Examining Differences in Occupational Engagement Among First-Time in College and Transfer College Undergraduate Students in the Southeastern United States

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Abstract

This study examined occupational engagement and its relationships with three constructs: academic major satisfaction (AMSS), general self-efficacy (GSE), and career exploration (CES). Participants were undergraduate students (N = 182) categorized as either First-Time in College (FTIC; n = 119) or Transfer College students (n = 55). Scales achieved acceptable reliability (alpha = 0.78-0.86). The occupational engagement scale (OES) was statistically and practically related to the GSE ($r(178) = 0.44$, $p = .001$) and AMS ($r(178) = 0.22$, $p = .003$) at a small effect size, but not to the CES ($r(178) = -0.14$, $p = .12$). Transfer students are delayed in engaging in OES behaviors compared to FTIC students ($p = .006$; partial eta squared = .05). Despite a later start, these two populations reported no significant differences in OES ($p = 0.49$; $g = .07$). This study demonstrates occupational engagement's associations with important constructs. We discuss the importance of occupational engagement in shaping student persistence and career readiness, offering insights that can inform institutional strategies aimed at enhancing student retention and success, particularly for transfer students.

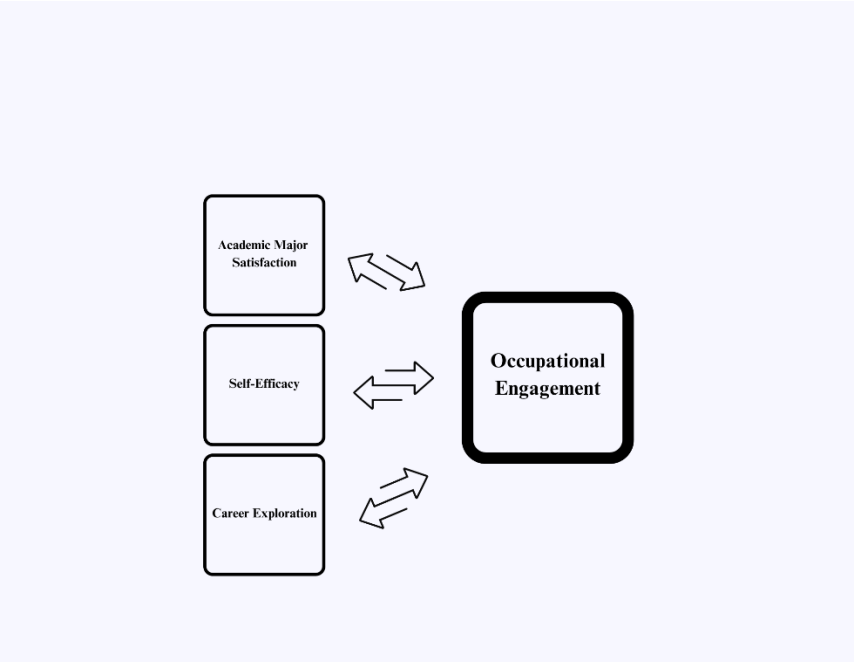
Keywords: Self-efficacy, transfer student success, academic major satisfaction, career decision-making, career exploration

The world of work has been, and remains, changing. Individuals and career professionals are having to shift from the mindset of finding the perfect career match to building vocational adaptability (Krieshok et al., 2009). Occupational engagement, a critical component of the trilateral model of adaptive career decision-making, refers broadly to the proactive behaviors students undertake to explore and enrich their career pathways.

Built upon research in decision-making involving judgement, decisional-processes, and neuroanatomy, Krieshok and colleagues hypothesized that career decision-making is comprised of intuitive (System 1 thinking) and rational processes (System 2 thinking), which are "kept in check" by occupational engagement behaviors (Krieshok et al., 2009, p. 276). Within the trilateral model of adaptive career decision-making, occupational engagement represents behavioral dimensions of exploration and enrichment. It is hypothesized that more engagement in these behaviors increases the fund of information possessed by System 1 and System 2 processes, which should allow individuals to make more informed decisions. Our Figure 1 illustrates our hypothesized relationships among occupational engagement behaviors and key student success variables across psychological (self-efficacy), academic (major satisfaction), and vocational domains (career exploration) within a cross-sectional design. For example, Academic major satisfaction (AMSS) may motivate students to engage more deeply in career-related activities, while general self-efficacy (GSE) provides the confidence needed to pursue challenging occupational experiences. These bidirectional relationships suggest that occupational engagement is associated with students' overall career development process.

