a major benefit of undergraduate students having a mentor is improved academic performance. According to the results of Budny et al., (2010) study, mentorship is directly related to improved academic performance of undergraduate students. More specifically, their study shows that mentoring relationships among undergraduate students helps to increase GPA, decrease the number of students on probation, and increase the number of students who receive honors.

The purpose of this study was to examine the predictability of types of mentoring relationships on the perceived academic success, and retention status of undergraduate students in the United States. Specifically, this study focused on the predictable relationship between types of mentoring relationships (peer mentoring, faculty mentorship, e-mentorship, and group mentorship) on the perceived academic success, and retention status of undergraduate students. Therefore, it can be hypothesized that type of mentoring relationships does have some predictive power regarding perceived academic success and retention among undergraduate students.

2. THEORETICAL FRAMEWORK

This study adopted Albert Bandura (2002) social cognitive theory (SCT) previously known as the social learning theory (SLT). More specifically, concept of *reciprocal determinism*, a central concept of social-cognitive theory, describes the reciprocal interaction and mutual influence between individual factors, such as cognition and individual or personal behavior, and social factors, such as environmental influences. In other word, Bandura argues that behavior, cognition, and environment all interact with and influence one another. Bandura would maintain that mentoring behavior influences by both the social world and personal characteristics. Reciprocal determinism in particular play a much more active and interactive role in the learning process. It is one's own personal characteristics, thoughts, feelings, and behaviors that impact on how we interact others (mentors—parents, teachers, pastors or spiritual leaders and/or peer sand the world at large (Bandura, 2002), which is reciprocal determinism.

Bandura's early introduction of the SLT also emphasizes that behavior; personal; and environmental factors are all equal, interlocking determinants of each other, which is reciprocal determinism. Bandura's SCT proposed later that human behavior encompasses core features that include both internal behavioral predispositions, such as cognition, affect, or motivation, but also various environmental influences (Bandura, 2001; 20002). Additionally, SLT initially states that behaviors are learned through direct experience and observation (Bandura, 1977). Suggesting that learning that occur by direct experience occurring through a series of consequences, both positive and negative, does influence future behaviors. This occurs through modelling by observing what others do and imitating those behaviors based on the consequence's others faced. Bandura maintains that "the actions of others can also serve as social cues that influence how others will behave at any given time" (Bandura, 1977, p. 11). Observational learning is a major component of Bandura's initial social learning theory. He further emphasized that four conditions were necessary in any form of observing and modeling behavior to occur, which were attention, retention, reproduction, and motivation. First, attention involves the individual paying attention to the role model. Second, the individual must retain the behavior that was observed from the role model. Third, the individual must duplicate the behavior that was observed. Finally, individuals must have a desire to show what was learned (Bandura-McClelland, 1977).

Applying the concept of reciprocal determinism more directly to mentoring relationship, reciprocal learning is an instructional model in which students work in pairs to master lesson content. Cooperating in well-defined roles of doer and observer (i.e., mentor and mentee or tutor and tutee) to maximize their own and each other's learning. The mentees will observe and imitate their mentors, learning behaviors and attitudes that may lead to higher self-concept. Self-concept is a person's self-perceptions that are formed through experience and the observation of one's environment (Marsh & Martin, 2011). Research confirms that quality mentoring relationships have powerful positive effects on young people in a variety of personal, academic, and professional situations. Ultimately, mentoring connects a young person to personal growth and development, and social and economic opportunity. Research shows that role models, such as mentors, have the ability to positively impact academic performance and the retention rate among undergraduate students (Chang, Buonora, Stevens, & Kwon, 2016; Shojai, Davis, & Root, 2014).

Bandura 's social cognitive theory, formerly known as social learning theory through reciprocal determinism, observation, and modelling aligns well with mentor-mentee relationships and could increase self-concept. Moreover, Bandura, suggest that "a person's judgments of her or his ability to perform an activity, and the effect this perception has on the on-going and future conduct of the activity" (Henk & Melnick, 1995, p. 471). These judgments are thought to influence a person's choice of activities, task avoidance, effort expenditure, and goal persistence, thereby affecting achievement.