Figure 1

Hypothesized Model of Occupational Engagement and associated constructs



Empirical literature suggests that occupational engagement has been associated with academic major satisfaction (Cox et al., 2016), career satisfaction (Carter, 2019), and self-efficacy. Despite its robustness, there is a need for research that directly addresses how occupational engagement influences student success and academic persistence, particularly for transfer students, who often face institutional barriers in accessing career development resources. Within such efforts, it is necessary to explore further the impact of occupational engagement on college students from various backgrounds and institutional types to gain more valuable insight into the needs of students, especially transfer students. In working towards furthering the understanding and application of the trilateral model, the current study assesses the occupational engagement scale student version across transfer students and first-time in college students (FTIC) using established constructs from career development and higher education.

In this study, we focus on three constructs closely related to occupational engagement: academic major satisfaction, general self-efficacy, and career exploration. These constructs were selected because they reflect dimensions of student success that occupational engagement may influence – students' satisfaction with their academic pathways (AMSS), their confidence in handling challenges (GSE), and their proactive exploration of career options (CES). Together, these elements have been consistently tied to persistence and retention in higher education, making them essential for understanding the role of occupational engagement in student success. These insights are aimed at providing educational professionals with the knowledge to implement current theories, practices, and pedagogies into university programming and curriculum.

Decision-making and the Current Vocational Environment

Choosing an educational and career direction is a primary focus for young adults in college. The characterization of an emblematic career and the terms of work we once knew have dissipated. There are now ongoing changes in the world of vocational decision-making where individuals and career professionals are having to shift from the mindset of finding the perfect career match to building vocational adaptability (Krieshok et al., 2009). In his analysis of the rise and fall of conventional careers of the twentieth century, Savickas (2000) presented how current vocational psychology has responded to, and transformed, the terms of work in today's global economy. Today, individuals are faced with the aspect of a career as a lack of job security and a state of unpredictability (Savickas, 2000). The historical structures of vocational constructs from the 20th century demonstrated a system where an individual could easily rise from an entry-level position and gain more responsibility, prestige, and income. However, the current climate of careers does not necessarily grant a similar path of ascension for those in the job market. Due to

this shift, the responsibility of gaining transferable skills and vocational adaptability falls on the individual (Savickas, 2000). A shift of this magnitude should encourage educational professionals, career counselors, and vocational researchers to access current theories, practices, and pedagogies, particularly in higher education, where educational and career pursuits are a primary focus.

Transfer Students

The transfer student population is rising on college campuses (Grinder et al. 2018), and traditional transfer college students constitute an important construct within this manuscript. Traditional transfer college students are a diverse and growing population that has been omitted in the literature, and arguably perceived as a student population that is neglected at institutions of higher education as well (Lester, 2006). About a third of all students transfer at least once during their college years, with a fourth of the students transferring to changing institutions two or more times (Grinder et al. 2018). Given the increasing presence of transfer students in higher education, understanding their engagement in occupational activities is crucial for developing retention initiatives and student success programs. Transfer students are integral members of colleges and universities, which requires further research to examine the unique challenges that these students encounter and how current institutional support systems differ in these populations.

Wickersham (2020) examined the underlying process that drives 2-year college students into various pathways as they navigate their academic journey. Wickersham (2020) used a grounded theory approach to develop a model that can better understand college students' postsecondary pathway decision-making. The methods used were a survey, a transcript, and interview data from one transfer-focused and two comprehensive community colleges. This

qualitative approach reveals two different categories of students: short-term and lifetime decision-making. Among 2-year college students, the most salient criteria in their decision-making process were payoff, fit, transferability, place, flexibility, and mobility. With a growing number of students transferring from 2-year colleges to 4-year colleges, this data can offer insight into how 2-year college students assess and select various pathways, providing institutions with evidence that can inform informed approaches. These findings contribute to the growing body of literature on transfer student persistence by highlighting discrepancies in access to occupational engagement opportunities, which may impact student success and retention efforts at four-year institutions. Further exploration of this population concerning occupational engagement and its perceived benefits for a diverse college student population within institutions of higher education will help higher education professionals better understand how to support this growing and diverse population.

Occupational Engagement

Occupational engagement has been defined in different ways throughout the history of career development, and the benefits of the relationship between the outcomes of occupational engagement and undergraduate college students have been demonstrated in various studies. One can argue that choosing an educational and career trajectory is one of the most important decisions young adults in college are currently facing. A meta-analysis by Roese and Summerville (2005), a study exploring adulthood regrets, found that the top two regrets were education and career-based. Using twelve life domains, the descriptors of education were based on school choice, study habits, and grades. The descriptors of occupation were based on factors such as jobs, employment, and earning a living. Examples provided in the survey posed phrases such as, *If only I had studied harder in college* and *If only I were a dentist* (Roese &

Summerville, 2005, p. 5). Participants were given the opportunity to record their own examples of regret within these domains. Over time, individuals often reflect on how the past might have been better if different actions had been taken, which would have led to subsequential outcomes.

In order to help undergraduate students gain crucial skills to develop career-decision-making self-efficacy and to navigate a path to long-term vocational satisfaction, one must continue to explore how current students are engaging in occupational activities. Navigating career development requires a student to engage in occupational engagement, which is both accessing career exploration by discovering more about an area within the world of work and enrichment by deepening an understanding of an area to make better and informed career decisions.

Development of the OES

The trilateral model of adaptive career decision-making may be a helpful tool in helping promote student adaptability. A significant aspect of the need for transferable skills and vocational adaptability highlights a state of optimal decision-making from experiential learning. This experiential learning is a form of accumulating experience and information, resulting in occupational engagement (Krieshok et al., 2009). This model incorporates both rational and intuitive thinking, which improves a student's ability to identify satisfactory work through occupational engagement activities (Motl et al., 2018). This line of thinking is consistent with Klein's (1998) attestation that individuals require both experiential and rational sources when making decisions.

The activities that provide information for these thinking mechanisms can be classified as occupational engagement. Among college students, occupational engagement is about exploring the world of work while working through academic progress to make better and more informed

career decisions. Occupational engagement consists of exploration and enrichment activities. These activities include engagement opportunities such as studying abroad, joining student organizations, volunteering, informational interviewing, job shadowing, professional development conferences, and even reading a section of the newspaper one normally would not (Cox et al., 2016).

For institutions focused on student success and retention, ensuring equitable access to occupational exploration and enrichment opportunities is particularly important for transfer students, who may have fewer structured pathways for career development upon arrival at a four-year institution. Exploration and enrichment benefit all students at any stage of their career decision-making (Fouad et al., 2016). For example, an undecided student can partake in exploration by conducting informational interviews with faculty members in various disciplines. The same student can also deepen their understanding of a discipline of their interest by participating in enrichment activities, such as a summer research project. The past scholarship has linked occupational engagement with academic major satisfaction (Cox et al., 2016), career satisfaction, and career decision-making self-efficacy (Carter, 2019).

Strengths of the OES

Cox and colleagues operationalize this construct as behavioral, as opposed to cognitive, like other parts of decision-making. They distilled 57 items to create a 9-item scale to measure this aspect of career decision-making among college students. Using two samples of college students, this scale demonstrated psychometric fitness, and it was associated with important constructs in career development, specifically major satisfaction, vocational competence, and vocational identity in undergraduate students. Together, these strengths demonstrate that the OES provides a reliable, behavioral measure of career-related decision-making that is both

theoretically grounded and practically useful for higher education research. Its connections to major satisfaction, self-efficacy, and vocational identity highlight its value for examining how student behaviors influence persistence and retention.

Present Study

Transfer students represent an increasingly significant portion of the undergraduate population, yet they often face structural and institutional barriers that hinder their engagement in career development opportunities. As student retention and success initiatives continue to evolve, understanding how occupational engagement influences transfer students' academic trajectories is critical. By examining when and how students engage in career exploration activities, this study provides insight into ways institutions can enhance advising, academic support, and student life programming to better integrate transfer students into four-year college environments. Further, by bridging the focus on career engagement with student success, this study aligns with efforts to design evidence-based retention programs tailored to transfer students.