Lastly, this present study focuses on the impact of mentoring relationships on undergraduate students perceived academic success as well as their retention status. According to Ashenbrener and Johnson

(2017), role models who support and mentor undergraduate students will positively impact their performance in college. Mentorship provides undergraduate students with new learned behaviors through their interactions and observation of a role model. As it relates to the Bandura's central tenants in social cognitive learning theory, previously known as the social learning theory undergraduate students who are mentors will learn new information and behaviors that can help them improve their GPA, retention, and persistence toward graduation. The social cognitive theory, previously known as the social learning theory, does provides the theoretical and empirical support for this study.

3. Operationalization of the Variables

The following variables were operationally defined for the purpose of providing clarity and understanding to this research investigation.

- Academic Success – Refers to undergraduate students' grade point average.
- E-Mentorship – refers to undergraduate students who seek career guidance, academic, social, and emotional support through online formats such as LinkedIn, Facebook, Twitter, Instagram, email, Zoom, etc.
- Faculty Mentorship – refers to a professor who provides career guidance, academic, social, and emotional support to undergraduate students.
- Group Mentorship – refers to a group of undergraduate students who receive career guidance, academic, social, and emotional support from a mentor (peer, faculty, or staff) within a group setting.
- Peer Mentorship – refers to an upper-class undergraduate or graduate student who provides academic guidance, advice, social, and emotional support to an under-classman or freshman student.
- Perceived Academic Success – refers to how undergraduate students' view their academic performance.
- Perceived Retention Status – refers to how undergraduate students see themselves returning with enough credits to progress to the next level.
- Retention Rate – refers to the percentage of first-time, first year undergraduate students who return with enough credits to progress to the next level.

4. METHODOLOGY

A correlational research design (see Figure 1) was employed in this investigation. This type of quantitative methodology will allow the researcher the opportunity to collect data to assess the degree of relationship that exists between two or more variables (Gay, Mills, & Airasion, 2012). According to Gay, Mills, and Airasion, (2012), a correlational study is utilized to measure something that has already occurred. The utilization of a correlational research design will allow the researcher to predict scores on one variable from study participants' scores on other variables (Mertler, & Vannatta 2016). Additionally, one of the most common strengths of the correlational research design is the simplicity of the design (Gay, Mills, & Airasion, 2012). A correlational design will allow the researcher to

investigate the predictability of types of mentoring relationships on the perceived performance behaviors of undergraduate students.

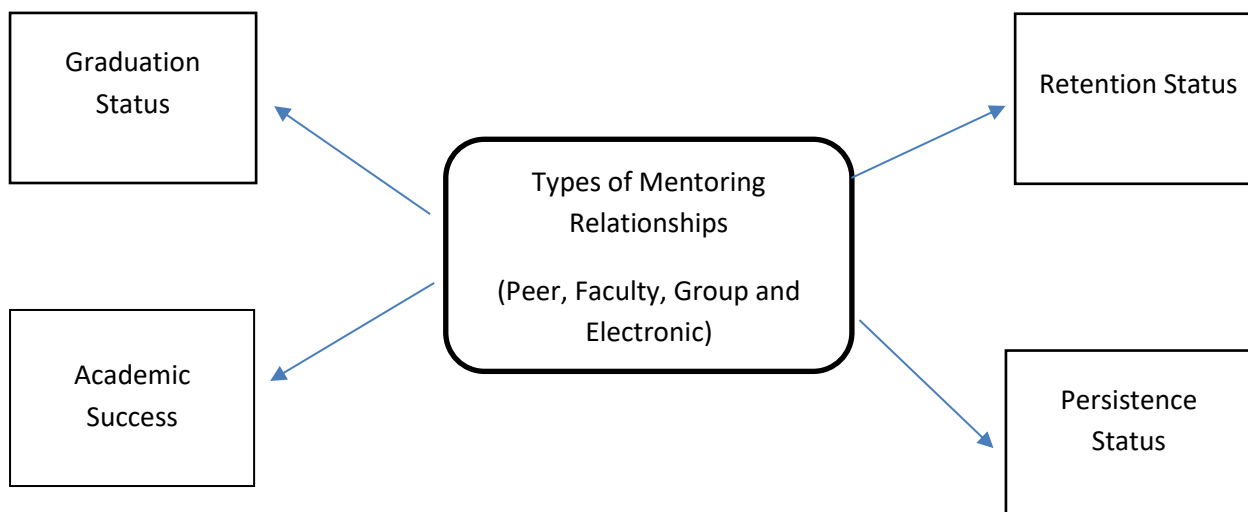


Figure 1: Correlational Predictable Design

4. 1. Population and Research Setting

The participants of this study involved current undergraduate students who have experienced a mentoring relationship at one of two HBCUs. The participants in this study consisted of young to middle aged adults who experienced a faculty mentor, peer mentor, group mentoring, or e-mentoring relationship. The research setting consisted of two public HBCUs, located in the Midwestern and Southcentral region of the United States.