This study focused on four established constructs in higher education research: occupational engagement (OES), academic major satisfaction (AMSS), general self-efficacy (GSE), and career exploration (CES). Specifically, it examined student occupational engagement, its relationships with these constructs, and whether differences existed in either the amount of occupational engagement or the timing of when students first engaged in these activities based on transfer-student status at a large public university in the Southeastern United States. The findings contribute to the growing body of literature on retention initiatives by offering practical recommendations to ensure that transfer students receive equitable access to engagement opportunities that promote persistence, satisfaction, and long-term career success.

We organized our hypotheses into two clusters. The first cluster focused on the relationships between occupational engagement and other constructs. Specifically, we hypothesized that:

- H_{1a}: Occupational engagement would be positively related to academic major satisfaction.
- H_{1b}: Occupational engagement would be positively related to general self-efficacy.
- H_{1c}: Occupational engagement would be positively related to career exploration.

The second cluster focused on occupational engagement and transfer-student status. Given the dearth of information regarding occupational engagement and transfer-student status, we formulated our null hypotheses as follows:

H_{01}: There would be no significant differences in the overall amount of occupational engagement between first-time-in-college students and transfer students.

H_{02}: There would be no significant differences in the timing of when first-time-in-college students and transfer students first engaged in occupational engagement activities.

Method

Participants

We collected participants using direct email to undergraduate college students at a large public university in the Southeastern United States. Participants were recruited through two methods: (1) direct email solicitation to undergraduate students through the researcher's institutional position, and (2) convenience and snowball sampling through social media platforms, where participants were invited to participate and share the recruitment information with other eligible individuals. The survey was available in September and October 2022.

Participants viewed an online informed consent document that detailed the study purpose, eligibility requirements, procedures, duration, confidentiality protections, and potential risks and benefits. Agreement to the consent form was required before proceeding to the survey. Additionally, participants confirmed they were 18 years or older and were informed they could exit the survey at any time without penalty, in which case their partial data would be excluded from the analysis. Of the 269 students who completed the survey, 56 were removed for scoring less than 70% on four attention checks, and 31 were removed for being ineligible participants (e.g., graduate students). This resulted in a final sample of 182 participants, none of whom were compensated for their participation. The undergraduate students (N = 182) were categorized as either First-Time in College (FTIC; n = 119) or Transfer College students (n = 55). FTIC refers to students entering college directly after high school without prior college coursework, while transfer students are those who began at a two-year institution and later enrolled at a four-year university. A small percentage of students were considered unknown (n = 6) and omitted from analyses.

We used Hays' ADDRESSING model to categorize demographics (1996, 2009). The majority of the participants identified as White (84.4%), non-Hispanic (94.4%), female (64%), and FTIC (68.4%). We detail group demographics, mean scores, and standard deviations in Table 1.

Table 1

Demographic Characteristics of the Sample

	M	*SD*
Age (18 - 57)	34.40	10.50
	N	*%*
Disability Status		
Non-disabled	89	49.4%
Disabled	60	33.33%
Unknown	31	17.2%
Race		
White	152	84.4%
Black	13	7.2%
Religious Affiliation		
Christian	90	50%
Not Religious	27	15%
Spiritual, Not Religious	25	13.9%
Ethnicity		
Non-Hispanic	170	94.4%
Hispanic	7	3.9%
Sexual Orientation		
Heterosexual	111	61.7%
Bisexual	37	20.6%
Socioeconomic Status		
Middle Class	71	39.4%
Lower-middle Class	49	27.2%
Indigenous Affiliation	0	0%
National Orientation		
United States	176	97.8%
Gender		
Female	116	64.4%
Male	50	27.8%
Gender Diverse	14	7.8%
Transfer Student Status		
FTIC	119	66.1%
Transfer	55	30.5%
Unknown	6	3.33%

We then classified participants into two groups: traditional-entry college students, referred to as first-time in college students, and traditional transfer college students. Students

who accumulated Advanced Placement credit or summer course credit before entering college would be considered traditional entry. In contrast, students who completed associate degrees or accrued 30 semester hours of designated coursework at a two-year college would be included in the transfer group.

Measures

To address the research questions, the survey included measures of four established constructs frequently used in higher education and career development research: occupational engagement (OES, Cox et al., 2015), academic major satisfaction (AMSS, Nauta, 2007), general self-efficacy (GSE, Schwarzer & Jerusalem, 1995), and career exploration (CES, Stumpf et al., 1983).

The Occupational Engagement Scale-Student Version (OES) measures occupational engagement among college students. The scale operationalizes the occupational engagement section of the trilateral model of adaptive career decision-making (Krieshok et al., 2009). We used the 9-item instrument (Cox et al., 2015). The items were formulated based on the college student engagement experience theory established by Kuh (2003). This construct is behavioral, as opposed to cognitive, like other parts of decision-making. This scale uses a 5-point Likert-style response system ranging from 1 (*unlike me*) to 5 (*like me*). Scores range from 0 (*least possible occupational engagement*) to 36 (*most possible occupational engagement*). For example, these items included opportunities that are typical of the college students' experience and provide college students insight into the world, themselves, and how they can navigate this world of work. The OES demonstrated good reliability in its initial validation using college students from a large midwestern institution (a = .83; Cox et al., 2015).

Because occupational engagement often involves activities that deepen students' identification with their academic pathway, such as internships, research, or student organizations, it is expected to be positively related to academic major satisfaction. The Academic Major Satisfaction Scale (AMSS) measures both practical and theoretical global satisfaction with one's major. This scale uses the college student theory of vocational choices established by Holland (1997). We used the 6-item instrument rather than the original 20 items (Nauta, 2007). This scale uses a 5-point Likert-style response system ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Scores range from 0 (*did not change majors in the next two years*) to 1 (*did change majors in the next 2 years*). For example, these items focused on academic satisfaction, including items like, *I often wish I hadn't gotten into this major* (item 1). In the AMSS 6-item results, a *t*-test analysis discovered a significantly higher score among students who stayed in their majors during the second year than students who changed their majors, validating the AMSS' predictive ability (Nauta, 2007). The AMSS demonstrated good reliability in its initial validation using a college student sample from a large midwestern university (a = .94; Nauta, 2007).

Occupational engagement requires initiative and persistence, suggesting a strong conceptual link to general self-efficacy, or students' belief in their ability to handle challenges. The General Self-Efficacy Scale (GSE) measures one's perceived self-efficacy, specifically in coping with daily stressors and adapting after significant life events. This scale uses social cognitive theory, which focuses on optimistic self-belief (Schwarzer & Luszczynska, 2008). We used the 10-item scale. The 10-item scale uses a 4-point Likert-style response system ranging from 1 (*Not at all true*) to 4 (*Exactly true*; Schwarzer & Jerusalem, 1995). The sum score of the GSE is calculated by computing each item score and the range between the lowest GSE (10) and

the highest GSE (40). For example, items focus on behaviors, including, *I can solve most problems if I invest the necessary effort* (item 6). The generalizability of this scale has been utilized in college students, health-related cohorts, and other clinical research studies (Schwarzer & Jerusalem, 1995). The theoretical accuracy of the general self-efficacy scale can be seen through numerous correlation studies indicating high correlations between GSE and various social-cognitive variables, including behavior-specific self-efficacy. The career assessment and decision-making self-efficacy scale designed for college students by Betz and Luzzo (1996) would have been a clear choice to include in this present study, as it assesses self-efficacy within vocation. However, the GSE scale was chosen because there were no proprietary restrictions, making this study more inclusive and equitable. In a meta-analysis, the GSE demonstrated a high reliability. The scale has been tested and validated among various samples with strong empirical evidence of its development, specifically to measure self-efficacy among adults and adolescents (a = 0.83; Waraich & Chechi, 2017).

Because occupational engagement encompasses exploratory behaviors such as job shadowing, informational interviewing, and volunteering, it logically intersects with career exploration, which reflects how students investigate options and reflect on themselves in relation to future careers. The Career Exploration Scale (CES) measures career exploration. This scale operationalizes career exploration using three primary variables: exploration, reactions to exploration, and beliefs about exploration (Stumpf et al.,1983). We used the 5-item subscale rather than the initial 92-item scale to examine self-exploration within career exploration. This scale was established on conceptual framework theories of investigation, motivation, stress, and career preferences. This scale uses a 5-point Likert-style response system ranging from 1 (*I relate a little*) to 5 (*I relate a great deal*). Scores range from 5 to 25. For example, items focused

on behaviors of self-exploration and thoughts on career choices, including how participants reflected on how their past integrates with their future (item 1; Stumpf et al., 1983). The CES demonstrated good reliability in its initial validation using an undergraduate student sample (a = 0.87; Stumpf et al., 1983).