Urban University A is one of the most comprehensive urban universities in the nation and it is located in the Southcentral region of the United States. This university has a population of approximately 6,000 undergraduate students and is considered a commuter campus, which included traditional and non-traditional students. Urban University A offers over 100 academic programs to undergraduate students. Rural University B is an 1890 Land Grant Institution, and it is located in the Midwestern region of the United States. This University has a population of approximately 2,000 undergraduate students and is considered a traditional campus where students live on campus. Rural University B offers over 30 academic programs for undergraduate students.

4. 2. Sampling Procedure

A purposive sample was utilized to collect participants for this study. According to Kerlinger and Lee (2001) by utilizing a purposive sampling technique, the researcher had the ability to select individuals based on a variety of criteria that is believed to be representative of a specific population.

For the purpose of this study, the sample was selected based on the following criteria: 1) the participant must be currently enrolled at a college or university, 2) the participant must be an undergraduate student, 3) enrolled in one of the targeted universities during the spring semester of 2020-2021, and 4) the participant must have experienced a mentoring relationship (peer, faculty, group, electronic).

4. 3. Instrumentation

Undergraduate's Perception of Performance Behaviors Survey, a self-devised instrument was used to collect the data. The instrument contained 26 items covering two major areas. Section I contains demographic items and items pertaining to type of mentorship. Section II which is entitled, student's perception, 1 consists of 20 items covering four areas. Area one which is entitled, "Student's Perception Regarding Retention Status" consists of 7 items. The third area which is entitled, "Student's Perception Regarding Persistence Status" contains 7 items. Likewise, the fourth area which is entitled, "Student's Perception Regarding Graduation Status" consists of 5 items.

Furthermore, all items in section II of the instrument are in a Likert format. The students will be required to rate each item on a five-point Likert scale. For analysis purposes, the scale scored (1) Strongly Agree (2) Agree (3) Neutral (4) Disagree (5) Strongly Disagree. The responses were tallied to determine the perceived performance behaviors of college undergraduate students.

To establish content validity on the Undergraduate's Perceptions of Performance Behaviors Survey, the researcher administered the instrument to several experts in the field of higher education. The experts were asked to assess the content (items) of the instrument by using a scale of 0 to 2 (zero means that the item is not measuring the intended area, one meaning that it is not clear, and two means that the item is measuring the intended area areas). Once the experts agreed that the instrument is measuring that the intended areas, the instrument was field tested.

4. 4. Reliability of the Instrument

Internal consistency reliability was established on the questionnaire. This type of reliability was conducted to assess how all items on the instrument are related to each other and the instrument as a whole. To establish this type of reliability, the alpha coefficient was used. The following alpha coefficients were computed for each subscale and the instrument as a whole:

Academic: .948
Persistence: .962
Total: .985

Retention: .953
Graduation: .955

4. 5. Statistical Analysis

The data analysis employed in this study was simultaneous multiple regression. The simultaneous multiple regression analysis allowed the researcher the opportunity to examine the predictability between multiple predictor variables and a single criterion variable (Warner, 2012). More specifically,

this statistical model permitted the researcher to examine the predictive power of each variable in the study while controlling for all other predictor variables (Warner, 2012).

5. RESULTS

5. 1. Descriptive Analyses of the Participants

Gender: Two hundred and sixty undergraduate students participated in the present investigation. The undergraduate college students consisted of 65 or 25 percent male students and 195 or 75 percent female students. Thirty or 11.5 percent of the undergraduate students indicated their age to be 18 years or less and 97 or 37.3 percent of them indicated their age to be between 19 and 20. Moreover, 60 or 23.1 percent of the undergraduate students acknowledged their ages was between 21 and 22. Finally, 73 or 28.1 percent of the undergraduate students expressed their age as 23 and above.