Taken together, these constructs capture how occupational engagement may shape students' satisfaction, confidence, and exploratory behaviors – factors that are critical for persistence and retention in higher education. By examining these measures alongside occupational engagement, this study provides insight into how career-related behaviors intersect with key psychological and academic outcomes that influence whether students remain enrolled and progress toward degree completion.

Analyses

We used descriptive statistics to describe our sample. We calculated Cronbach's alpha to assess the reliability of our measures of occupational engagement, major academic satisfaction, career decision-making self-efficacy, and career exploration using DeVellis' criteria (Bland, 1997; DeVellis,1991). Under this criterion, alpha levels greater than 0.59 are acceptable, and measures would be included in subsequent analyses. All measures met the inclusion criteria defined by DeVellis (1991) and were eligible for inclusion in further analyses. Table 2 contains each measure's alpha calculation, as well as its mean and standard deviations.

Table 2

Instrument Reliability

	a	*M*	*SD*
OES	0.81	33.2	6.4
AMS	0.86	26.47	3.7
GSE	0.82	35.7	4.6
CES	0.78	19.7	3.9

To address the first research question, that the OES was related to other vocational scales, we computed correlation coefficients and assessed them for statistical significance ($p < .05$) and practical significance (Ferguson, 2016; Pearson's r of 0.20 is a practical effect). To address the second research question, whether there were differences in OES scores between FTIC and traditional college students, we conducted an independent samples *t*-test. To address the third research question, whether there were differences in a participant's first reported occupational engagement exercise, we again conducted a *t*-test. SPSS was used for all analyses (IBM, 2021).

Results

OES Relationships

In our first hypothesis, we predicted that the OES would be statistically and practically related to the AMS, GSE, and CES. To assess this, we computed correlation coefficients according to procedures outlined by Green and Salkind (2010). Given multiple comparisons between the OES and other variables, we assessed statistical significance using a Bonferroni correction to control for Type 1 error across the four variables ($p = .05/3 = p = 0.017$). We assessed practical significance using Ferguson's guidelines (2016). After the Bonferroni correction, the OES was statistically and practically related to the GSE at a small effect size:

$r(178) = 0.44$, $p = .001$. The OES was also statistically and practically related to the AMS at a small effect size, $r(178) = 0.22$, $p = .003$. The OES was not statistically or practically related to the CES, $r(178) = -0.14$, $p = .12$. In general, these results suggest that the OES is positively related to self-efficacy and major satisfaction. Surprisingly, the OES was not related to career exploration. These results largely support hypothesis 1.

OES Transfer

In our second hypothesis, we predicted that the OES would not be a statistically significant difference between FTIC and transfer students. To assess this, we conducted an independent-sample *t*-test to determine that there would be no differences in OES scores between FTIC and transfer students. As Levene's test for equality of variance suggested unequal variances between the FTIC and transfer students, we used *t*-test methods that do not require equal variances between groups. The test was not significant, $t(112) = .07$, $p = .49$. There was no statistically significant difference between FTIC and transfer students. This result supports hypothesis 2.

OES Engagement

In our third hypothesis, we predicted that there would be no differences between FTIC and transfer students on age-related OES activities. To assess this, we conducted a one-way multivariate analysis of variance (MANOVA) to determine the effect of transfer student status on the age one started to engage in occupational engagement activities. There were significant differences found between FTIC and transfer students in the initial age at which they began education-based occupational engagement activities. Wilks' Lambda = .95, F (3, 160) = 2.75, p = .045, partial eta squared = 0.049. We conducted follow-up analyses of variances in the occupational engagement activities. Using the Bonferroni method, we tested each ANOVA at the

.0167 level ($p = .05/3 = 0.0167$). The ANOVA on the age of beginning formal occupational engagement activities was statistically significant, $F(1, 162) = 7.79$, $p = .006$, partial eta squared = .05. However, the other follow-up ANOVAs on general OES and position-based OES were not statistically significant. These results generally suggest that FTIC and transfer students differ based on the first reported age at which they engaged in occupational engagement activities, but this was only detected in education-based OES activities. These results largely do not support hypothesis 3. Table 3 contains each measure's age calculations, mean, and standard deviation for both FTIC and transfer college students.

OES is related to important constructs for higher education among college students, particularly GSE and AMS. However, there were no differences in OES based on transfer student status. FTIC students started engaging in OES education-based activities (e.g., attending a job talk) before transfer students. There were no differences when other OES activities began (e.g., talking about work/jobs).

Table 3

OES Age

	N	*M*	*SD*
OESAge1			
FTIC	113	15.62	2.871
Transfer	51	16.51	4.628
Total	164	15.90	3.522
OESAge2			
FTIC	113	15.57	2.535
Transfer	51	15.94	2.915
Total	164	15.69	2.656
OESAge3			
FTIC	113	17.05	1.864
Transfer	51	18.47	4.666
Total	164	17.49	3.082

Discussion

Occupational engagement can be implemented in a student population by teaching students a skillset through occupational engagement that focuses on adapting to the changing world of work and learning how to continue to investigate opportunities, even while working (Vuyk et al., 2020). Additionally, Jenkins and Jeske (2017) affirmed the need for general career support among students. Specifically, student support services on campus were found to be positively linked to the success of occupational engagement on campus (Jenkins & Jeske, 2017). Higher education administrators should encourage these behaviors and inspire students to join student organizations, speak with professors, seek internships, job shadow, and volunteer as early as their first semester of college.

These results emphasize the importance of integrating career development programming within student success frameworks, ensuring that transfer students receive the same opportunities for engagement as their first-time-in-college peers. These findings are particularly relevant for student success practitioners, as they suggest that transfer students may require early intervention strategies to close the engagement gap observed in occupational activities.

Occupational engagement research has been positively linked to critical constructs within vocational psychology (Cox et al., 2015). However, previous research omitted important sample characteristics, like transfer student status, and it did not focus on integral higher education constructs. In this southeastern institution sample, occupational engagement did matter, as evidenced by positive relationships among the OES, AMS, and GSE. While transfer students report a delayed start in occupational engagement activities, there was no difference in the amount of occupational engagement between transfer students and FTIC students.

Concurrent with the larger literature from a large midwestern sample and samples from Paraguay and China (Cox et al., 2015; Vuyk et al., 2020), the OES's relationships indicate that occupational engagement matters, which supports our first hypothesis. In this first known sample to examine the OES in the southeastern United States, the OES was statistically and practically associated with academic major satisfaction and self-efficacy. This fits with Cox and colleagues' finding that OES was a predictor of major satisfaction (2016). Surprisingly, the OES was not related to career exploration. Like previous literature, the OES demonstrated good internal consistency.

Our findings regarding transfer students and FTIC were more novel. We found that among this sample, transfer students were delayed in engaging in OES behaviors compared to FTIC students, which does not support our third hypothesis. Despite a later start, these two

populations had no significant differences in OES, which supported our second hypothesis. While it can be viewed as a positive that there were no significant differences in OES between FTIC and traditional transfer students, a delay in when transfer students access occupational engagement is an important finding. Transfer student populations are increasing and remain integral to four-year college campuses (Grinder et al., 2018). This study confirmed discrepancies between traditional entry and transfer college students, and it provides insight into how higher education professionals can better support student needs.

Overall, this study has numerous strengths. Our sample was solicited from the southeastern United States, the first known sample in which the OES was assessed in this region. Our instruments all demonstrated adequate reliability within our sample. All of the measures used are free through the public domain, which allows researchers and administrators, regardless of financial privilege, the ability to use these instruments and replicate our study. Additionally, the relationships between the OES and these important constructs were tested using statistical and practical significance. Also, our participants were described using Hays' ADDRESSING Framework, which better describes the diversity inherent to this sample in comparison with previous samples that may restrict demographics. Additionally, this study highlighted the considerations of transfer students, which are an important and understudied classification within higher education. Lastly, to the best of our knowledge, our sample was the most diverse United States higher education sample in which occupational engagement has been assessed (*Masked Citation*).

The findings of this study have important implications for institutional policies and student success initiatives aimed at increasing retention among transfer students. The delay in occupational engagement reported by transfer students suggests a need for proactive intervention

strategies that integrate career development into the transfer student experience. To address this gap, institutions should incorporate occupational engagement activities into transfer orientation programs, advising sessions, and academic coursework. Embedding career exploration and experiential learning opportunities early in the transfer process may help students establish a sense of belonging and investment in their academic and professional trajectories. Additionally, student support services, such as academic advising, career centers, and student life offices, should collaborate to develop targeted programming that ensures transfer students have equal access to networking, internships, and professional development opportunities. By aligning these strategies with retention-focused frameworks, higher education institutions can strengthen student engagement, improve transfer student persistence, and advance the broader mission of student success.