Of the undergraduate college students, 187 or 71.9 percent reported their ethnic status as African American and 24 or 9.2 percent indicated their ethnic identity as Hispanic. Furthermore, 21 or 8.1 percent of the undergraduate students expressed their ethnicity as White American. The remaining 28 or 11.6 percent of the students revealed their ethnic identification as other. Finally, 64 or 24.6 percent of the undergraduate students identified themselves as freshman and 57 or 22 percent reported they were sophomores. Likewise, 67 or 25.8 percent of the undergraduate students acknowledged they were juniors and 72 or 27.7 percent revealed they were seniors.

5. 2. Examination of Null Hypotheses

H_{01} : There is no statistically significant relationship between types of mentoring relationship (peer mentorship, faculty mentorship, e-mentorship, and group mentorship) and the perceived academic success of undergraduate students.

Presented in Table 1 were the Standard Multiple Regression results regarding the relationship between the type of mentoring and the perceived academic success scores of undergraduate students. The regression model yielded a multiple correlation of .203. The four mentoring variables of peer, faculty, electronic, and group, together accounted for 4.1 percent (adjusted = 2.6) of the variance in the perceived academic success of undergraduate students.

A significant linear relationship was found to exist between the four mentoring predictors (peer, faculty, electronic and group) and the perceived academic success scores of undergraduate students ($F(4,255) = 2.741, P < .05$). In addition, when the variables peer mentoring, e-mentoring, and group mentoring ($t(255) = 2.355, P < .05$) contribute significantly to the perceived academic success of undergraduate students. Consequently, hypothesis 1 was rejected.

Table 1: Standard Multiple Regression Results Regarding the Relationship Between Type of Mentoring Relationships and Perceived Academic Success

Model	B	SE	Beta	T	P
(Constant)	25.397	1.330			
Peer	.751	1.513	.048	.496	.620
Faculty	3.684	1.564	.224	2.355	.019*
Electronic	.697	.835	.066	.834	.405
Group	-1.197	2.388	-.036	.501	.617

Note: $R = .203$; $R^2 = .041$; Adjusted $R^2 = .026$; $F = 2.741$; $df = 4,255$; $P = .029^*$

Staff Mentoring is the reference group

*Significant at the .05 level

H_{02} : There is no statistically significant relationship between types of mentoring and relationship (peer mentorship, faculty mentorship, e-mentorship, and group mentorship) and the perceived retention success of undergraduate students.

A Standard Multiple Regression statistical procedure was computed to determine the relationship between types of mentoring relationship and the perceived retention status scores of undergraduate students. As shown in Table 2, the Multiple Regression Model yielded a multiple correlation of .181. The mentoring factors or peer mentorship, faculty mentorship, and e-mentorship, and group mentorship combined accounted for 3.3 percent (Adjusted = 1.8%) pf the variance in the perceived retention scores among undergraduate students.

Furthermore, a statistically linear relationship was not found to exist between the four mentoring factors (peer, faculty, electronic, and group) and the perceived retention scored ($F(4,255) = 2.168$, $P < .05$) of undergraduate students. Neither if the mentoring variables was found to contribute significantly to the perceived retention scores among the undergraduate students. Thus hypothesis 2 was not rejected.

Table 2: Standard Multiple Regression Results Regarding the Relationship Between Type of Mentoring Relationships and Perceived Retention Success

Model	B	SE	Beta	T	P
(Constant)	25.077	1.429			
Peer	-.125	1.626	-.007	-.077	.939
Faculty	3.245	-1.681	.184	1.931	.055
Electronic	.763	.898	.067	.850	.396
Group	.857	2.566	.024	.334	.739

Note: $R = .181$; $R^2 = .038$; Adjusted $R^2 = .018$; $F = 2.168$; $df = 4,255$; $P = .073$ Staff Mentoring is the reference group

6. DISCUSSIONS

One of the most interesting findings of the present study was the significant impact of type of mentoring relationship factors had on the perceived academic success of undergraduate students. Specifically, the variables peer mentorship, faculty mentorship, e-mentorship, and group mentorship were found to be significantly linear related to the perceived academic success of undergraduate students.

Even though peer mentorship, faculty mentorship, e-mentorship and group mentorship were found to be linearly related to academic success together, only faculty mentorship was found to be an independent predictor of perceived academic success among undergraduate students. Previously, findings regarding the predictable relationship between faculty mentorship and the academic behaviors of undergraduate students were consistent with those of Haeger and Fresquez (2016), Kendricks, Nedumuri and Arment (2013), Baker (2013), Junge, Quinones, Teodoresco, and Marsteller (2010) and Wilson, Iyengar, Pang, Warner, and Locas (2012). All of the aforementioned researchers found a positive relationship between faculty mentorship and academic success among undergraduate students.

A plausible explanation for the present finding regarding the relationship between faculty mentor and the academic success among undergraduate students may be that faculty support is needed more so on historical black college campuses because of the academic deficiencies that a large portion of the students attending these institutions bring with them. Faculty members on black college campuses understand this dilemma and know they need to spend more time with their students in order to assist them in overcoming their academic challenges so they can feel more comfortable in achieving their academic potential.

Moreover, the lack of influence that peer mentoring, e-mentoring, and group mentoring, individually had on the perceived academic success of undergraduate students were not consistent with previous research conducted between these variables. Regarding peer mentorship, the findings were not favorable to those of Koegel, and Koegal (2017), Rando, Huber, & Oswald (2016), Walker & Verklan (2016), Fianco (2012), Gust & Valle-Riestra (2017), Riesk & Benjamin (2015) and Lewis (2017). However, findings regarding the lack of relationship between peer mentoring and academic success were supported in research conducted by Graham & McClain (2019), Blankenship et al. (2020) and Baker (2013).

Furthermore, the lack of predictable relationship between group mentoring and academic success among undergraduate students did not correspond to those by Chung, Boonora, Stevens, & Kwon (2016). Again, these researchers (Strojai Davis, & Root, 2014) found a positive relationship between group mentoring and academic success among undergraduate students.

Another notable and surprising finding in the present study was the lack of relationship found between the types of mentoring factors and the perceived retention status of undergraduate students. To be sure, peer mentorship, faculty mentorship, e-mentorship, and group mentorship were found not to be significantly linear related to retention among undergraduate students. These findings were favorable of Etzel, Algifari, Shields, Wang, & Bilack (2018), Blankenship et al. (2020), and baker (2013) regarding peer mentoring and retention status of undergraduate students.

On the other hand, the findings with regard to the predictable relationship between peer mentoring, faculty mentoring, group mentoring, and retention were not favorable (Schneider et al., 2015; Ricks et al., 2014; Kendricks et al, 2013, Lisbery & Woods, 2018, and Proctor et al., 2018). All of the above researchers found that peer, faculty, and group mentoring were significant predictors of the retention status among undergraduate students.

A reasonable explanation for the lack of a predictable relationship between types of mentoring factors and retention maybe that these factors collectively have a direct effect on the overall well-being of students attending historically black institutions. Due to the supporting and caring nature of mentorship in general, together they seem to reduce the drop out rates among undergraduate students on black college campuses.

7. CONCLUSIONS

The following conclusions were generated from the results of the study. First, it appears that the type of mentoring relationship factors or peer mentorship, faculty mentorship, e-mentorship, and group mentorship do have some predictive validity with regards to the perceived academic success of undergraduate students. Second, in general, for every one-point increase in faculty mentorship there was a 3.68 increase in undergraduate students perceived academic success scores. Lastly, the type of mentoring relationships of peer mentorship, faculty mentorship, e-mentorship, and group mentorship had no predictive validity on the perceived retention scores of undergraduate students.

8. IMPLICATIONS

The following implications were offered for consideration by administrators on college campuses.

1. The significant relationship that exists between mentoring factors and the perceived academic success among undergraduate students suggests that there is a need on college campuses, especially on black college campuses, to take a serious look at the significant impact that mentorships have on the perceived performance behaviors among students. An awareness of this relationship by college administrators who are responsible for the academic preparedness of students would go a long way to enhance not only the academic self-concept but also the academic self-efficacy of students.
2. Finally, the lack of significant relationships found between mentoring factors and the perceived retention status among undergraduate students suggest that academic advisors and other service-

related personnel on college campuses should be aware of the influence that type of mentoring relationships have on students remaining in school. It should be pointed out that some undergraduate students who have persisted in college for the most part have been exposed to some type of mentoring relationship. It is from this frame of reference that various mentoring relationships have been used as intervention strategies by some administrator on college campuses to help undergraduate students persist in college.

9. Recommendations for Further Study

To further extend the findings of this study, the researcher recommends that a study be conducted to examine the predictive power of selected components of mentoring programs on the overall academic well-being of college students.

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