Limitations and Future Research

While our sample was the first known from the southeastern United States and the first to assess transfer-student status, our participants were still overwhelmingly White (84.4%) and Non-Hispanic (94.4%). This imbalance may have influenced the ability to detect differences between FTIC and transfer students, as transfer students tend to be more racially and ethnically diverse (Bulman & Fairlie, 2022). More research at Historically Black Colleges and Universities and Hispanic Serving Institutions would provide information on whether these findings can be generalized to a racial and/or ethnic majority sample. Our study is also cross-sectional. As such, we cannot state that occupational engagement caused these relationships with major satisfaction, self-efficacy, or career exploration. Because causal direction cannot be inferred, additional longitudinal or experimental studies are needed to more directly test causal pathways among these constructs.

Beyond our study's methodological considerations, the broader OES literature also faces important limitations. Most validations of the OES have been conducted with predominantly White students at four-year institutions in the United States, limiting generalizability and leaving gaps in understanding how occupational engagement functions among racial and ethnic minorities, two-year college students, and transfer populations (Carter, 2019; Cox et al., 2015; Fouad et al., 2016; Jenkins & Jeske, 2017). Given that community college students account for nearly 40% of undergraduates (Grinder et al., 2018) and frequently make enrollment decisions based on payoff, transferability, and flexibility (Cohen et al., 2014), examining occupational engagement within this population is particularly important. Expanding research across more diverse student groups is essential to ensure that occupational engagement can inform equitable best practices, retention strategies, and career development supports across higher education.

Future research would benefit from higher education administration integrating OES alongside other routine metrics, such as GPA, financial aid need, and retention, from a student's matriculation through graduation or dropout. Doing so would allow researchers to better assess how occupational engagement may or may not change over time and how it may be related to important constructs regarding the career development of undergraduate students. While we recognize that research, administration, and pedagogy are often intertwined within higher education, we frame our implications with these lenses. For research, given the cross-sectional support for the OES, we would encourage further assessment of the OES within a national student sample and, specifically, in more racially and ethnically diverse samples. Information regarding how OES relates to a student's perceived retention status may be informative. Additionally, there needs to be a longitudinal assessment of occupational engagement, both in a

naturalistic assessment and after integrating OES-focused interventions that could occur in student services and in pedagogy.

For administrators, we encourage integrating occupational engagement into routine student contacts, such as advising and various student-success initiatives. For example, academic advisors could inquire about the occupational engagement in which the student is engaging, and they could intentionally incorporate OES initiatives into student educational planning. Faculty could integrate OES into the curriculum, specifically in professional, interdisciplinary, integrative, and university study courses. Service-learning-based courses may be a natural integration, given that service-learning inherently provides students with an occupational engagement activity. To promote student retention and success, institutions should facilitate earlier engagement with career exploration activities among transfer students – through orientations, advising, and campus programming – so they enter four-year institutions with equitable opportunities for major satisfaction and career decision-making self-efficacy.

To translate these findings into practice, institutions could initiate occupational engagement earlier in the transfer student experience through intentional programming. For example, OES-informed activities could be embedded into transfer-student orientations, first advising appointments, and structured peer-mentoring programs. Service-learning opportunities and transition courses may also serve as natural venues for occupational engagement, providing transfer students with equitable access to career decision-making self-efficacy and academic major satisfaction from the outset of their four-year enrollment.

Conclusions

Occupational engagement matters. As such, continued assessment of how this construct manifests in diverse student samples and how it relates to integral constructs within higher

education is necessary. Here, the OES demonstrated adequate reliability and a positive relationship between academic major satisfaction and self-efficacy. Additionally, this is the first study to examine both FTIC and transfer student populations, and it notes that while there are no differences in occupational engagement, transfer students are, on average, more delayed in engaging in engagement behaviors. Universities can encourage occupational engagement-based activities and curricula, which will further our understanding of occupational engagement and support our students in their vocational decision-making. By embedding occupational engagement activities into advising, orientation, and curricular experiences, institutions can provide transfer students with the same early opportunities that support persistence for FTIC peers. These strategies highlight how higher education practitioners can apply the OES framework to foster retention and career readiness across diverse student populations.

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